Citywide
Facility Condition Assessment

Report of

Facility Condition Assessment

For
City of Manhattan Beach
Public Works Yard
3621 Bell Avenue, Manhattan Beach, CA

September 4, 2013
(Rev A)

Provided By:

Faithful+Gould, Inc.

Provided For:

CITY OF MANHATTAN BEACH
3621 BELL AVENUE, MANHATTAN BEACH, CA 90266
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INTRODUCTION

In accordance with the agreement held between City of Manhattan Beach, dated May 9, 2013 and Faithful+Gould Inc, this completed report provides a comprehensive Facility Condition Assessment of the Public Works Yard located at 3621 Bell Avenue, Manhattan Beach, CA (The Facility). The facility consisted of the following buildings:

- Administration Offices (Building A)
- Vehicle Shop (Building B)
- Paint Storage (Building C)
- Service Garage (Building D)
- Engineering Offices (Building E)
- Storage (Building F)
- Storage (Building G)
- Sand/Gravel Hoppers
- Storage Building (Oil Tanks)

This report provides a summary of the facility information known to us at the time of the study, the scope of work performed, an equipment inventory, evaluation of the visually apparent condition of the Property and an expenditure forecast of expenditures anticipated over the next 10 years. The expenditure forecast does not account for typical planned maintenance items such as changing filters to fan coil units and only considers deficiencies above a $500 aggregated value.

Our cost rates to produce life cycle and replacement cost estimates are based on our knowledge of the local regional market rates. Our line item costs assume that the work will be undertaken by either in-house or by direct sub-contract labor. If the work is procured through public general contractor bids, we recommend budgeting for additional project costs of between 25%-30% to allow for professional fees and general contractor overhead/profit and management costs

Charts EX-1 through to EX-11 provides a summary of the anticipated primary expenditures over the 10 year study period. Further details of these expenditures are included within each respective report section and within the 10 year expenditure forecast, in Appendix A.

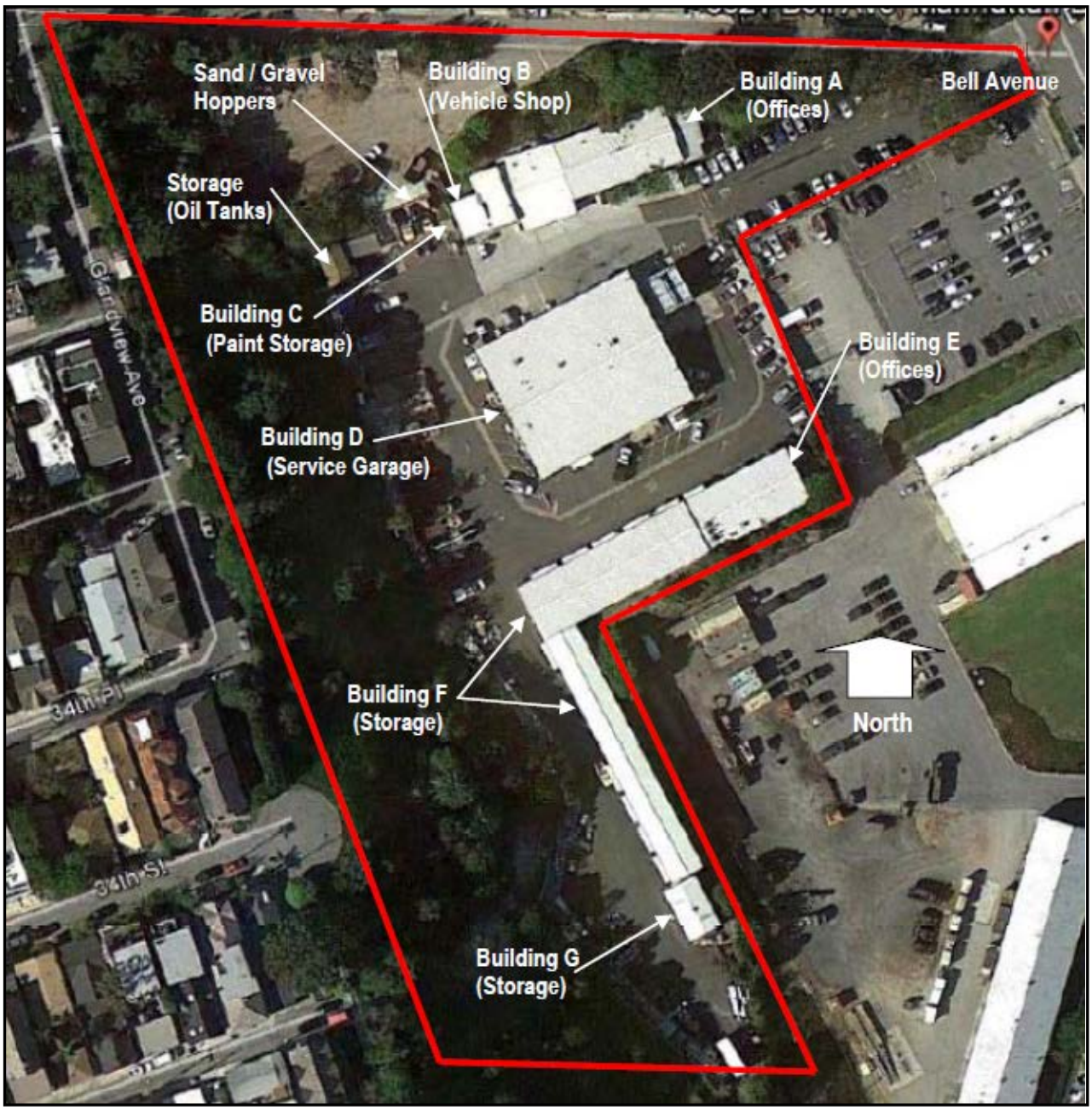
The report also calculates the Facility Condition Index (FCI) of each building based upon the calculated FCI. Further discussion of the Facility Condition Index is detailed in the sections below. The FCI does not include the general site systems, however we have still included repair and replacement costs so that they can be represented in the study.

This report was completed in general accordance with the ASTM E2018-08 Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process.

PROJECT DETAILS

On May 14, 2013, Mr. Richard Needler of Faithful+Gould visited the facility to observe and document the condition of each building and the site components. During our site visit, Faithful+Gould was assisted by Mr. Doug Foster, Senior Facilities Maintenance Technician for the City of Manhattan Beach.

Overview of the Buildings at the Facility



BUILDING SUMMARY

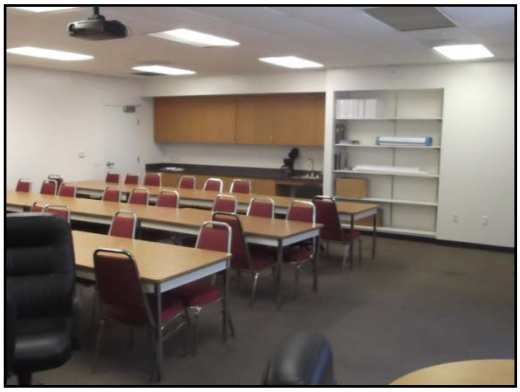
Table EX-1 Facility Details

BUILDING NAME:	Administration Office (Building A)		LAT/LONG:	33º 54' 04" N / 118º 24' 48" W	
ADDRESS:	3621 Bell Avenue Manhattan Beach, CA 90266		OCCUPANCY STATUS: OCCUPIED ☒ VACANT ☐ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	5,748		GROSS SQUARE FOOTAGE OF LAND:	210,800 (estimated) Whole Facility	
CURRENT REPLACEMENT VALUE:	$ 906,031		YEAR OF CONSTRUCTION:	1967, Renovated 2012	
			BUILDING EUL:	100+ Years	
			BUILDING RUL:	54+ Years	
BUILDING USE:	Office		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The Administration Office building is part of the Manhattan Beach Public Works Department service facility and is located along the north side of the site. The site as a whole was developed in circa 1967, with the Administration Office building being constructed at that time. The building was renovated several times since construction, most recently in 2012.

The building is steel framed, the roof supported on steel beams and columns, with lightweight metal stud-framed exterior walls, enclosed with painted corrugated metal siding, stucco cladding and wood siding. The sloped roof has prefinished corrugated steel panels and modified bitumen built-up roofing, draining to a gutters and downspouts. The floors are concrete slabs-on-grade, with concrete footing foundations. Windows are aluminum-framed units with sliding single and double pane glazing; doors are flush steel units in steel frames. The interior finishes include vinyl and ceramic tile and carpet flooring, painted gypsum board walls and acoustical tile and painted gypsum board ceilings.



The heating and cooling is provided by gas-fired unit heaters, split system direct-exchange AC units and a pad-mounted heat pump package unit. Hot domestic water is provided by two gas-fire instant-hot units. The electrical system is supplied underground at 120/208-volts to 100- and 200-amp interior electrical distribution panels, supplying the power and lighting needs; lighting is primarily fluorescent lamped fixtures. The building does not have an electronic security system, fire sprinkler system or fire alarm system.

Table EX-2 Facility Details

BUILDING NAME:	Vehicle Shop (Building B)		LAT/LONG:	33° 54' 04" N / 118° 24' 48" W	
ADDRESS:	3621 Bell Avenue Manhattan Beach, CA 90266		OCCUPANCY STATUS: OCCUPIED ☒ VACANT ☐ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	1,260		GROSS SQUARE FOOTAGE OF LAND:	210,800 (estimated) Whole Facility	
CURRENT REPLACEMENT VALUE:	$174,069		YEAR OF CONSTRUCTION:	2000	
			BUILDING EUL:	100+ Years	
			BUILDING RUL:	87+ Years	
BUILDING USE:	Maintenance		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The Vehicle Shop building is part of the Manhattan Beach Public Works Department service facility and is located along the north side of the site. The site as a whole was developed in circa 1967, with the Vehicle Shop building being constructed in circa 2000.

The building is steel framed, the roof supported on steel beams and columns, with lightweight metal stud-framed exterior walls, enclosed with painted corrugated metal siding. The sloped roof has prefinished corrugated steel panel roofing, draining to a gutters and downspouts. The floors are concrete slabs-on-grade, with concrete footing foundations. The building does not have windows, with doors of a flush steel unit in steel frame and two coiling overhead doors. The interior is unfinished, with exposed wall and roof framing.

Heating is provided by two gas-fired unit heaters suspended from the roof framing; cooling is not provided. Plumbing systems are not provided in the building. The electrical system is supplied underground at 277/480-volts to a 100-amp interior electrical distribution panel; a transformer reduces the service to 120/208-volts to a 100-amp panel, supplying the power and lighting needs; lighting is primarily suspended metal halide lamped fixtures, with fluorescent and LED fixtures also provided. The building does not have an electronic security system, fire sprinkler system or fire alarm system.

Table EX-3 Facility Details

BUILDING NAME:	Paint Storage (Building C)		LAT/LONG:	33° 54' 04" N / 118° 24' 48" W	
ADDRESS:	3621 Bell Avenue Manhattan Beach, CA 90266		OCCUPANCY STATUS: OCCUPIED ☐ VACANT ☒ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	104 (estimated)		GROSS SQUARE FOOTAGE OF LAND:	210,800 (estimated) Whole Facility	
CURRENT REPLACEMENT VALUE:	$8,840		YEAR OF CONSTRUCTION:	1967	
			BUILDING EUL:	100+ Years	
			BUILDING RUL:	54+ Years	
BUILDING USE:	Storage		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The Paint Storage building is part of the Manhattan Beach Public Works Department service facility and is located along the north side of the site. The site as a whole was developed in circa 1967, when the Paint Storage building was constructed.

The building has concrete masonry load-bearing walls supporting a steel-reinforced concrete roof deck, with steel-reinforced concrete footings and slab-on-grade floor. The roof deck is unfinished exposed. The exterior walls are painted, with one painted flush steel door in steel frame. The building does not have windows.

The interior of the building is assumed to be unfinished concrete masonry walls, exposed concrete floor slab and roof deck. Heating and cooling are not provided, nor is a plumbing system. The electrical service appears to be supplied underground, tapped from an adjacent building and service is limited to lighting fixtures only. The building does not contain fire sprinkler, fire alarm, or security systems.

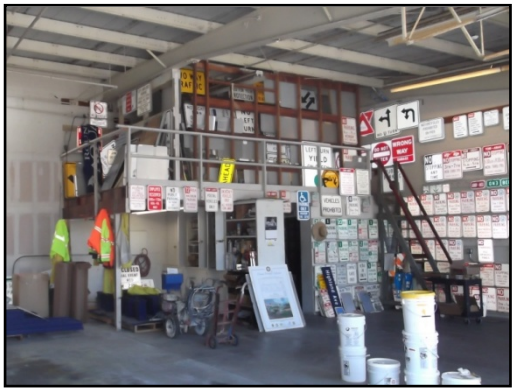
Table EX-4 Facility Details

BUILDING NAME:	Service Garage (Building D)		LAT/LONG:	33° 54' 02" N / 118° 24' 48" W	
ADDRESS:	3621 Bell Avenue Manhattan Beach, CA 90266		OCCUPANCY STATUS: OCCUPIED ☐ VACANT ☒ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	12,050		GROSS SQUARE FOOTAGE OF LAND:	210,800 (estimated) Whole Facility	
CURRENT REPLACEMENT VALUE:	$1,397,769		YEAR OF CONSTRUCTION:	1967; addition completed 2000	
			BUILDING EUL:	100+ Years	
			BUILDING RUL:	54+ Years	
BUILDING USE:	Maintenance		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The Service Garage building is part of the Manhattan Beach Public Works Department service facility and is located in the center of the site, near the eastern boundary. The site as a whole was developed in circa 1967, when the building was constructed, with an addition completed in circa 2000.

The building is steel framed, the roof supported on steel beams and columns, with lightweight metal stud-framed exterior walls, enclosed with painted corrugated metal siding. The sloped roof has prefinished corrugated steel panel roofing, draining to a gutters and downspouts. The floors are concrete slabs-on-grade, with concrete footing foundations; steel-framed mezzanine floors are provided in some areas. A limited number of aluminum—framed sliding single paned windows are provided; doors include flush steel units in steel frames, sliding service doors and sectional and coiling overhead doors. The interior is primarily warehouse and service space, with unfinished gypsum board walls, as well as exposed wall and roof framing and concrete slab on grade floors. Office areas have painted gypsum board walls, carpet and vinyl tile flooring and acoustic tile ceilings.



Heating is provided in warehouse spaced by gas-fired unit heaters; heating and cooling in office space is provided split-system components. Plumbing systems are not provided to the building. The electrical service is supplied underground to a main distribution panel located in the southeast corner of the building; service is rated at 277/480-volts, 400-amps, with transformers reducing power to 120/208-volts. The lighting consists of suspended fluorescent and metal halide fixtures. The building does not contain fire sprinkler, fire alarm, or security systems.

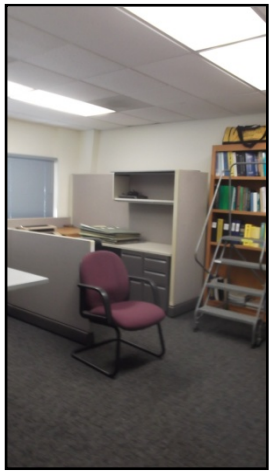
Table EX- 5 Facility Details

BUILDING NAME:	Engineering Offices (Building E)		LAT/LONG:	33° 54' 02" N / 118° 24' 47" W	
ADDRESS:	3621 Bell Avenue Manhattan Beach, CA 90266		OCCUPANCY STATUS: OCCUPIED ☐ VACANT ☒ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	3,120 (estimated)		GROSS SQUARE FOOTAGE OF LAND:	210,800 (estimated) Whole Facility	
CURRENT REPLACEMENT VALUE:	$359,768		YEAR OF CONSTRUCTION:	1967; renovated 2012	
			BUILDING EUL:	100+ Years	
			BUILDING RUL:	54+ Years	
BUILDING USE:	Office		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The Engineering Offices building is part of the Manhattan Beach Public Works Department service facility and is located at the east side of the site and adjoins Storage Building F. The site as a whole was developed in circa 1967, with the building constructed in circa 1967 and renovated in 2012.

The building is steel framed, the roof supported on steel beams and columns, with lightweight metal stud-framed exterior walls, enclosed with painted corrugated metal siding. The sloped roof has prefinished corrugated steel panel roofing, draining to a gutters and downspouts. The floors are concrete slabs-on-grade, with concrete footing foundations. Windows are aluminum—framed sliding single paned windows; doors are flush steel units in steel frames. The interior is primarily office space, with finishes that include painted gypsum board walls, carpet and vinyl tile flooring and acoustic tile and painted gypsum board ceilings.



The heating and cooling is provided by a pad-mounted package HVAC unit and through-wall air conditioning units. Plumbing systems are provided to restroom fixtures and an electric domestic water heater. The electrical system is supplied underground at 120/208-volts to 100- and 200-amp interior electrical distribution panels, supplying the power and lighting needs. Lighting is primarily surface-mounted and recessed fluorescent lamped fixtures. The building does not have an electronic security system, fire sprinkler system or fire alarm system. An Onan emergency generator, rated at 60-kilowatts, is pad-mounted adjacent to the building, with under-unit fuel tank.

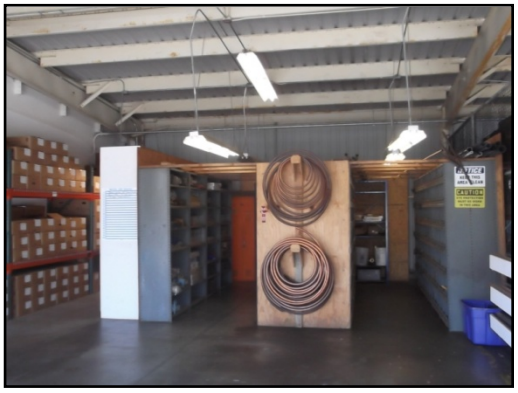
Table EX- 6 Facility Details

BUILDING NAME:	Storage Building (Building F)		LAT/LONG:	33° 54' 01" N / 118° 24' 48" W	
ADDRESS:	3621 Bell Avenue Manhattan Beach, CA 90266		OCCUPANCY STATUS: OCCUPIED ☐ VACANT ☒ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	10,058 (estimated)		GROSS SQUARE FOOTAGE OF LAND:	210,800 (estimated) Whole Facility	
CURRENT REPLACEMENT VALUE:	$1,159,790		YEAR OF CONSTRUCTION:	1967	
			BUILDING EUL:	100+ Years	
			BUILDING RUL:	54+ Years	
BUILDING USE:	Storage		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The Storage Building (Building F) is part of the Manhattan Beach Public Works Department service facility and is located in the southeast portion of the site and adjoins the Engineering Offices building (Building E). The site as a whole was developed in circa 1967, when the building was constructed.

The building is steel framed, the roof supported on steel beams and columns, with lightweight metal stud-framed exterior walls, enclosed with painted corrugated metal siding. The sloped roof has prefinished corrugated steel panel roofing, draining to a gutters and downspouts. The floors are concrete slabs-on-grade, with concrete footing foundations. The building does not have windows; doors include sectional and pivoting overhead doors. The interior is primarily warehouse and service space, with exposed wall and roof framing and concrete slab on grade floors.



Heating and cooling are not provided in the building. Plumbing systems are not provided in the building. The electrical service is supplied underground from an adjacent building, service assumed to be 120/208-volts to 100- and 200-amp panels. The lighting consisted of suspended fluorescent fixtures. The building does not contain fire sprinkler, fire alarm, or security systems.

Table EX- 7 Facility Details

BUILDING NAME:	Storage Building (Building G)		LAT/LONG:	33° 53' 59" N / 118° 24' 47" W	
ADDRESS:	3621 Bell Avenue Manhattan Beach, CA 90266		OCCUPANCY STATUS: OCCUPIED ☐ VACANT ☒ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	979		GROSS SQUARE FOOTAGE OF LAND:	210,800 (estimated) Whole Facility	
CURRENT REPLACEMENT VALUE:	$60,225		YEAR OF CONSTRUCTION:	2000	
			BUILDING EUL:	100+ Years	
			BUILDING RUL:	87+ Years	
BUILDING USE:	Storage		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The Storage Building (Building G) is part of the Manhattan Beach Public Works Department service facility and is located in the southeastern corner of the site and is adjacent to Storage Building F. The site as a whole was developed in circa 1967, with the building constructed in 2000.

The building is steel framed, the roof supported on steel beams and columns, with lightweight metal stud-framed exterior walls, enclosed with painted corrugated metal siding. The sloped roof has prefinished corrugated steel panel roofing, draining to a gutters and downspouts. The floors are concrete slabs-on-grade, with concrete footing foundations. The building does not have windows, with doors of a flush steel unit in steel frame and two coiling overhead doors. The interior is unfinished, with exposed wall and roof framing and batt blanket insulation.

Heating, cooling and plumbing systems are not provided to the building. The electrical system is supplied underground from an adjacent building at 120/208-volts, supplying the power and lighting needs. Lighting is provided by suspended fluorescent lamped fixtures. The building does not have an electronic security system, fire sprinkler system or fire alarm system.

Table EX- 8 Facility Details

BUILDING NAME:	Sand / Gravel Hoppers		LAT/LONG:	33° 54' 04" N / 118° 24' 48" W	
ADDRESS:	3621 Bell Avenue Manhattan Beach, CA 90266		OCCUPANCY STATUS: OCCUPIED ☐ VACANT ☒ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	624		GROSS SQUARE FOOTAGE OF LAND:	210,800 (estimated) Whole Facility	
CURRENT REPLACEMENT VALUE:	$55,520		YEAR OF CONSTRUCTION:	1967	
			BUILDING EUL:	100+ Years	
			BUILDING RUL:	54+ Years	
BUILDING USE:	Storage / Maintenance		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The Sand / Gravel Hopper structure is part of the Manhattan Beach Public Works Department service facility and is located along the north side of the site, at its northwest corner. The site as a whole was developed in circa 1967, when the Sand/Gravel Hopper was constructed.

The building has steel-reinforced concrete and steel superstructure supporting the upper concrete service deck; the structure is assume to be supported on steel-reinforced concrete footings, and has a slab-on-grade lower level floor. The upper service deck is the roof covering, without additional finish material. The exterior walls and framing are painted, without door or windows.

The lower level truck bays have painted concrete walls, with unfinished slab on grade floor and painted underside of the roof deck as ceiling. Heating, cooling and plumbing systems are not provided. The electrical service appears to be supplied underground, tapped from an adjacent building, and service is limited to the hopper operation equipment and wall-mounted, high-intensity discharge type lighting fixtures. The building does not contain fire sprinkler, fire alarm, or security systems.

Table EX- 9 Facility Details

BUILDING NAME:	Storage Building (Oil Tanks)		LAT/LONG:	33° 54' 04" N / 118° 24' 48" W	
ADDRESS:	3621 Bell Avenue Manhattan Beach, CA 90266		OCCUPANCY STATUS: OCCUPIED ☐ VACANT ☒ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	370		GROSS SQUARE FOOTAGE OF LAND:	210,800 (estimated) Whole Facility	
CURRENT REPLACEMENT VALUE:	$27,050		YEAR OF CONSTRUCTION:	1967	
			BUILDING EUL:	80+ Years	
			BUILDING RUL:	34+ Years	
BUILDING USE:	Storage		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The storage building is part of the Manhattan Beach Public Works Department service facility and is located along the north side of the site, at its northwest corner. The site as a whole was developed in circa 1967, when the oil tanks storage building was constructed. It has been reroofed in circa 1997.

The building has conventionally wood-framed walls and roof, with steel-reinforced concrete footings, concrete masonry foundation walls and concrete slab-on-grade floor. The roof covering is asphaltic fiberglass shingles over plywood or wood plank decking. The exterior walls are painted wood siding and concrete masonry foundation walls, with no doors or windows.

The interior of the facility has painted concrete masonry and gypsum board walls, exposed concrete slab floor and painted gypsum board ceiling. Heating, cooling and plumbing systems are not provided. The electrical service appears to be supplied underground, tapped from an adjacent building, and service is limited to the pumping equipment required for the oil storage tanks; lighting fixtures are not provided. The building does not contain fire sprinkler, fire alarm, or security systems.

ENVIRONMENTAL REVIEW

During the assessment period an inspection and survey to ascertain if Asbestos Containing Materials (ACM) and Lead-Based Paint (LBP) are present at the interior and exteriors of the building. The assessment was undertaken by Andersen Environmental and their full report can be reviewed Appendix E. A summary of results indicate the following:

The following materials were found to contain asbestos and considered ACM:

Table EX-2 Summary of Asbestos Results

Material Description	Material Location	Condition	Asbestos Percentage	Estimated Quantity*
Drywall & Joint Compound	Throughout Public Services Building	Good	>1% Chrysotile	5,656
12" Brown Vinyl Floor Tile & Mastic	Throughout Public Services Building	Good	2% Chrysotile	1,560
12" Tan Vinyl Floor Tile & Mastic	Throughout Public Services Building	Good	2% Chrysotile	956
Drywall & Joint Compound	Throughout Public Services Building	Good	2% Chrysotile	980
Roofing Materials (Penetration Mastic)	Throughout Public Services Building	Good	Presumed	500

* These quantities are only approximations

Expenditure relating to the removal of the ACM has not been provided within this report. We recommend that the abatement contractor is selected through a bidding process.

Lead-Based Paint was not identified at the building. Through sampling of several paint components the presence of LBP was indicated at or above the action level at the following locations:

- All interior and exterior painted surfaces samples during the inspection tested negative for lead-based paint.

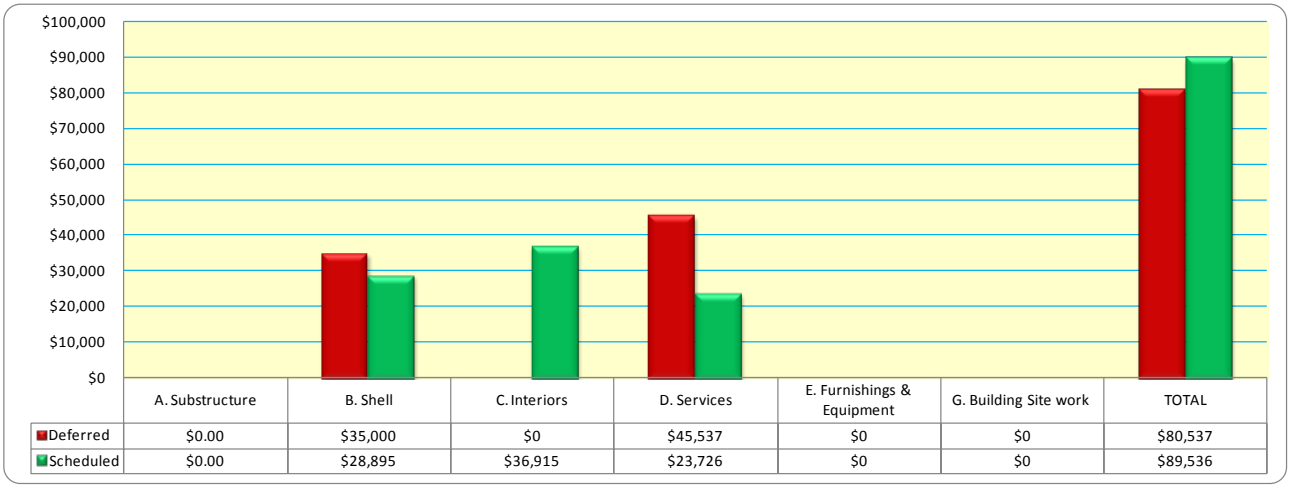
BUILDING EXPENDITURE SUMMARY

The building expenditure summary section provides an executive overview of the findings from the assessments. Charts EX-1 through to EX-9 provides a summary of anticipated expenditures over the study period for each of the buildings at the site. Chart EX-10 provides a cursory review and assessment of the major site assets to further assist the City in understanding the condition of the park over all. We have scheduled key findings highlighting key items of interest and their anticipated failure year. Further details of these expenditures and others are included within each respective report section and within the expenditure forecast, in Appendix A of this report.

Administration Offices (Building A)

The results illustrate a total anticipated expenditure over the study period of circa $170,073.

Chart EX-1 Building Expenditure Summary [1 & 2]



	A. Substructure	B. Shell	C. Interiors	D. Services	E. Furnishings & Equipment	G. Building Site work	TOTAL
Deferred	$0.00	$35,000	$0	$45,537	$0	$0	$80,537
Scheduled	$0.00	$28,895	$36,915	$23,726	$0	$0	$89,536

KEY FINDINGS

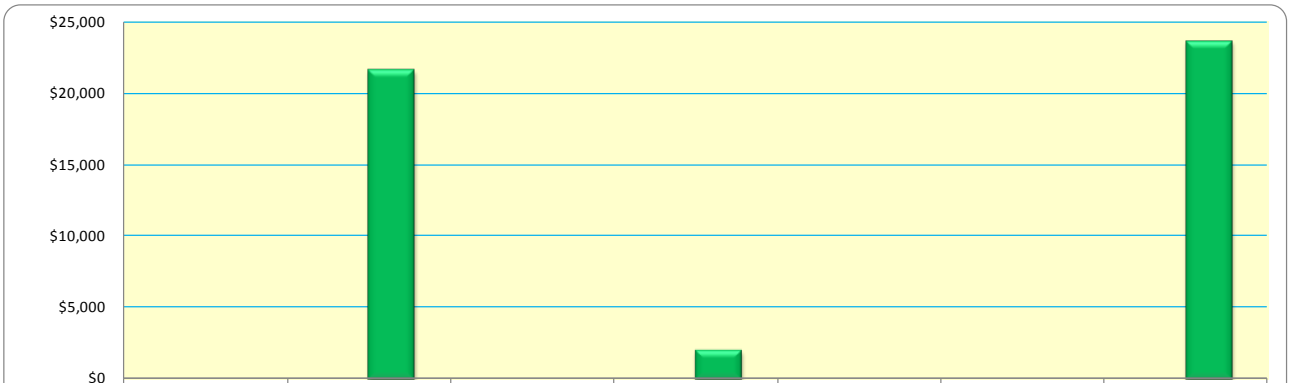
- B Shell: Repaint exterior at an estimated cost of $9,198 in years 2015 and 2019
- B Shell: Recoat metal roofing at an estimated cost of $10,500 in year 2018
- C Interiors: Repaint interior walls at an estimated cost of $28,665 in years 2016 ad 2022
- C Interiors: Replace carpeting at an estimated cost of $8,250 in year 2020
- D Services: Renovate restroom and install locker room at an estimated cost of $40,000 in year 2013
- D Services: Test, balance and repair the air distribution system at an estimated cost of $3,100 in year 2013
- D Services: Replace package HVAC unit at an estimated cost of $12,576 in year 2018

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 10 year study period

Vehicle Shop (Building B)

The results illustrate a total anticipated expenditure over the study period of circa $23,650.

Chart EX-2 Building Expenditure Summary [1 & 2]



	A. Substructure	B. Shell	C. Interiors	D. Services	E. Furnishings & Equipment	G. Building Site work	TOTAL
Deferred	$0.00	$0	$0	$0	$0	$0	$0
Scheduled	$0.00	$21,600	$0	$2,050	$0	$0	$23,650

KEY FINDINGS

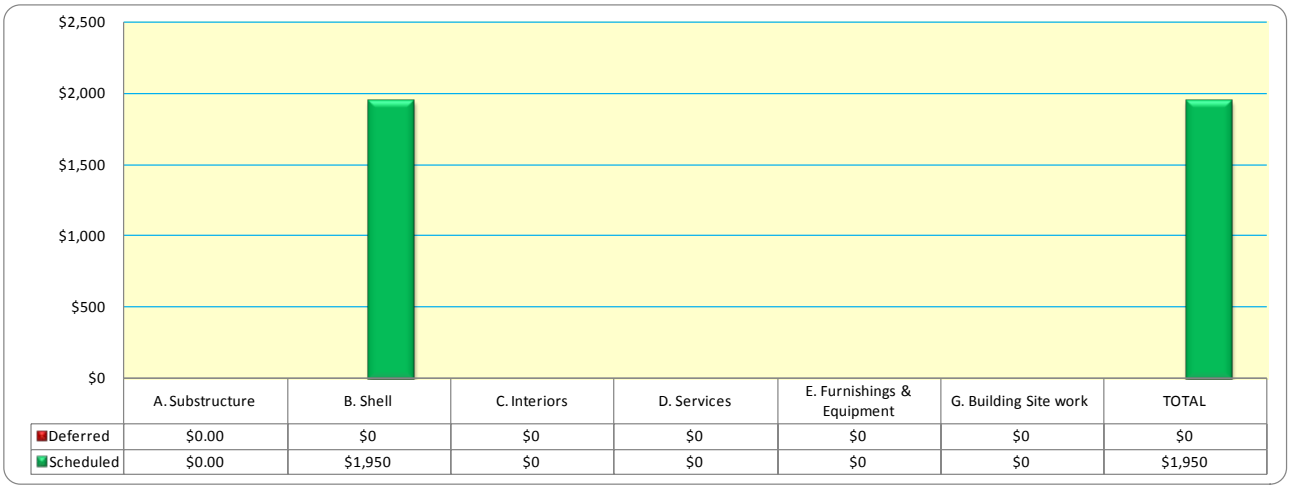
- B Shell: Repaint exterior surfaces at an estimated cost of $8,840 in years 2015 and 2019
- B Shell: Recoat metal roofing at an estimated cost of $3,920 in year 2018
- D Services: Replace unit heaters at an estimated cost of $2,050 in year 2020

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 10 year study period

Paint Storage (Building C)

The results illustrate a total anticipated expenditure over the study period of circa $1,950.

Chart EX-3 Building Expenditure Summary [1 & 2]



	A. Substructure	B. Shell	C. Interiors	D. Services	E. Furnishings & Equipment	G. Building Site work	TOTAL
Deferred	$0.00	$0	$0	$0	$0	$0	$0
Scheduled	$0.00	$1,950	$0	$0	$0	$0	$1,950

KEY FINDINGS

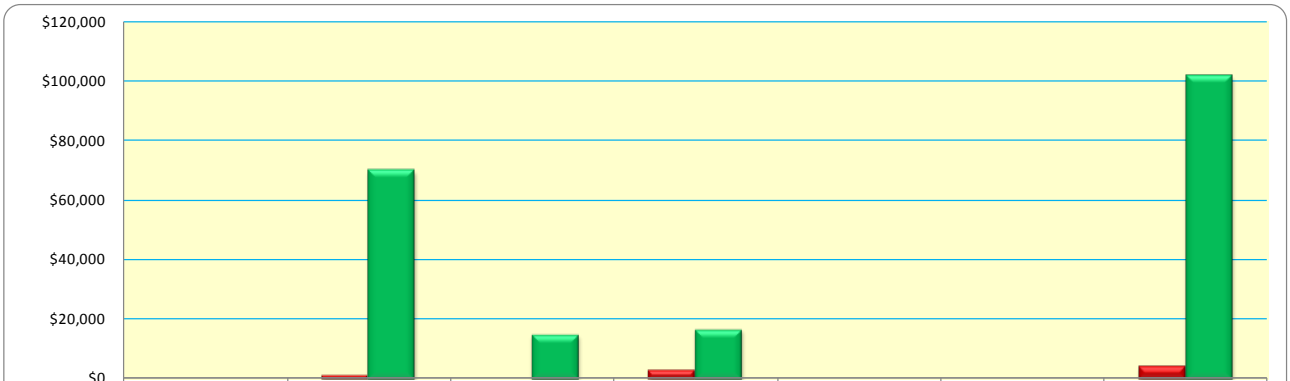
- B Shell: Repaint exterior wall surfaces at an estimated cost of $975 in years 2015 and 2019

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 10 year study period

Service Garage (Building D)

The results illustrate a total anticipated expenditure over the study period of circa $105,980.

Chart EX- 4 Building Expenditure Summary [1 & 2]



	A. Substructure	B. Shell	C. Interiors	D. Services	E. Furnishings & Equipment	G. Building Site work	TOTAL
Deferred	$0.00	$1,160	$0	$3,013	$0	$0	$4,173
Scheduled	$0.00	$70,075	$14,950	$16,783	$0	$0	$101,808

KEY FINDINGS

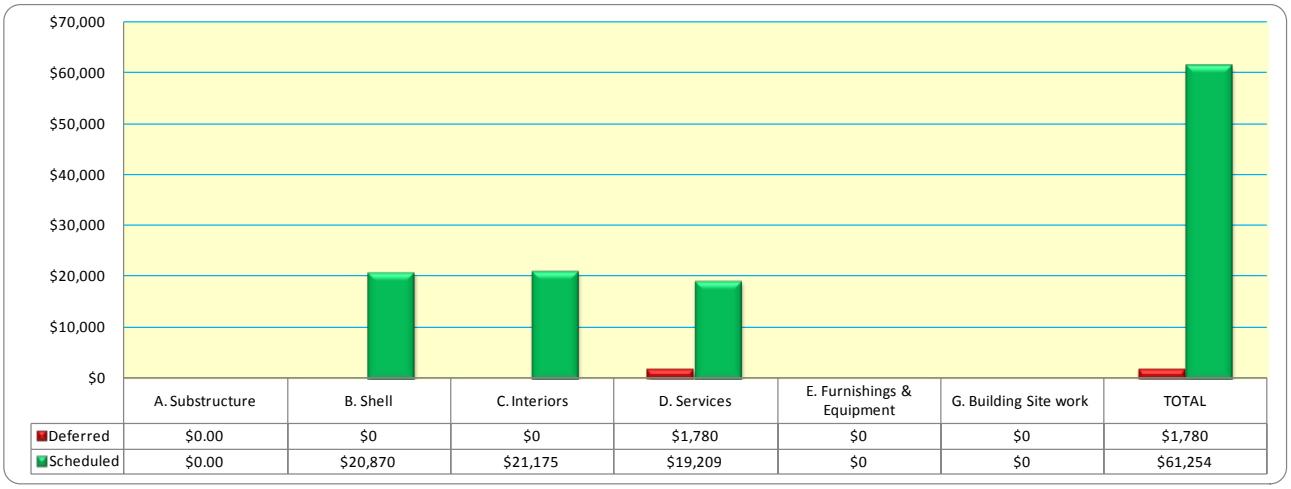
- B Shell: Repaint exterior surfaces at an estimated cost of $22,523 in years 2015 and 2019
- B Shell: Recoat metal roofing at an estimated cost of $24,395 in year 2018
- C Interiors: Repaint interior wall surfaces at an estimated cost of $14,950 in year 2017
- D Services: Replace split system HVAC equipment at an estimated cost of $4,190 in year 2017

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 10 year study period

Engineering Offices (Building E)

The results illustrate a total anticipated expenditure over the study period of circa $63,034.

Chart EX-5 Building Expenditure Summary [1 & 2]



	A. Substructure	B. Shell	C. Interiors	D. Services	E. Furnishings & Equipment	G. Building Site work	TOTAL
Deferred	$0.00	$0	$0	$1,780	$0	$0	$1,780
Scheduled	$0.00	$20,870	$21,175	$19,209	$0	$0	$61,254

KEY FINDINGS

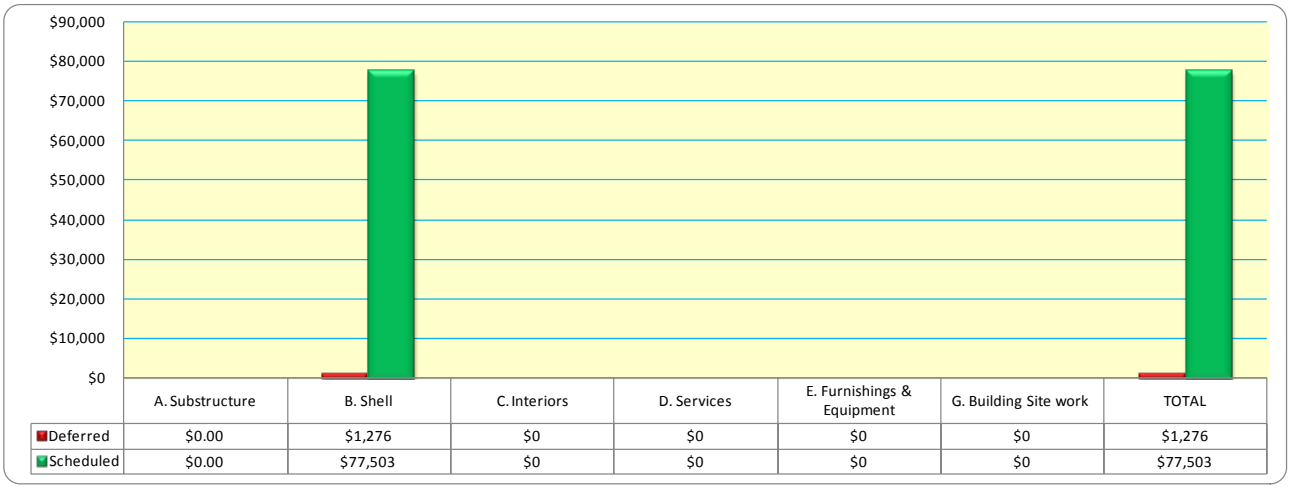
- B Shell: Repaint exterior wall surfaces at an estimated cost of $7,215 in years 2015 and 2019
- B Shell: Recoat metal roofing at an estimated cost of $6,440 in year 2018
- C Interiors: Repaint interior wall surfaces at an estimated cost of $15,925 in year 2017
- C Interiors: Replace carpeting at an estimated cost of $5,250 in year 2020
- D Services: Replace exhaust fans at an estimated cost of $1,665 in years 2017 and 2019
- D Services: Replace package HVAC unit at an estimated cost of $8,384 in year 2018
- D Services: Replace split system HVAC units at an estimated cost of $4,190 in year 2017

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 10 year study period

Storage Building (Building F)

The results illustrate a total anticipated expenditure over the study period of circa $78,779.

Chart EX- 6 Building Expenditure Summary [1 & 2]



	A. Substructure	B. Shell	C. Interiors	D. Services	E. Furnishings & Equipment	G. Building Site work	TOTAL
Deferred	$0.00	$1,276	$0	$0	$0	$0	$1,276
Scheduled	$0.00	$77,503	$0	$0	$0	$0	$77,503

KEY FINDINGS

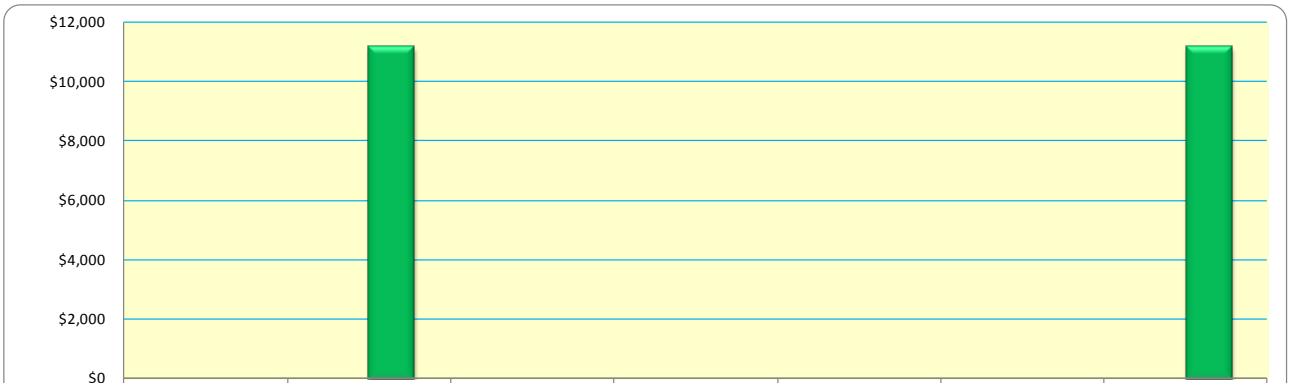
- B Shell: Repaint exterior wall surfaces at an estimated cost of $28,698 in years 2015 and 2019
- B Shell: Recoat metal roofing at an estimated cost of $20,108 in year 2018

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 10 year study period

Storage Building (Building G)

The results illustrate a total anticipated expenditure over the study period of circa $11,160.

Chart EX- 7 Building Expenditure Summary [1 & 2]



	A. Substructure	B. Shell	C. Interiors	D. Services	E. Furnishings & Equipment	G. Building Site work	TOTAL
Deferred	$0.00	$0	$0	$0	$0	$0	$0
Scheduled	$0.00	$11,160	$0	$0	$0	$0	$11,160

KEY FINDINGS

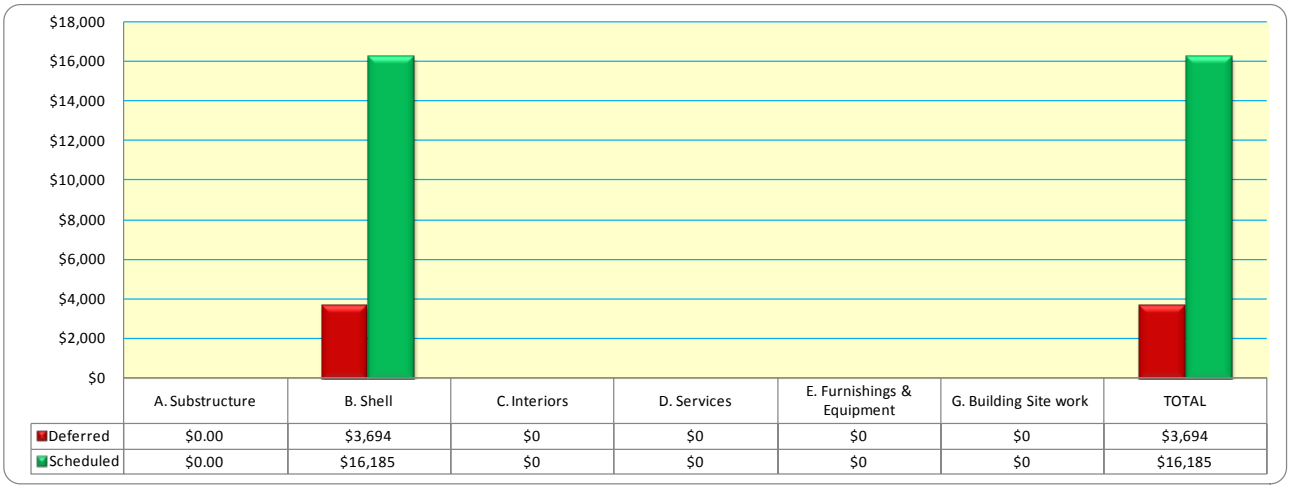
- B Shell: Repaint exterior wall surfaces at an estimated cost of $4,583 in years 2015 and 2019
- B Shell: Recoat metal roofing at an estimated cost of $1,995 in year 2018

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 10 year study period

Sand/Gravel Hopper

The results illustrate a total anticipated expenditure over the study period of circa $19,879.

Chart EX- 8 Building Expenditure Summary [1 & 2]



	A. Substructure	B. Shell	C. Interiors	D. Services	E. Furnishings & Equipment	G. Building Site work	TOTAL
Deferred	$0.00	$3,694	$0	$0	$0	$0	$3,694
Scheduled	$0.00	$16,185	$0	$0	$0	$0	$16,185

KEY FINDINGS

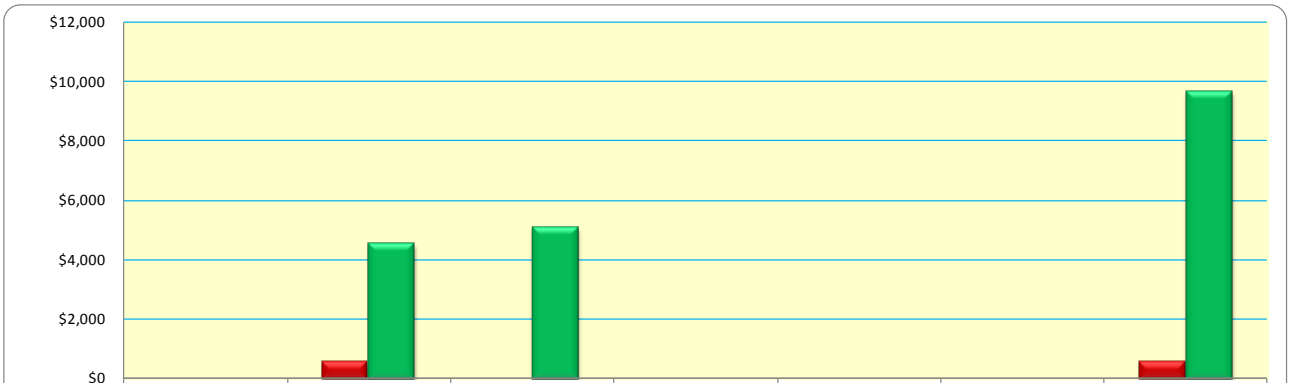
- B Shell: Repair exterior wall surfaces at an estimated cost of $3,694 in year 2013
- B Shell: Repaint exterior wall surfaces at an estimated cost of $8,093 in year 2015 and 2019

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 10 year study period

Storage Building (Oil Tanks)

The results illustrate a total anticipated expenditure over the study period of circa $10,233.

Chart EX- 9 Building Expenditure Summary [1 & 2]



	A. Substructure	B. Shell	C. Interiors	D. Services	E. Furnishings & Equipment	G. Building Site work	TOTAL
Deferred	$0.00	$580	$0	$0	$0	$0	$580
Scheduled	$0.00	$4,550	$5,103	$0	$0	$0	$9,653

KEY FINDINGS

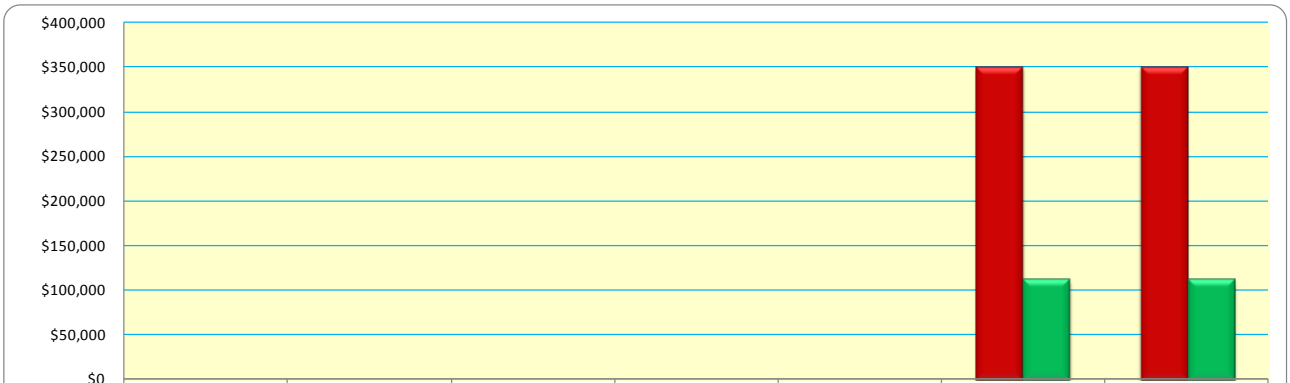
- B Shell: Repaint exterior surfaces at an estimated cost of $2,275 in years 2015 and 2019
- C Interiors: Repaint interior wall and ceiling surfaces at an estimated cost of $5,103 in year 2017

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 10 year study period

Site Systems

The results illustrate a total anticipated expenditure over the study period of circa $462,235.

Chart EX- 10 Building Expenditure Summary [1 & 2]



	A. Substructure	B. Shell	C. Interiors	D. Services	E. Furnishings & Equipment	G. Building Site work	TOTAL
Deferred	$0.00	$0	$0	$0	$0	$350,500	$350,500
Scheduled	$0.00	$0	$0	$0	$0	$111,735	$111,735

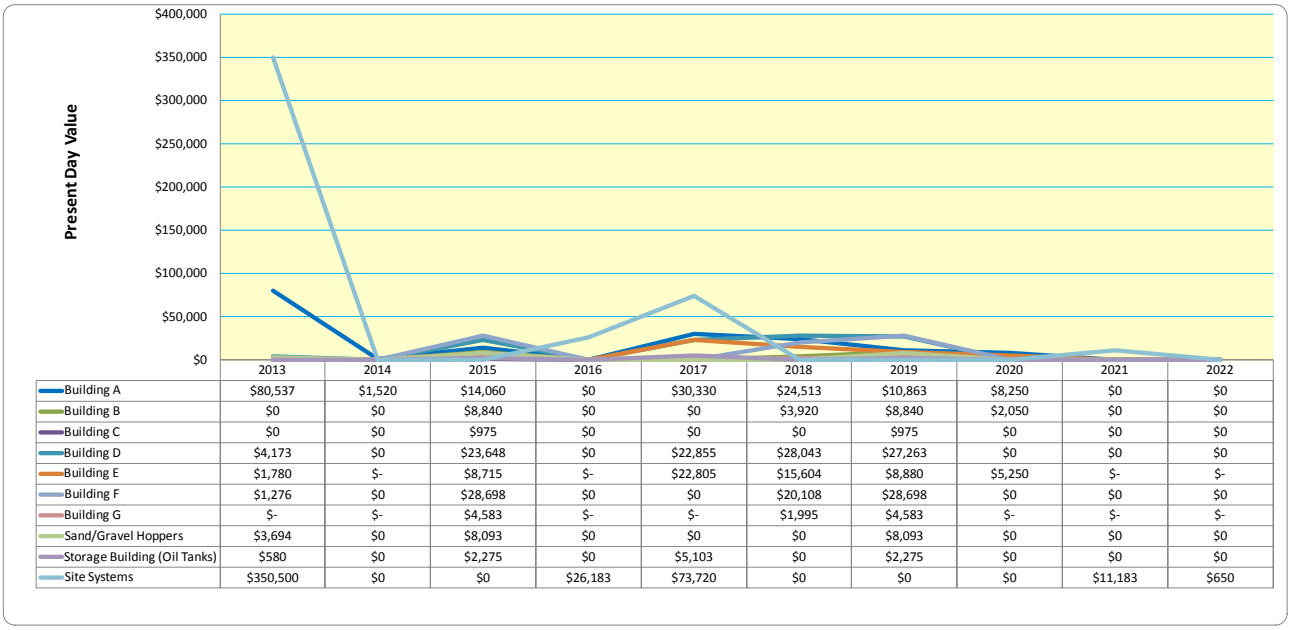
KEY FINDINGS

- G Building Sitework: Mill and resurface the asphalt pavement at an estimated cost of $15,000 in year 2016
- G Building Sitework: Seal coat and restripe asphalt pavement at an estimated cost of $2,745 in years 2016 and 2021
- G Building Sitework: Seal coat and restripe asphalt pavement at an estimated cost of $8,438 in years 2016 and 2021
- G Building Sitework: Replace emergency generator at an estimated cost of $73,720 in year 2017

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 10 year study period

Chart EX-11 illustrates a summary of yearly anticipated expenditures over the cost study period for each of the Public Works buildings and site systems. A detailed breakdown of anticipated expenditures is contained within Appendix A of this report.

Chart EX-11 Expenditure Forecast [1 & 2]



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Building A	$80,537	$1,520	$14,060	$0	$30,330	$24,513	$10,863	$8,250	$0	$0
Building B	$0	$0	$8,840	$0	$0	$3,920	$8,840	$2,050	$0	$0
Building C	$0	$0	$975	$0	$0	$0	$975	$0	$0	$0
Building D	$4,173	$0	$23,648	$0	$22,855	$28,043	$27,263	$0	$0	$0
Building E	$1,780	$-	$8,715	$-	$22,805	$15,604	$8,880	$5,250	$-	$-
Building F	$1,276	$0	$28,698	$0	$0	$20,108	$28,698	$0	$0	$0
Building G	$-	$-	$4,583	$-	$-	$1,995	$4,583	$-	$-	$-
Sand/Gravel Hoppers	$3,694	$0	$8,093	$0	$0	$0	$8,093	$0	$0	$0
Storage Building (Oil Tanks)	$580	$0	$2,275	$0	$5,103	$0	$2,275	$0	$0	$0
Site Systems	$350,500	$0	$0	$26,183	$73,720	$0	$0	$0	$11,183	$650

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 10 year study period

This chart highlights significant expenditure for the Public Works buildings and site systems within years 2013, 2014, 2015, 2017, 2018, 2019, 2020 and 2022 primarily due to the following systems which are expected to reach their Estimated Useful Life (EUL) and therefore due for replacement. The lines represent the total expenditure for each year, and are a useful tool to indicate the magnitude of the impeding issues the buildings will face.

Administration Offices (Building A)

Year 2013

- Test, balance and repair air distribution system

Year 2014

- Replace the drinking fountain

Year 2018

- Replace pad-mounted package unit
- Recoat metal roofing

Year 2020

- Repaint carpeting

Vehicle Shop (Building B)

Year 2018

- Recoat metal roofing

Year 2020

- Replace gas-fired unit heaters

Sand/Gravel Hoppers

Year 2013

Paint Storage (Building C)

Year 2015

- Repaint exterior walls

Storage Building (Oil Tanks)

Year 2015

- Repaint interior walls and ceilings

Year 2019

- Repaint exterior walls

Year 2019

- Repaint interior walls and ceilings

Engineering Offices (Building E)

Year 2015

- Install lighting occupancy sensors

Year 2017

- Replace exhaust fans and unit heaters

Year 2017

- Repaint exterior walls
- Repaint interior walls and ceilings
- Replace split system unit

Year 2020

- Replace carpeting

Storage Building (Building G)

Year 2015

- Repaint exterior walls
- Repair deteriorated concrete

Year 2015

- Repaint exterior surfaces

Storage Building (Building D)

Year 2017

- Replace exhaust fans and gas-fired unit heaters
- Replace split system units

Year 2018

- Recoat metal roofing
- Clean ductwork

Year 2019

- Replace exhaust fans and gas-fired unit heaters

Storage Building (Building F)

Year 2013

- Repair metal siding

Year 2018

- Recoat metal roofing

Site Systems

Year 2016

- Repair and resurface a portion of asphalt pavement
- Seal coat and restripe asphalt pavement

Year 2017

- Replace the emergency generator set

Year 2021

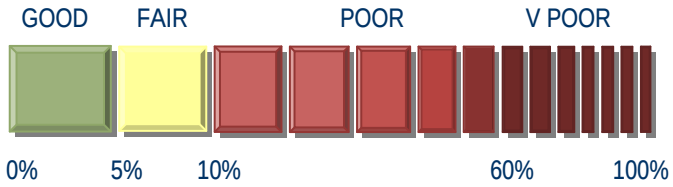
- Seal coat and restripe asphalt pavement

INTERPRETING RESULTS

In this report we have calculated the Facility Condition Index (FCI) for the facility; illustrating the likely condition of the systems and equipment should the required funding not be expended over the cost study period. The FCI is used in Facilities Management to provide a benchmark to compare the relative condition of a group of facilities. The FCI is primarily used to support asset management initiatives of federal, state, and local government facilities organizations.

The FCI is the ratio of accumulated Deferred Maintenance (DM) (total sum of required and recommended works) to the Current Replacement Value (CRV) for a constructed asset calculated by dividing DM by CRV. The range is from zero for a newly constructed asset, to one for a constructed asset with a DM value equal to its CRV. Acceptable ranges vary by "Asset Type', but as a general guideline the FCI scoring system is as follows:

$$FCI = \frac{\text{Maintenance, Repair, and Replacement Deficiencies of the Facility(s) (DM)}}{\text{Current Replacement Value of the Facility(s) (CRV)}}$$



The FCI is a relative indicator of condition, and should be tracked over time to maximize its benefit. It is advantageous to define condition ratings based on ranges of the FCI. There are a set of ratings: GOOD (under 0.05 (under 5%)), FAIR (0.5 to 0.10 (5% to 10%)), POOR (over 0.10 (over 10%)) and V-POOR (over 0.60 (over 60%)) based on evaluating data from various clients at the time of the publication. Table EX-10 will help interpret the results:

Table EX-10 FCI Scoring System

Condition	Definition	Score	Percentage Value
GOOD	In a new or well maintained condition, with no visual evidence of wear, soiling or other deficiencies	0.00 to 0.05	0% to 5%
FAIR	Subject to wear, and soiling but is still in a serviceable and functioning condition	0.05 to 0.10	5% to 10%
POOR	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.	Greater than 0.10	Greater than 10%
V-POOR	Subjected to hard or long-term wear. Has reached the end of its useful or serviceable life. Renewal now necessary	Greater than 0.60	Greater than 60%

If the FCI rating is 60% or greater then replacement of the asset/building should be considered instead of renewal.

Table EX-11 provides calculations of the FCI for each of the Public Works Yard buildings (excluding the site system expenditure costs); illustrating both the current condition of the buildings and the likely condition of the buildings should the required funding not be expended over the study period. The results of the study indicate that currently the buildings are similar in their condition, with them either being in a GOOD or FAIR condition rating.

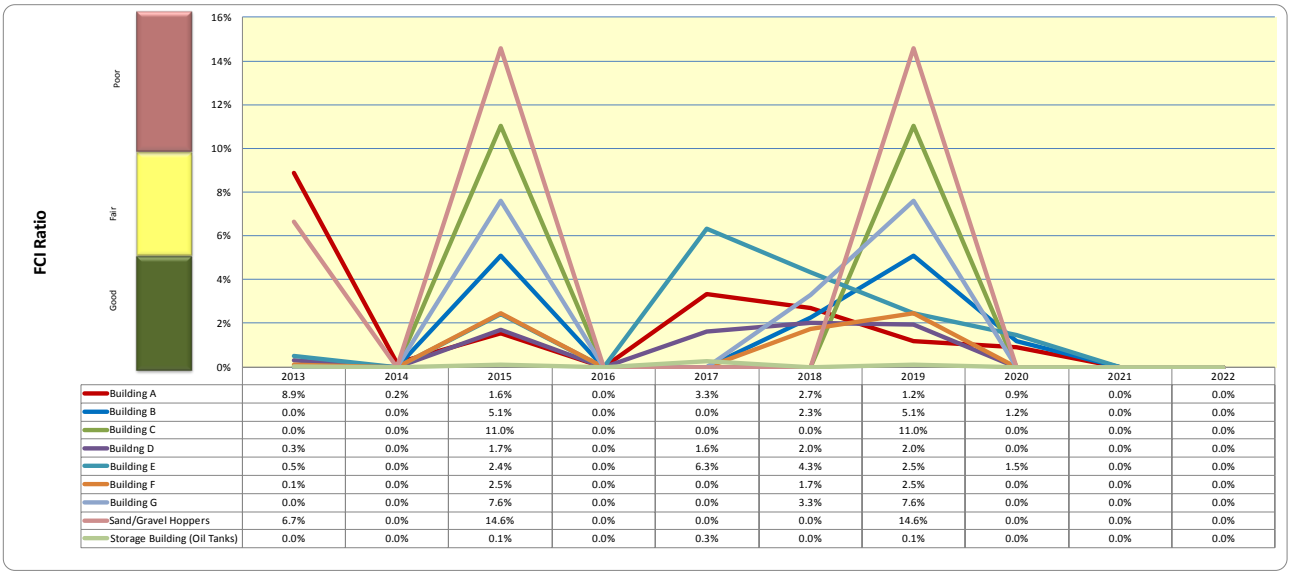
Table EX-11 Facility Condition Index

Building Name	FCI	Gross Square Foot (GSF)	CRV per GSF	Current Replacement Value (CRV)	Deferred Maintenance Value (DM)	FCI Ratio	Property Condition
Building A	Current FCI Ratio	5,748	$158	$906,031	$80,537	8.9%	FAIR
Building A	Year 10 FCI Ratio	5,748	$158	$906,031	$170,072	18.8%	GOOD
Building B	Current FCI Ratio	1,260	$138	$174,069	$0	0.0%	GOOD
Building B	Year 10 FCI Ratio	1,260	$138	$174,069	$23,650	13.6%	FAIR
Building C	Current FCI Ratio	104	$85	$8,841	$0	0.0%	GOOD
Building C	Year 10 FCI Ratio	104	$85	$8,841	$1,950	22.1%	POOR
Sand/Gravel Hoppers	Current FCI Ratio	624	$89	$55,520	$3,694	6.7%	FAIR
Sand/Gravel Hoppers	Year 10 FCI Ratio	624	$89	$55,520	$19,878	35.8%	POOR
Storage Building (Oil Tanks)	Current FCI Ratio	7,391	$274	$2,025,800	$580	0.0%	GOOD
Storage Building (Oil Tanks)	Year 10 FCI Ratio	7,391	$274	$2,025,800	$10,233	0.5%	GOOD
Building D	Current FCI Ratio	12,050	$116	$1,397,769	$4,173	0.3%	GOOD
Building D	Year 10 FCI Ratio	12,050	$116	$1,397,769	$105,980	7.6%	FAIR
Building E	Current FCI Ratio	3,120	$115	$359,768	$1,780	0.5%	GOOD
Building E	Year 10 FCI Ratio	3,120	$115	$359,768	$63,034	17.5%	POOR
Building F	Current FCI Ratio	10,058	$115	$1,159,790	$1,276	0.1%	GOOD
Building F	Year 10 FCI Ratio	10,058	$115	$1,159,790	$78,779	6.8%	FAIR
Building G	Current FCI Ratio	979	$62	$60,225	$0	0.0%	GOOD

Building Name	FCI	Gross Square Foot (GSF)	CRV per GSF	Current Replacement Value (CRV)	Deferred Maintenance Value (DM)	FCI Ratio	Property Condition
Building G	Year 10 FCI Ratio	979	$62	$60,225	$11,160	18.5%	POOR

Chart EX-12 indicates the affects of the FCI ratio per year, assuming the required funds and expenditures ARE made to address the identified works and deferred maintenance each year. As explained the buildings are in a similar condition at this current time, and will contain varied condition ratings throughout the study period as repairs and renewals are carried out

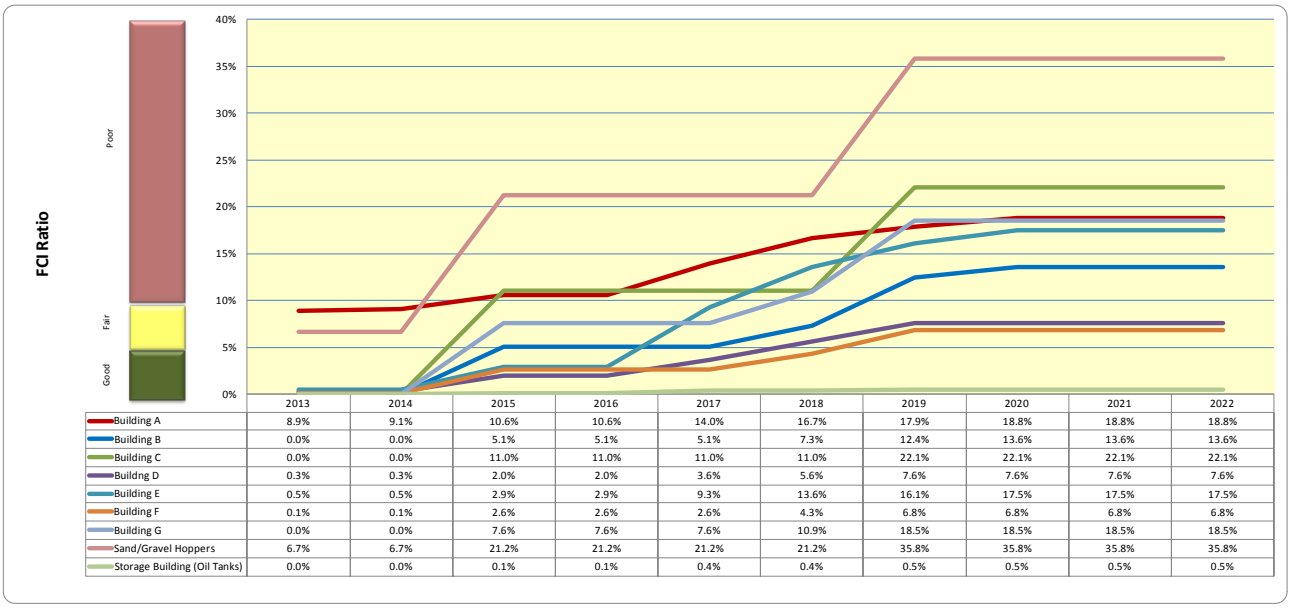
Chart EX-12 Year by Year Effects of FCI over the Study Period



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Building A	8.9%	0.2%	1.6%	0.0%	3.3%	2.7%	1.2%	0.9%	0.0%	0.0%
Building B	0.0%	0.0%	5.1%	0.0%	0.0%	2.3%	5.1%	1.2%	0.0%	0.0%
Building C	0.0%	0.0%	11.0%	0.0%	0.0%	0.0%	11.0%	0.0%	0.0%	0.0%
Buildng D	0.3%	0.0%	1.7%	0.0%	1.6%	2.0%	2.0%	0.0%	0.0%	0.0%
Building E	0.5%	0.0%	2.4%	0.0%	6.3%	4.3%	2.5%	1.5%	0.0%	0.0%
Building F	0.1%	0.0%	2.5%	0.0%	0.0%	1.7%	2.5%	0.0%	0.0%	0.0%
Building G	0.0%	0.0%	7.6%	0.0%	0.0%	3.3%	7.6%	0.0%	0.0%	0.0%
Sand/Gravel Hoppers	6.7%	0.0%	14.6%	0.0%	0.0%	0.0%	14.6%	0.0%	0.0%	0.0%
Storage Building (Oil Tanks)	0.0%	0.0%	0.1%	0.0%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%

Chart EX-13 indicates the cumulative effects of the FCI ratio over the study period assuming the required funds and expenditures are NOT provided to address the identified actions and deferred maintenance each year. The majority of the buildings will fall into the POOR condition rating by the end of the study period.

Chart EX-13 Cumulative Effects of FCI over the Study Period



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Building A	8.9%	9.1%	10.6%	10.6%	14.0%	16.7%	17.9%	18.8%	18.8%	18.8%
Building B	0.0%	0.0%	5.1%	5.1%	5.1%	7.3%	12.4%	13.6%	13.6%	13.6%
Building C	0.0%	0.0%	11.0%	11.0%	11.0%	11.0%	22.1%	22.1%	22.1%	22.1%
Buildng D	0.3%	0.3%	2.0%	2.0%	3.6%	5.6%	7.6%	7.6%	7.6%	7.6%
Building E	0.5%	0.5%	2.9%	2.9%	9.3%	13.6%	16.1%	17.5%	17.5%	17.5%
Building F	0.1%	0.1%	2.6%	2.6%	2.6%	4.3%	6.8%	6.8%	6.8%	6.8%
Building G	0.0%	0.0%	7.6%	7.6%	7.6%	10.9%	18.5%	18.5%	18.5%	18.5%
Sand/Gravel Hoppers	6.7%	6.7%	21.2%	21.2%	21.2%	21.2%	35.8%	35.8%	35.8%	35.8%
Storage Building (Oil Tanks)	0.0%	0.0%	0.1%	0.1%	0.4%	0.4%	0.5%	0.5%	0.5%	0.5%

PRIORITIZATION OF WORK

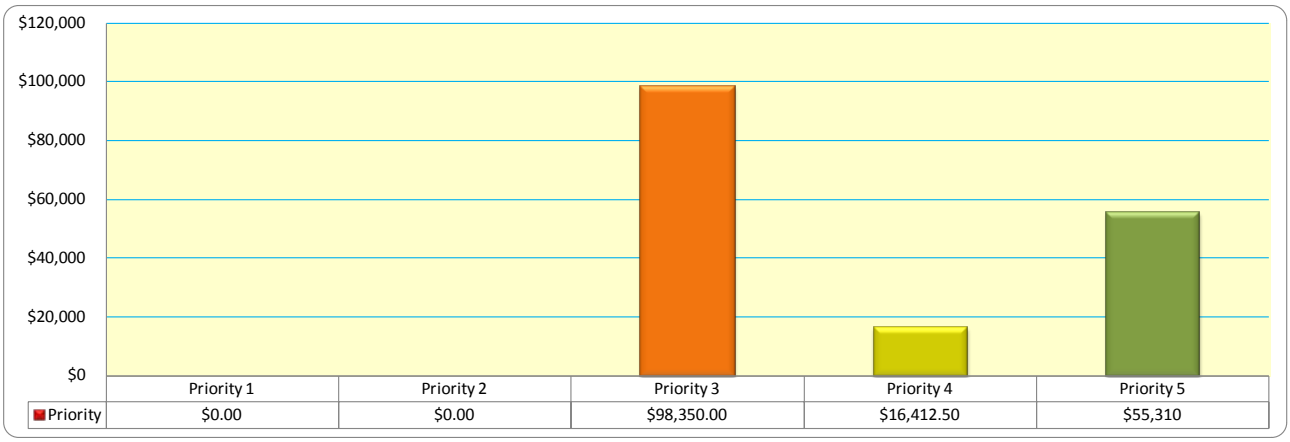
Faithful+Gould has prioritized the identified work in order to assist with analyzing the deficiencies found during the assessments. The following Priorities are shown below:

Priority 1 - Life Safety/ Code Compliance/ADA:	•Compromises staff or public safety or when a system requires to be upgraded to comply with current codes and standards.
Priority 2 – Currently Critical:	•A system or component is inoperable or compromised and requires immediate action
Priority 3 – Necessary / Not Critical:	•Maintain the integrity of the facility or component and replace those items, which have exceeded their expected useful life
Priority 4 – Recommended:	•Necessary for optimal performance of the facility or component
Priority 5 – Appearance:	•Used when a system has degraded and requires refurbishment

Chart EX-14 through to EX-23 illustrates the breakdown of expenditure according the priority coding providing an opportunity to strategically plan and effectively direct funding to the highest priority for each building and the site systems.

Administration Offices (Building A)

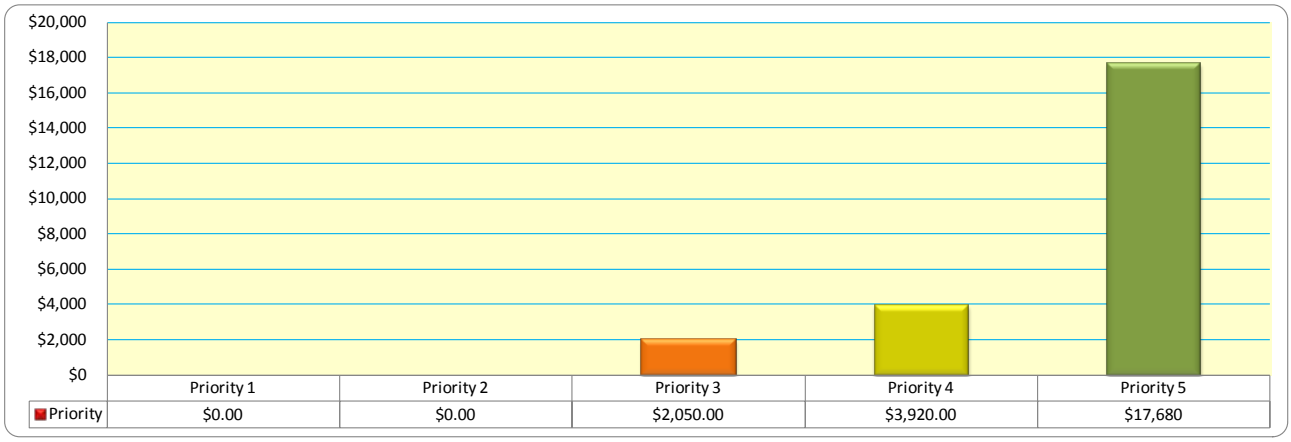
Chart EX-14 Cumulative Prioritization of Work



In Chart EX-14, Priority 3 and Priority 5 appear to require the most amount of expenditure in this study. These categories illustrate that the majority of the work which needs to be undertaken is associated with normal replacements and with the appearance of the building.

Vehicle Shop (Building B)

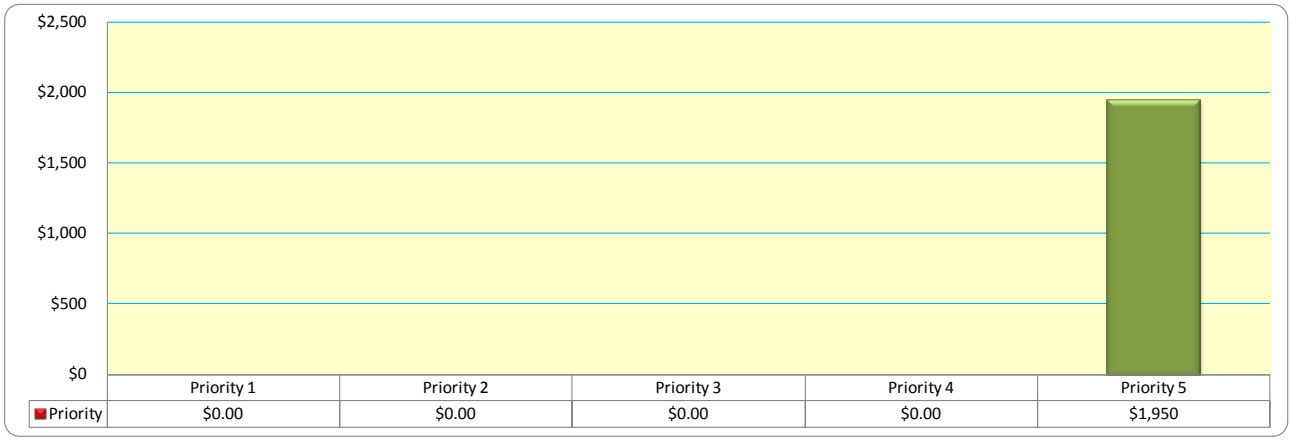
Chart EX-15 Cumulative Prioritization of Work



Priority 5 appears to require the most amount of expenditure in this study. This category illustrates that the majority of the work which needs to be undertaken is associated with the appearance of the building.

Paint Storage (Building C)

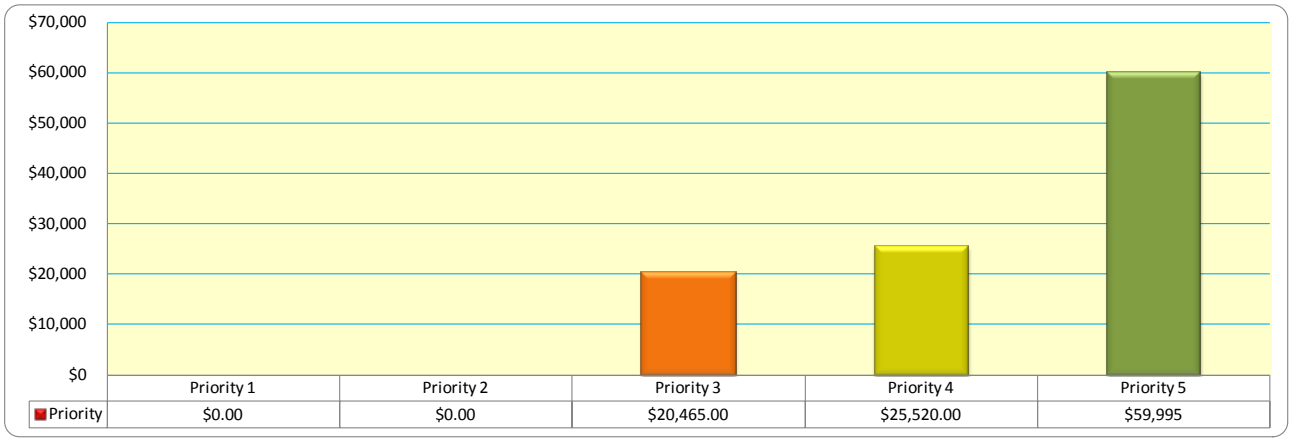
Chart EX-16 Cumulative Prioritization of Work



Priority 5 requires the most amount of expenditure in this study. This category illustrates that the majority of the work which needs to be undertaken is associated with maintaining the appearance of the building.

Service Garage (Building D)

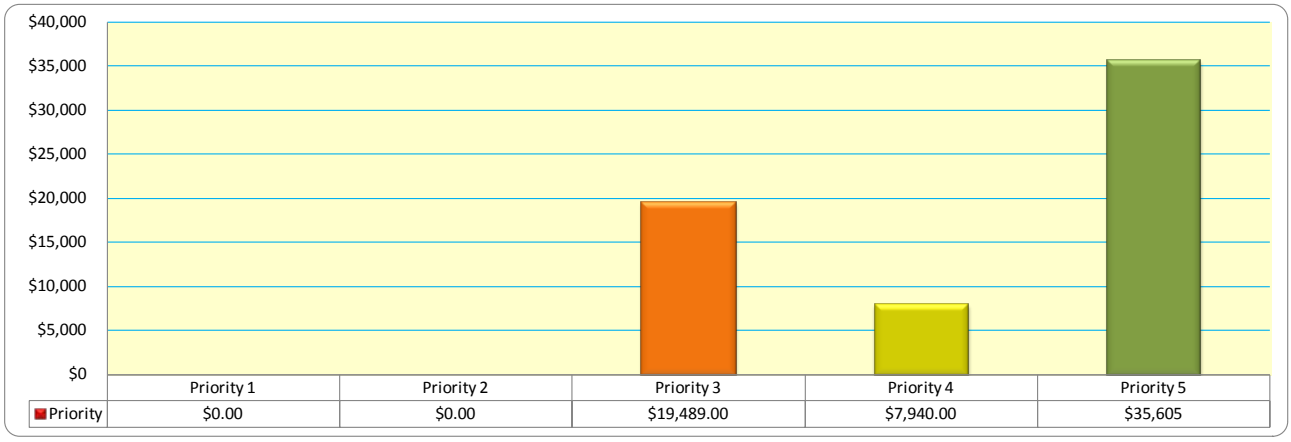
Chart EX-17 Cumulative Prioritization of Work



Priority 5 appear to require the most amount of expenditure in this study. These categories illustrate that the majority of the work which needs to be undertaken is associated with the appearance of the building.

Engineering Offices (Building E)

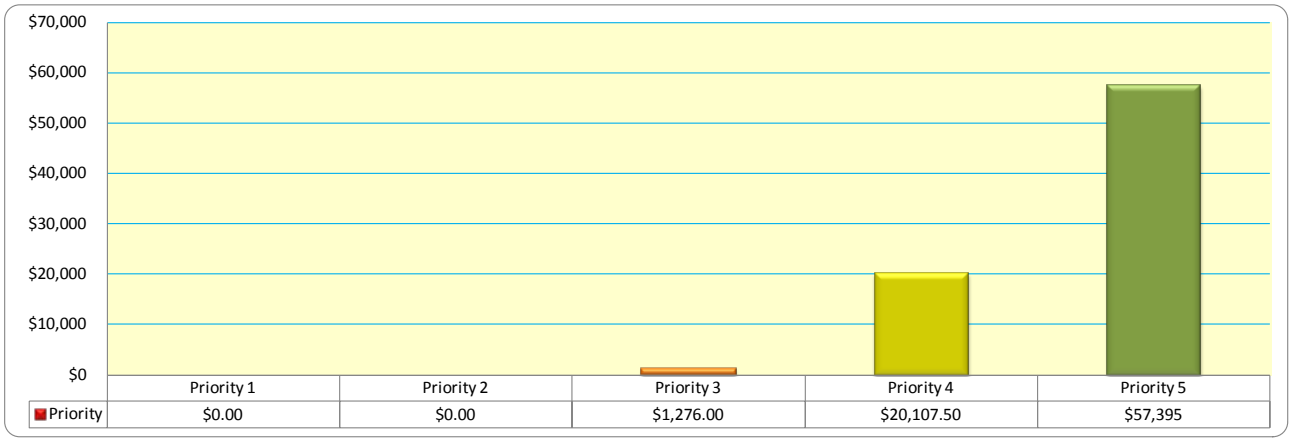
Chart EX-18 Cumulative Prioritization of Work



Priority 3 and Priority 5 appear to require the most amount of expenditure in this study. These categories illustrate that the majority of the work which needs to be undertaken is associated with maintaining the site and end of useful life replacements, and the appearance of the building.

Storage Building (Building F)

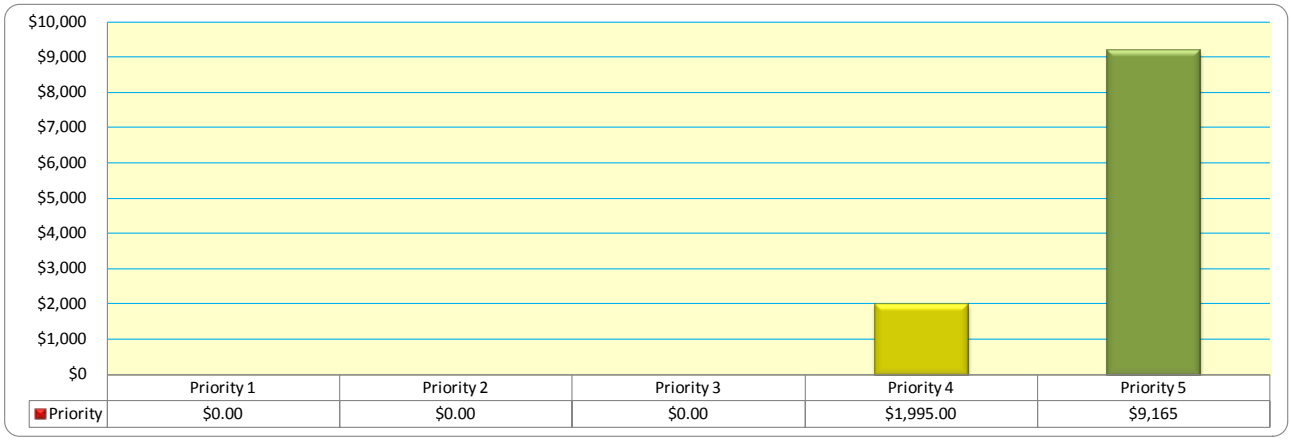
Chart EX-19 Cumulative Prioritization of Work



Priority 4 and Priority 5 appear to require the most amount of expenditure in this study. These categories illustrate that the majority of the work which needs to be undertaken is associated with the optimal performance and the appearance of the building.

Storage Building (Building G)

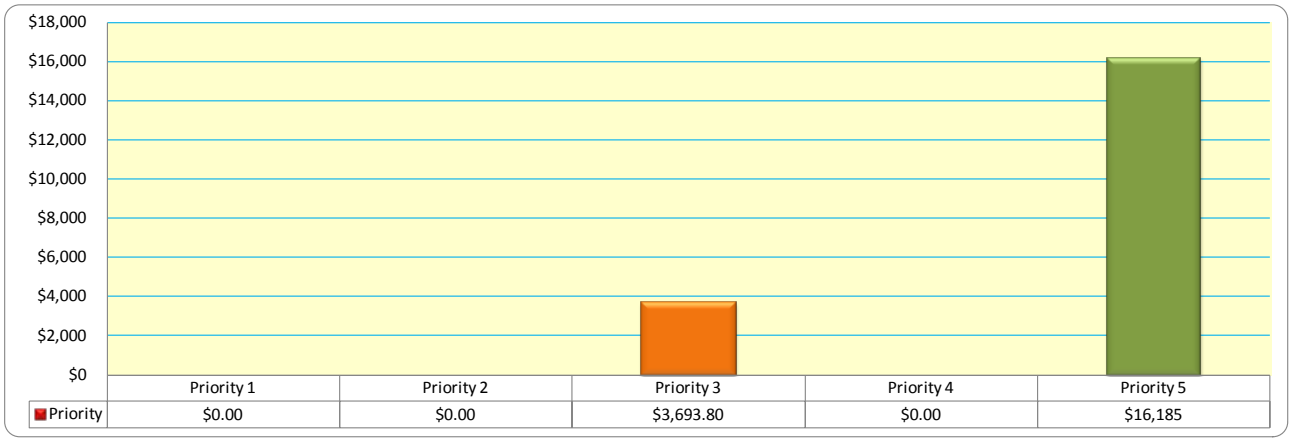
Chart EX-20 Cumulative Prioritization of Work



Priority 4 and Priority 5 appear to require the most amount of expenditure in this study. These categories illustrate that the majority of the work which needs to be undertaken is associated with the optimal performance and the appearance of the building.

Sand / Gravel Hoppers

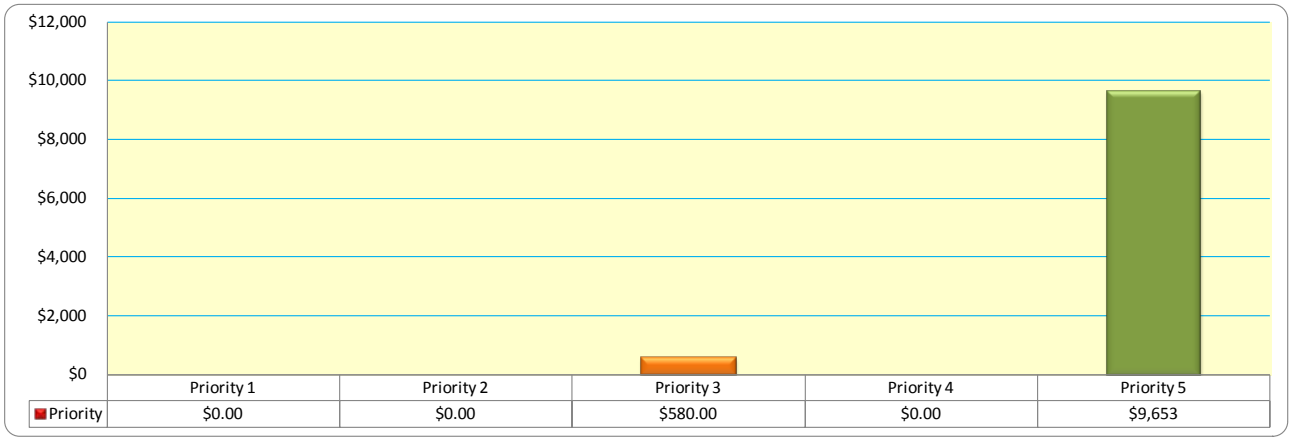
Chart EX-21 Cumulative Prioritization of Work



Priority 3 and 5 appears to require the most amount of expenditure in this study. This category illustrates that the majority of the work which needs to be undertaken is associated with maintaining the site, and the appearance of the building.

Storage Building (Oil Tanks)

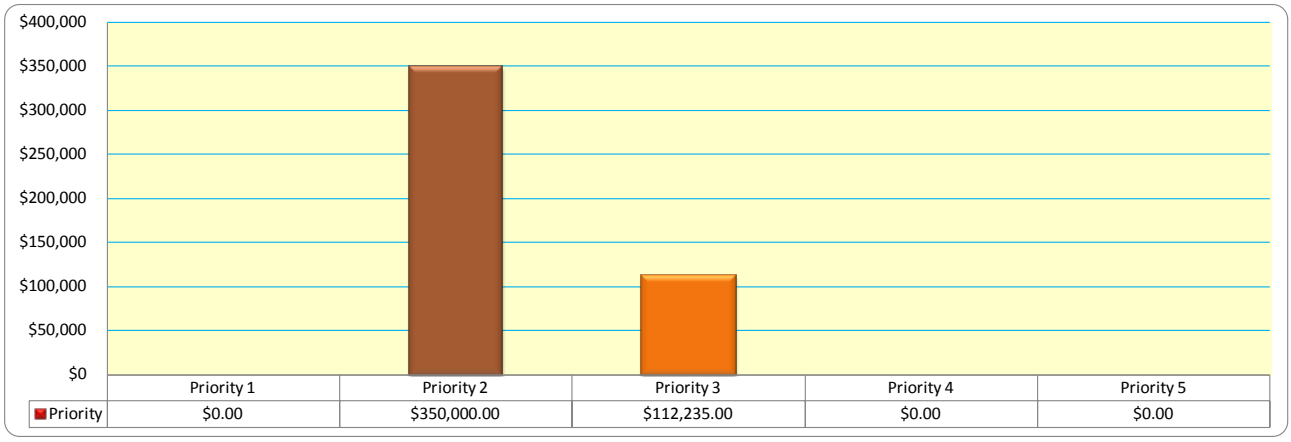
Chart EX-22 Cumulative Prioritization of Work



Priority 5 requires the most amount of expenditure in this study. This category illustrates that the majority of the work which needs to be undertaken is associated with the appearance of the building.

Site Systems

Chart EX-23 Cumulative Prioritization of Work

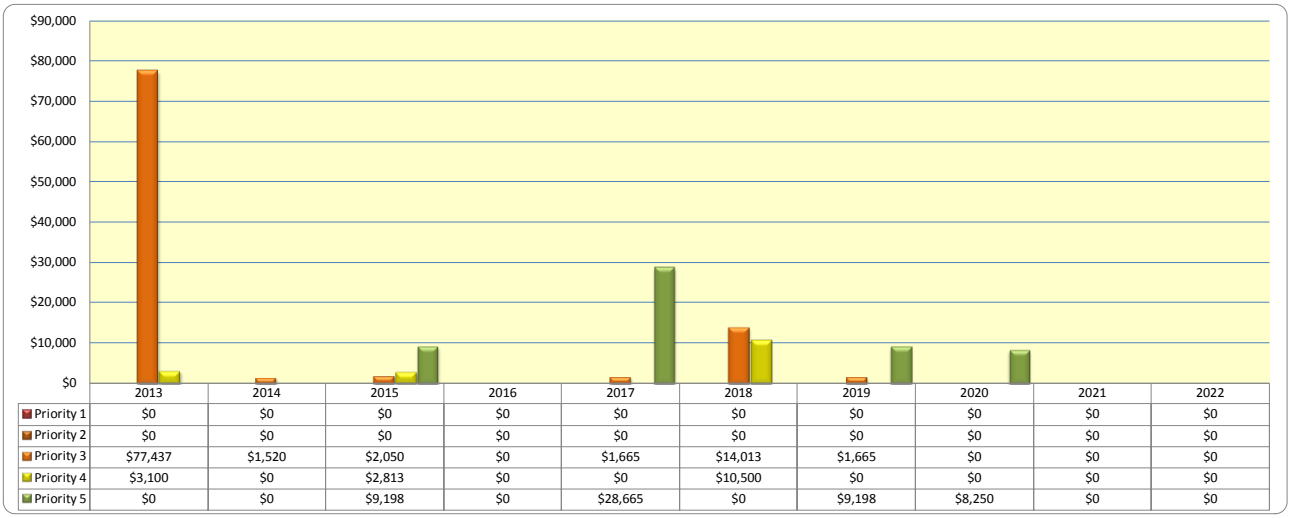


Priority 2 and 3 appears to require the most amount of expenditure in this study. The expenditure relates to immediate repair or replacement of inoperable or compromised components, and end of useful life component replacements at the site.

Chart EX-24 through to EX-33 illustrates the expenditure per priority code, per each year within the 10 year study period.

Administration Offices (Building A)

Chart EX-24 Year by Year Cumulative Prioritization of Work

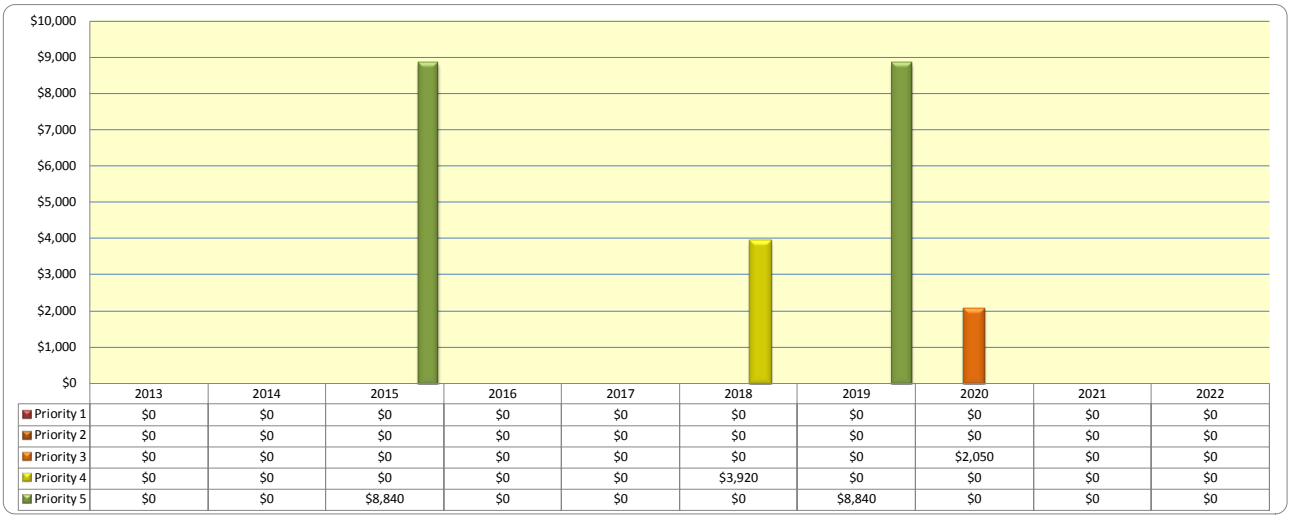


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Priority 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$77,437	$1,520	$2,050	$0	$1,665	$14,013	$1,665	$0	$0	$0
Priority 4	$3,100	$0	$2,813	$0	$0	$10,500	$0	$0	$0	$0
Priority 5	$0	$0	$9,198	$0	$28,665	$0	$9,198	$8,250	$0	$0

Chart EX-24 illustrates that there is one key year for Priority 3 coding; at the near-term in the study period, and several key years for Priority 5, including 2017.

Vehicle Shop (Building B)

Chart EX-25 Year by Year Cumulative Prioritization of Work

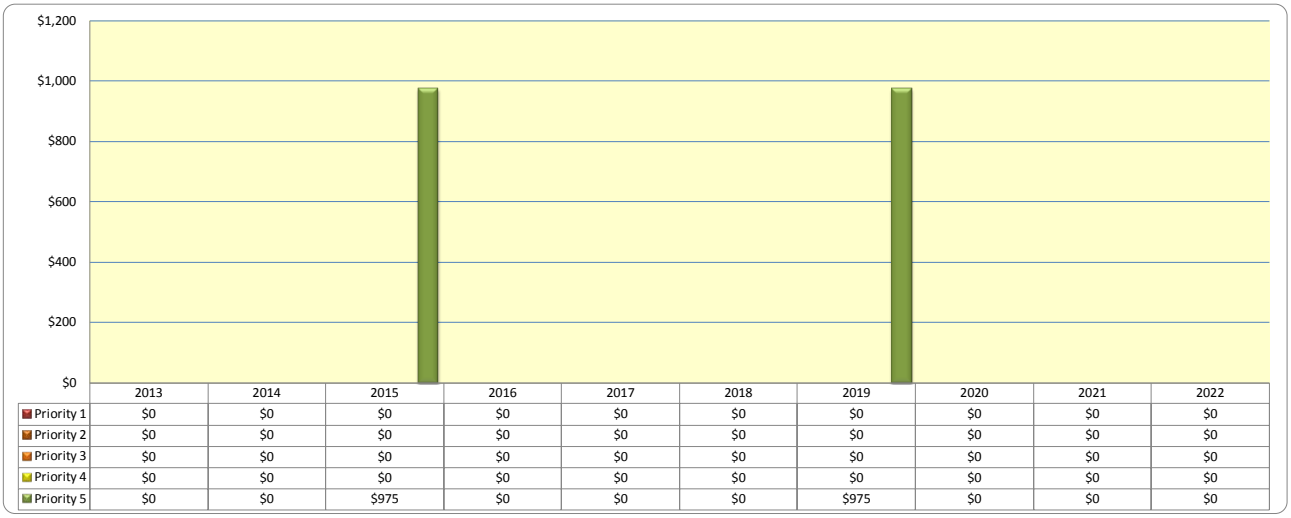


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Priority 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$0	$0	$0	$0	$0	$0	$0	$2,050	$0	$0
Priority 4	$0	$0	$0	$0	$0	$3,920	$0	$0	$0	$0
Priority 5	$0	$0	$8,840	$0	$0	$0	$8,840	$0	$0	$0

Chart EX-25 illustrates that there are two key years for Priority 5 throughout the study period.

Paint Storage (Building C)

Chart EX-26 Year by Year Cumulative Prioritization of Work

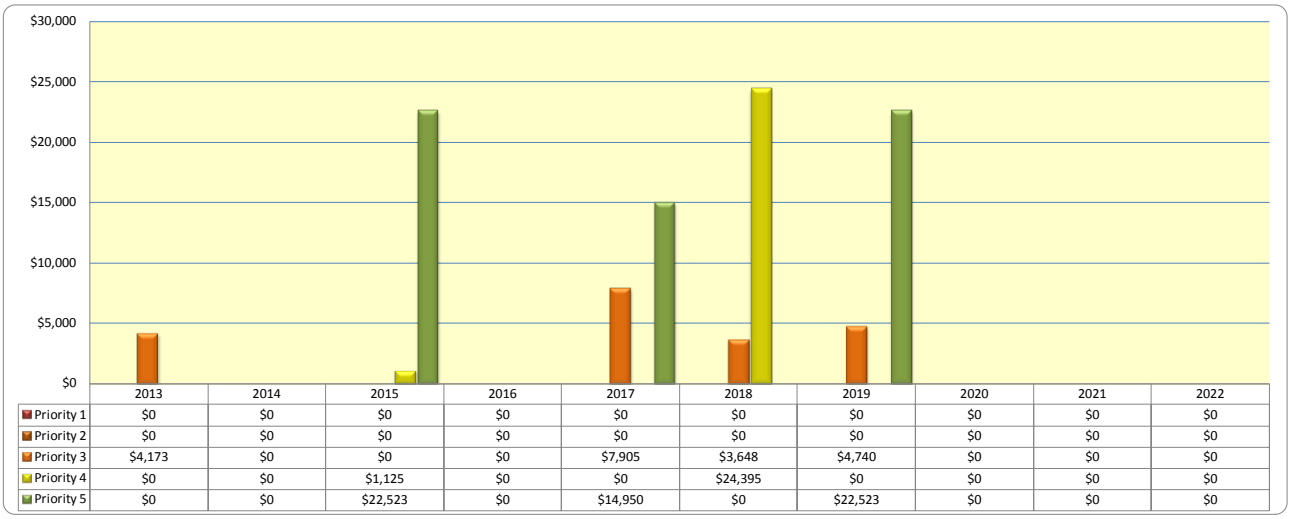


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Priority 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 5	$0	$0	$975	$0	$0	$0	$975	$0	$0	$0

Chart EX-26 illustrates that there are two key years for Priority 5 coding throughout the study period, years 2015 and 2019.

Service Garage (Building D)

Chart EX-27 Year by Year Cumulative Prioritization of Work

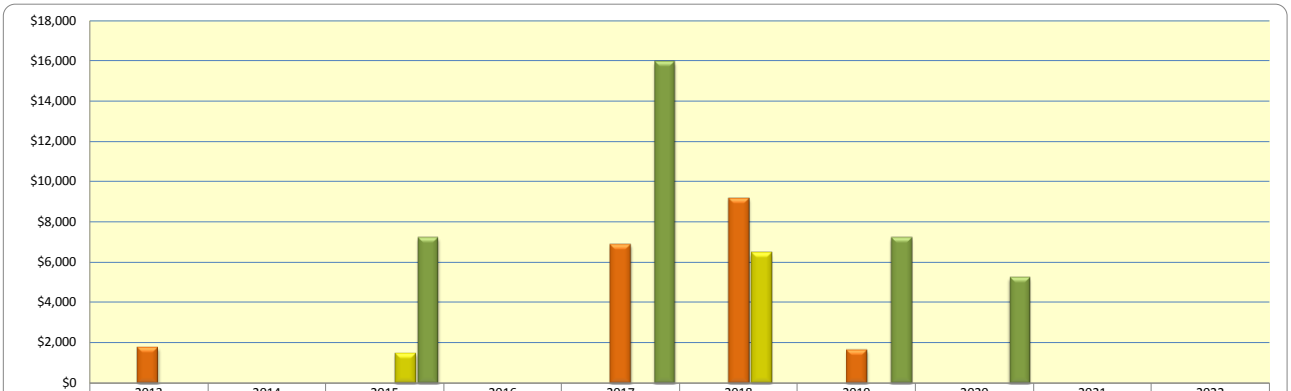


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Priority 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$4,173	$0	$0	$0	$7,905	$3,648	$4,740	$0	$0	$0
Priority 4	$0	$0	$1,125	$0	$0	$24,395	$0	$0	$0	$0
Priority 5	$0	$0	$22,523	$0	$14,950	$0	$22,523	$0	$0	$0

Chart EX-27 illustrates that there is one key year for Priority 4 and several key years for Priority 5 coding mid-term.

Engineering Offices (Building E)

Chart EX-28 Year by Year Cumulative Prioritization of Work

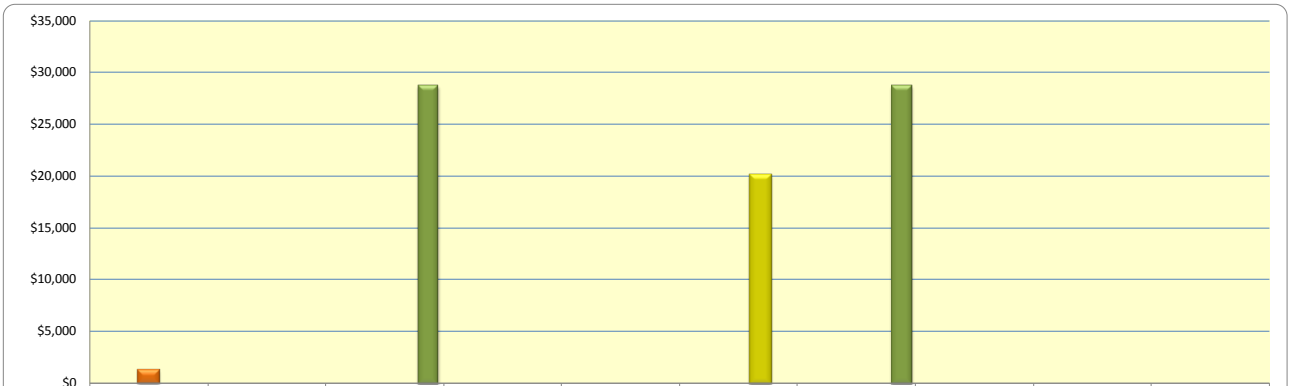


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Priority 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$1,780	$0	$0	$0	$6,880	$9,164	$1,665	$0	$0	$0
Priority 4	$0	$0	$1,500	$0	$0	$6,440	$0	$0	$0	$0
Priority 5	$0	$0	$7,215	$0	$15,925	$0	$7,215	$5,250	$0	$0

Chart EX-28 illustrates that there are several of key years for Priority 3 and Priority 5 coding throughout the study period.

Storage Building (Building F)

Chart EX-29 Year by Year Cumulative Prioritization of Work

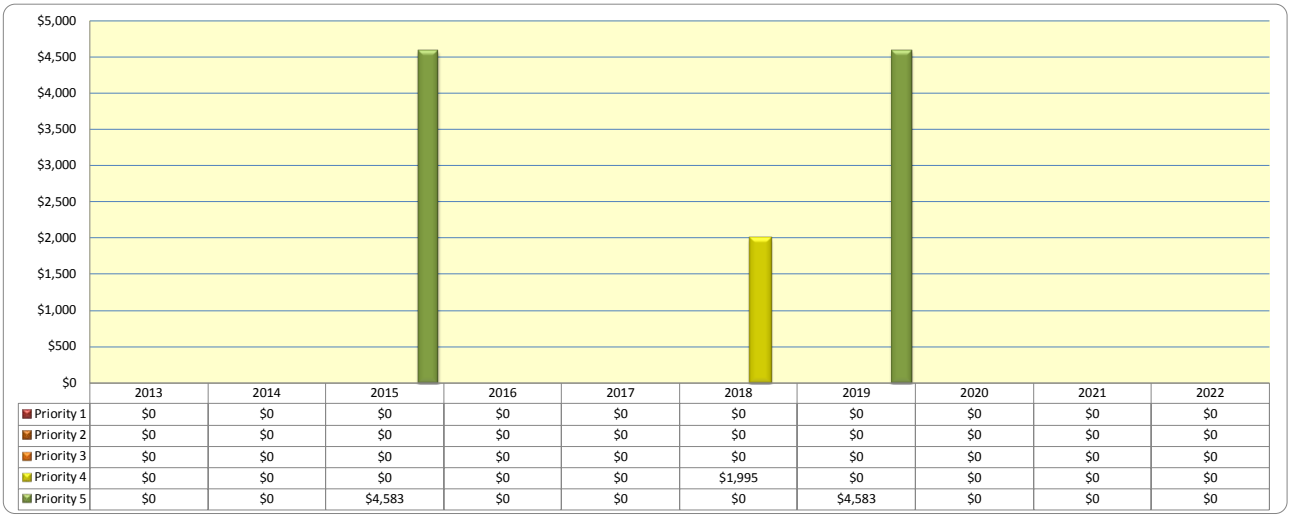


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Priority 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$1,276	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 4	$0	$0	$0	$0	$0	$20,108	$0	$0	$0	$0
Priority 5	$0	$0	$28,698	$0	$0	$0	$28,698	$0	$0	$0

Chart EX-29 illustrates that there are key years for both Priority 4 and Priority 5 coding throughout the study period.

Storage Building (Building G)

Chart EX-30 Year by Year Cumulative Prioritization of Work

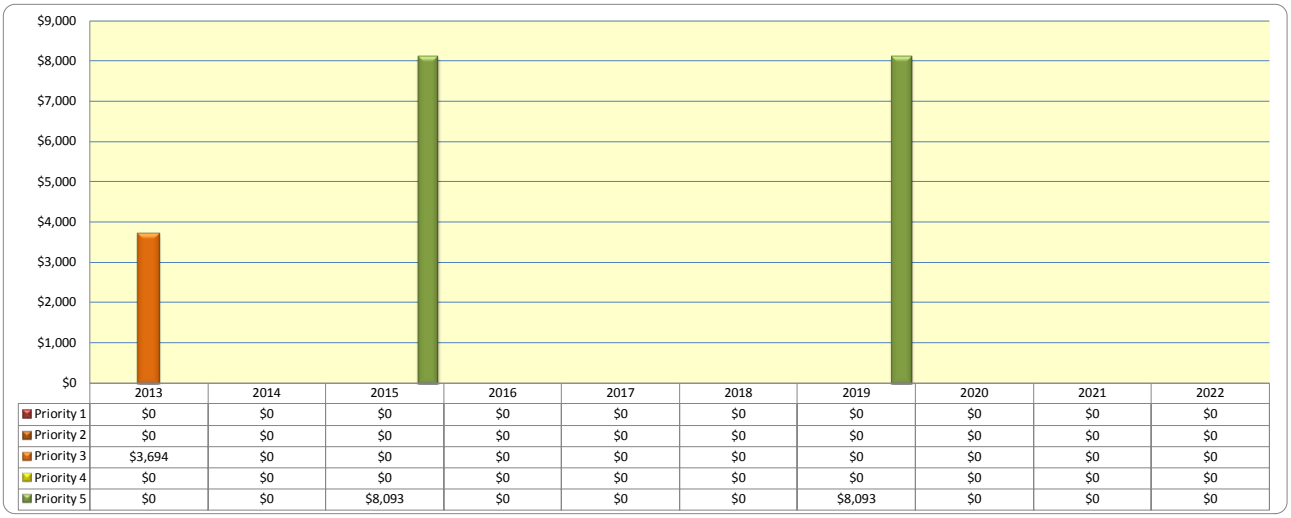


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Priority 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 4	$0	$0	$0	$0	$0	$1,995	$0	$0	$0	$0
Priority 5	$0	$0	$4,583	$0	$0	$0	$4,583	$0	$0	$0

Chart EX-30 illustrates that there is one key year for Priority 4 and two key years for Priority 5 coding during the study period.

Sand / Gravel Hoppers

Chart EX-31 Year by Year Cumulative Prioritization of Work

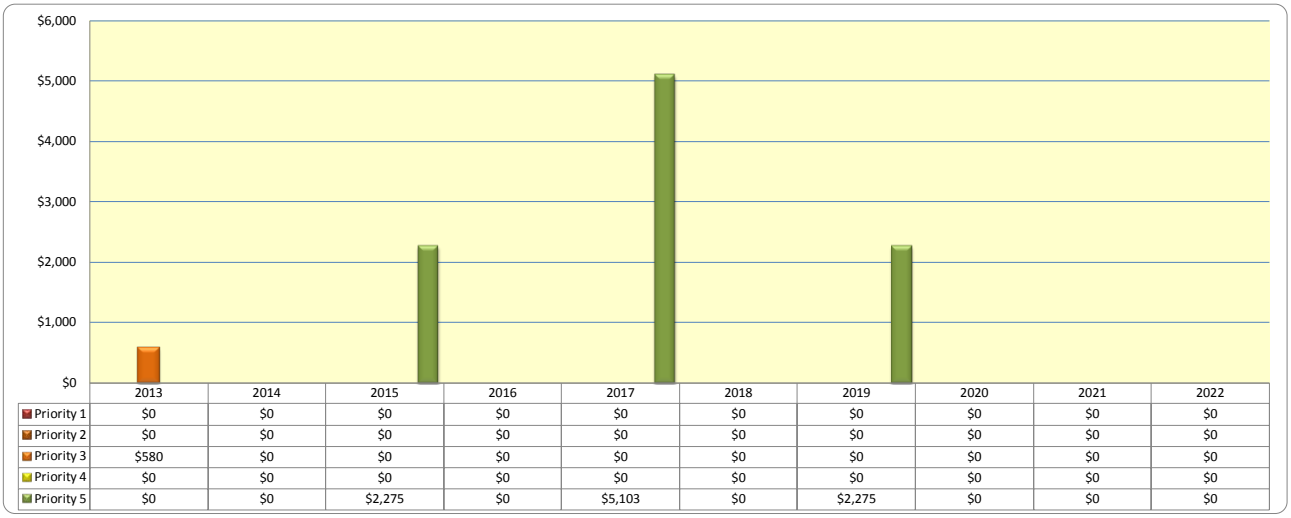


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Priority 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$3,694	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 5	$0	$0	$8,093	$0	$0	$0	$8,093	$0	$0	$0

Chart EX-31 illustrates that there is one key year for Priority 3 and two key years for Priority 5 coding throughout the study period.

Storage Building (Oil Tanks)

Chart EX-32 Year by Year Cumulative Prioritization of Work

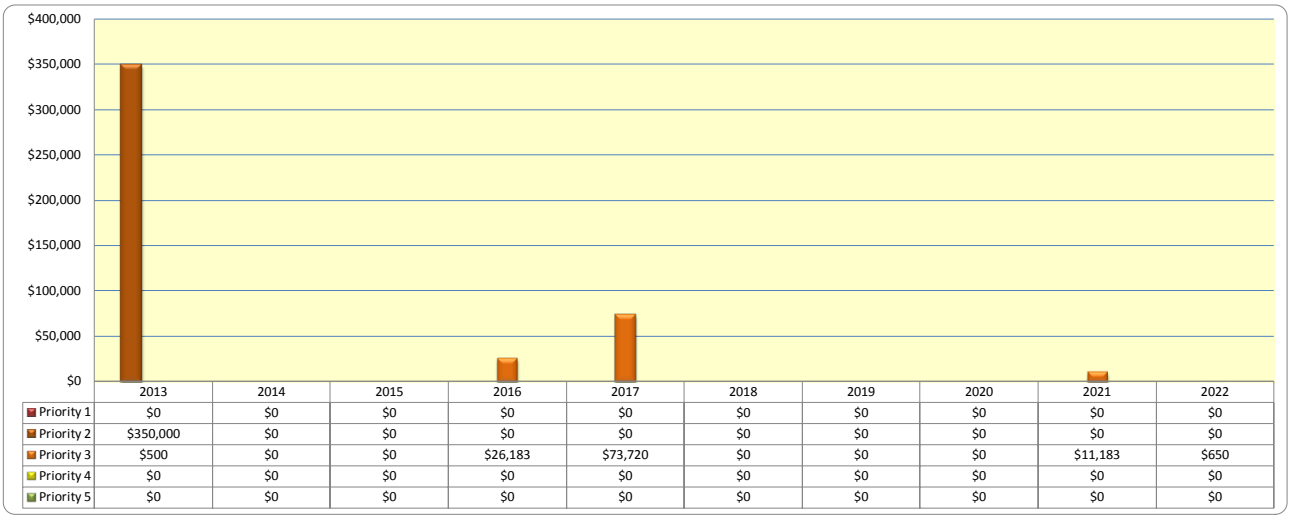


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Priority 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$580	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 5	$0	$0	$2,275	$0	$5,103	$0	$2,275	$0	$0	$0

Chart EX-32 illustrates that there are several of key years for Priority 5 coding throughout the study period.

Site Systems

Chart EX-33 Year by Year Cumulative Prioritization of Work



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Priority 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$350,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$500	$0	$0	$26,183	$73,720	$0	$0	$0	$11,183	$650
Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 5	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-33 illustrates that there is one key year for Priority 2 coding during the study period.

PLAN TYPES

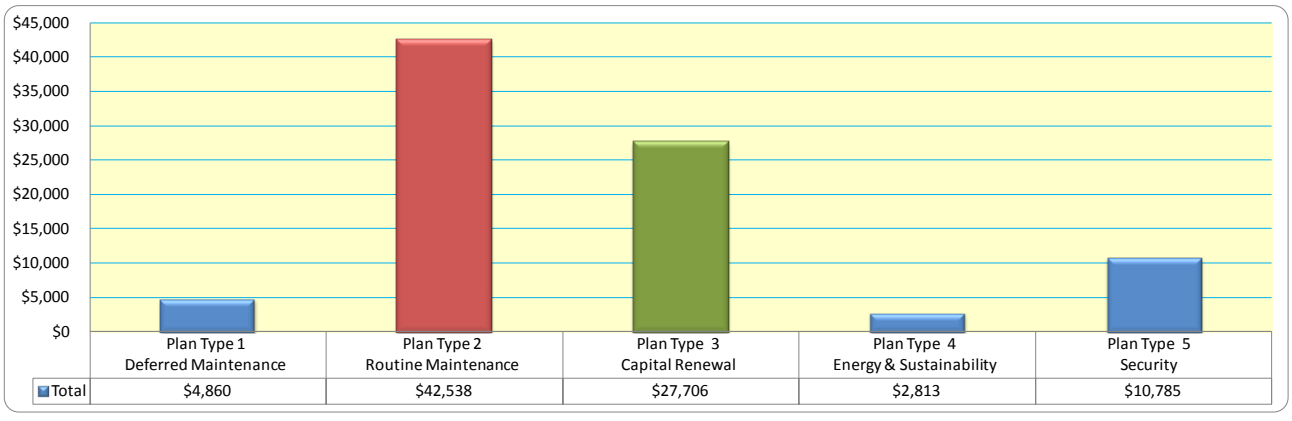
Faithful+Gould has prioritized the identified work according to the Plan Type or deficiency categories in order to assist with analyzing the deficiencies found during the assessments. The following Plan Types are shown below:

Plan Type 1 Deferred Maintenance	•Maintenance that was not performed when it was scheduled or past its useful life resulting in immediate repair or replacement
Plan Type 2 Routine Maintenance	•Maintenance that is planned and performed on a routine basis to maintain and preserve the condition
Plan Type 3 Capital Renewal	•Planned replacement of building systems that have reached the end of their useful life
Plan Type 4 Energy & Sustainability	•When the repair or replace of equipment or systems are recommended to improve energy and sustainability performance.
Plan Type 5 Security	•When a system requires replacement due to a security risk or requirement

Charts EX-34 through EX-43 illustrates the amount of expenditure, per category within the 10 year study period. These figures include each of the buildings and the site systems.

Administration Offices

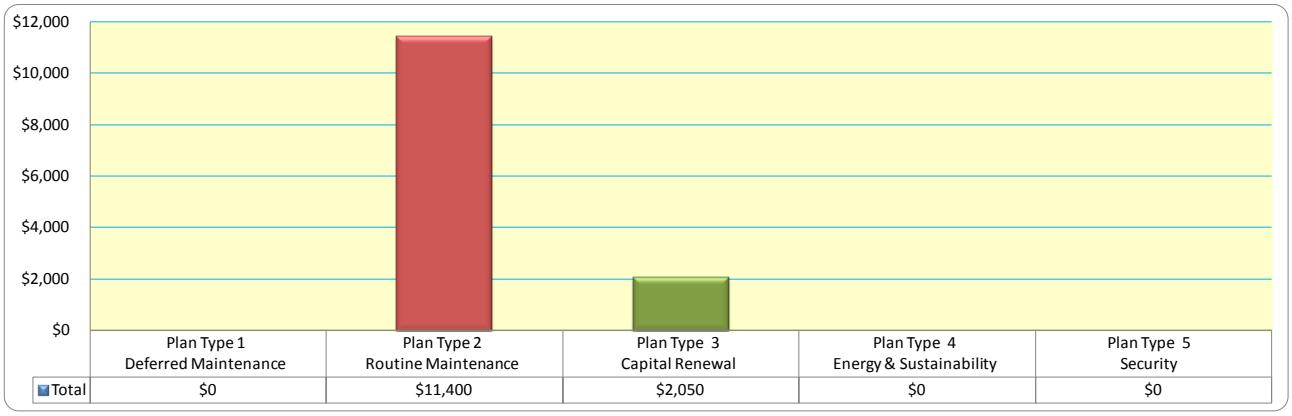
Chart EX-34 Cumulative Expenditure per Category of Works



Plan Type 2 – Routine Maintenance, and Plan Type 3 – Capital Renewal appear to require the most amount of expenditure in this study.

Vehicle Shop (Building B)

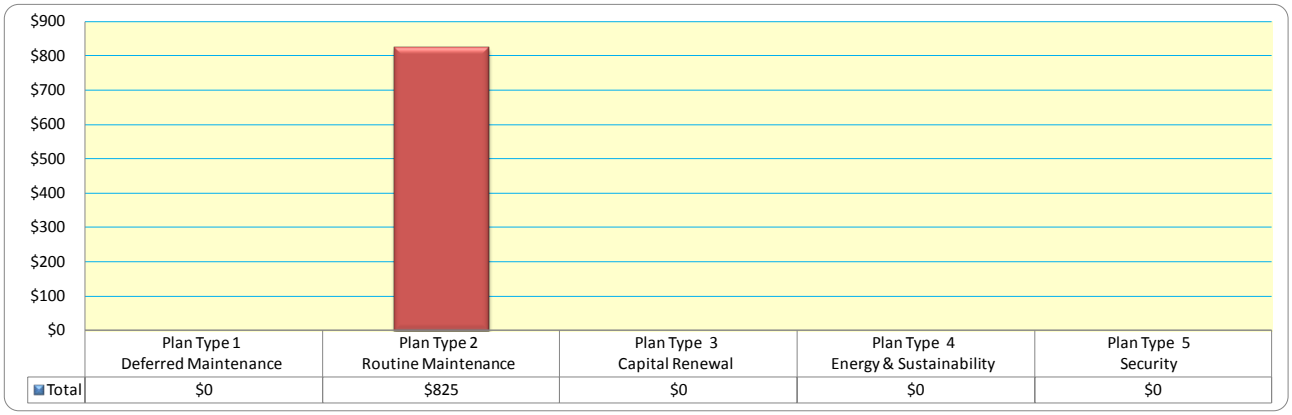
Chart EX-35 Cumulative Expenditure per Category of Works



Plan Type 2 – Routine Maintenance, and Plan Type 3 – Capital Renewal appear to require the most amount of expenditure in this study.

Paint Storage (Building C)

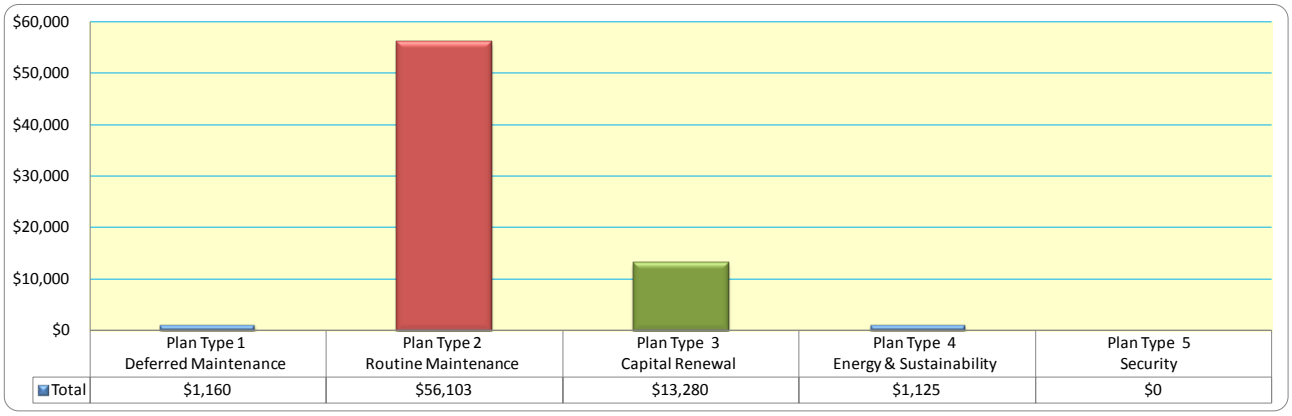
Chart EX-36 Cumulative Expenditure per Category of Works



Plan Type 2 – Routine Maintenance appears to require the most amount of expenditure in this study.

Service Shop (Building D)

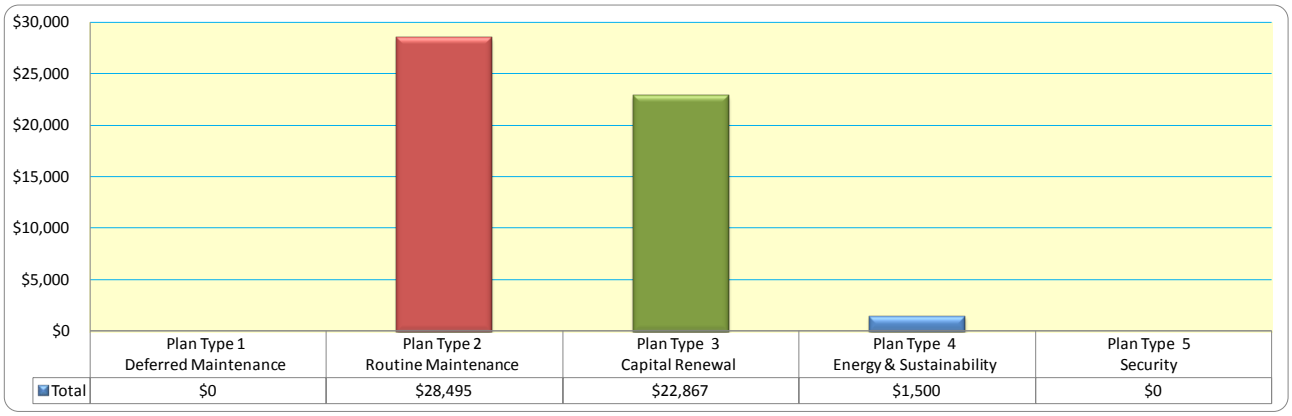
Chart EX-37 Cumulative Expenditure per Category of Works



Plan Type 2 – Routine Maintenance appears to require the most amount of expenditure in this study.

Engineering Offices (Building E)

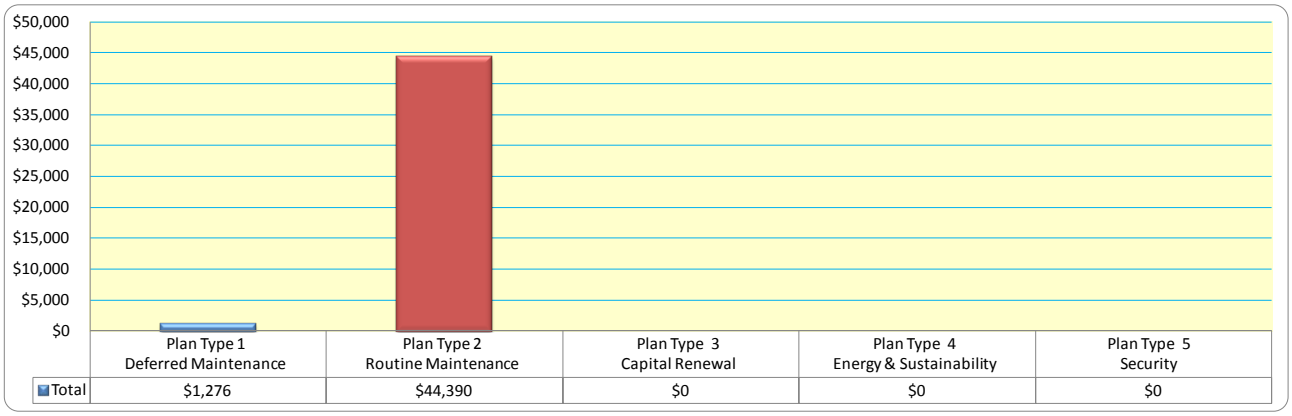
Chart EX-38 Cumulative Expenditure per Category of Works



Plan Type 2 – Routine Maintenance, and Plan Type 3 – Capital Renewal appear to require the most amount of expenditure in this study.

Storage Building (Building F)

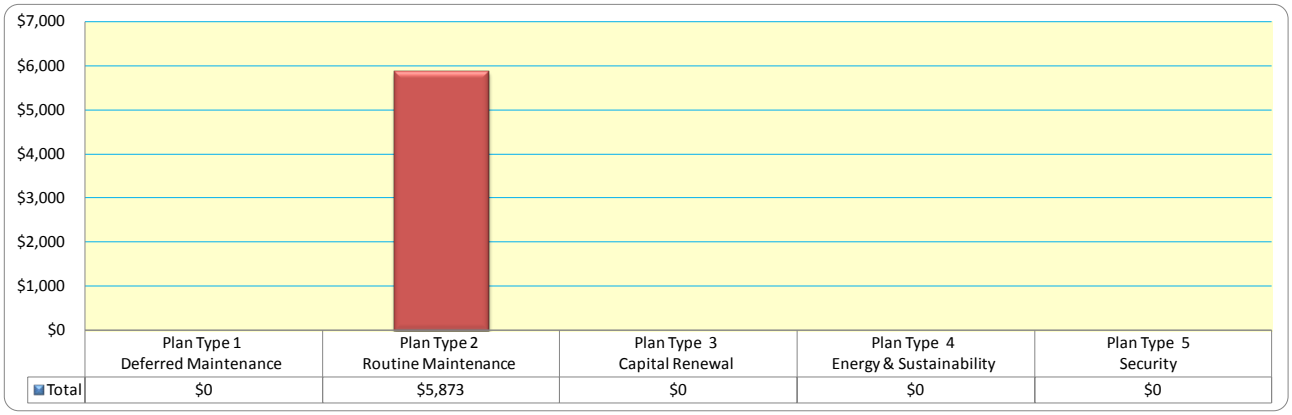
Chart EX-39 Cumulative Expenditure per Category of Works



Plan Type 2 – Routine Maintenance appears to require the most amount of expenditure in this study.

Storage Building (Building G)

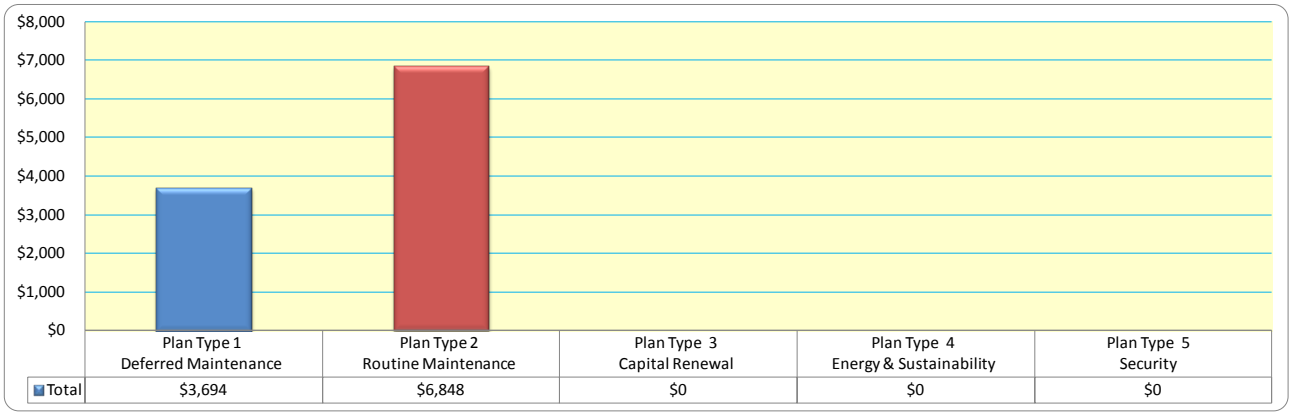
Chart EX-40 Cumulative Expenditure per Category of Works



Plan Type 2 – Routine Maintenance appears to require the most amount of expenditure in this study.

Sand / Gravel Hoppers

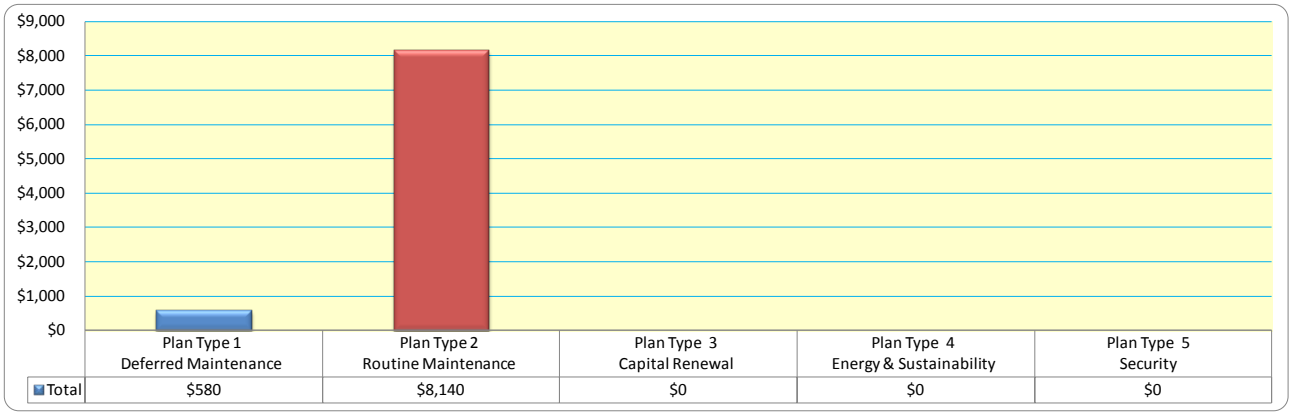
Chart EX-41 Cumulative Expenditure per Category of Works



Plan Type 1 – Deferred Maintenance, and Plan Type 2 – Routine Maintenance appear to require the most amount of expenditure in this study.

Storage Building (Oil Tanks)

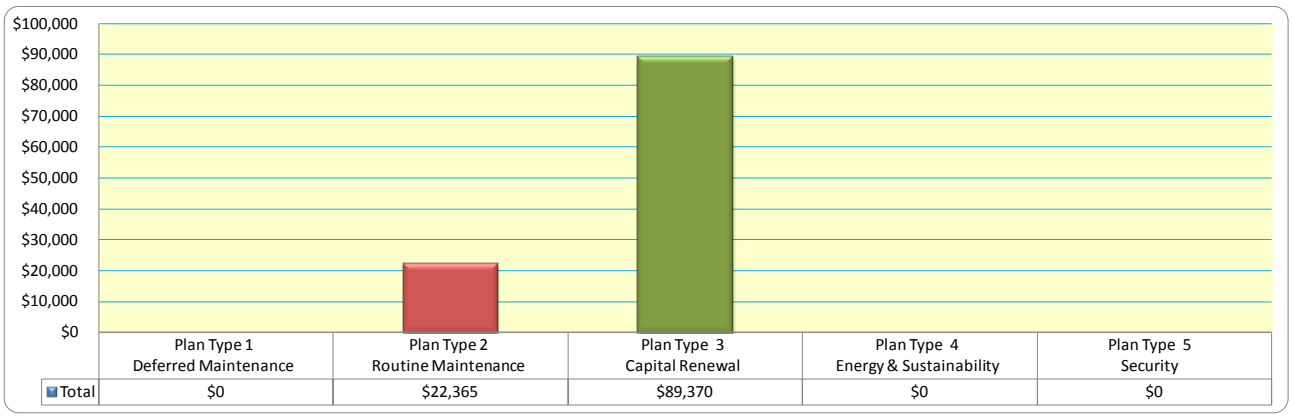
Chart EX-42 Cumulative Expenditure per Category of Works



Plan Type 2 – Routine Maintenance appears to require the most amount of expenditure in this study.

Site Systems

Chart EX-43 Cumulative Expenditure per Category of Works

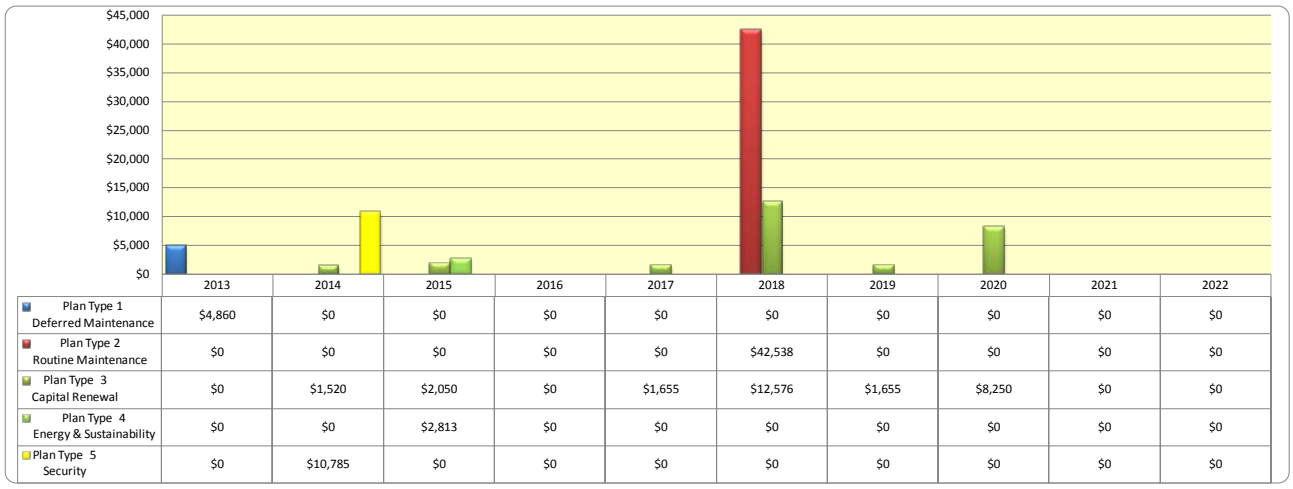


Plan Type 2 – Routine Maintenance, and Plan Type 3 – Capital Renewal appears to require the most expenditure in this study.

Chart EX-44 through to EX-53 illustrates the amount of expenditure, per category, per each year within the 10 year study period.

Administration Offices (Building A)

Chart EX-44 Year by Year Cumulative Expenditure per Category of Works

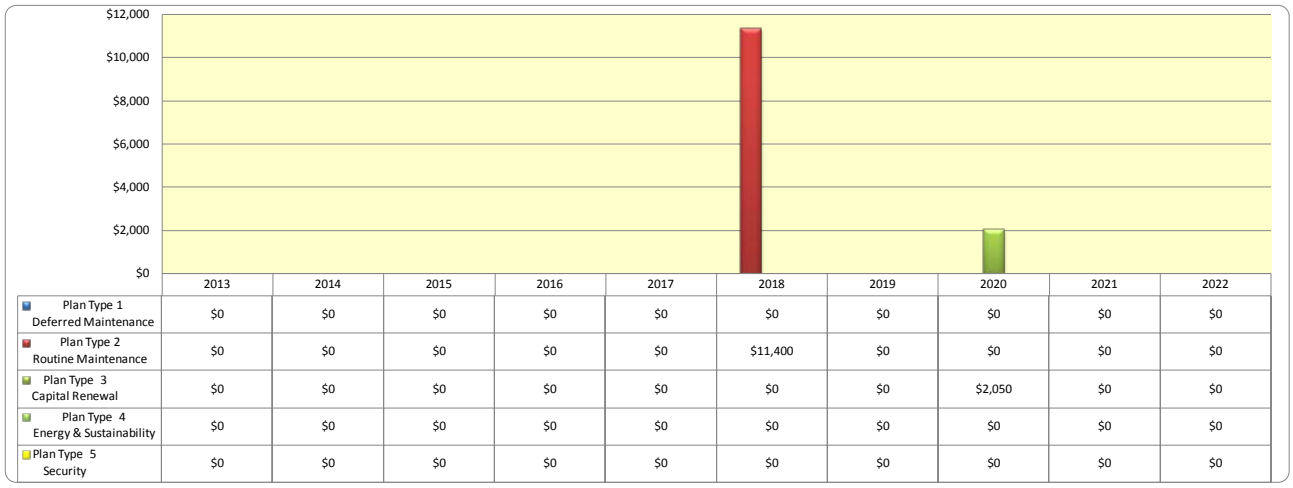


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Plan Type 1 Deferred Maintenance	$4,860	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 2 Routine Maintenance	$0	$0	$0	$0	$0	$42,538	$0	$0	$0	$0
Plan Type 3 Capital Renewal	$0	$1,520	$2,050	$0	$1,655	$12,576	$1,655	$8,250	$0	$0
Plan Type 4 Energy & Sustainability	$0	$0	$2,813	$0	$0	$0	$0	$0	$0	$0
Plan Type 5 Security	$0	$10,785	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-44 illustrates that there is one key year for Plan Type 2 – Routine Maintenance.

Vehicle Shop (Building B)

Chart EX-45 Year by Year Cumulative Expenditure per Category of Works

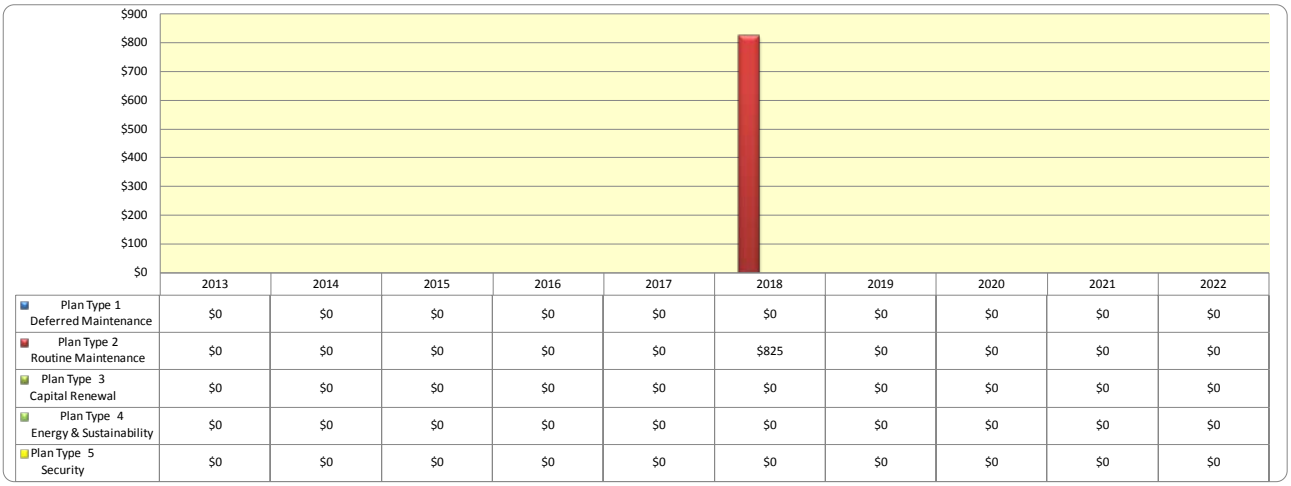


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Plan Type 1 Deferred Maintenance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 2 Routine Maintenance	$0	$0	$0	$0	$0	$11,400	$0	$0	$0	$0
Plan Type 3 Capital Renewal	$0	$0	$0	$0	$0	$0	$0	$2,050	$0	$0
Plan Type 4 Energy & Sustainability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 5 Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-45 illustrates that there is one key year for Plan Type 2 – Routine Maintenance.

Paint Storage (Building C)

Chart EX-46 Year by Year Cumulative Expenditure per Category of Works

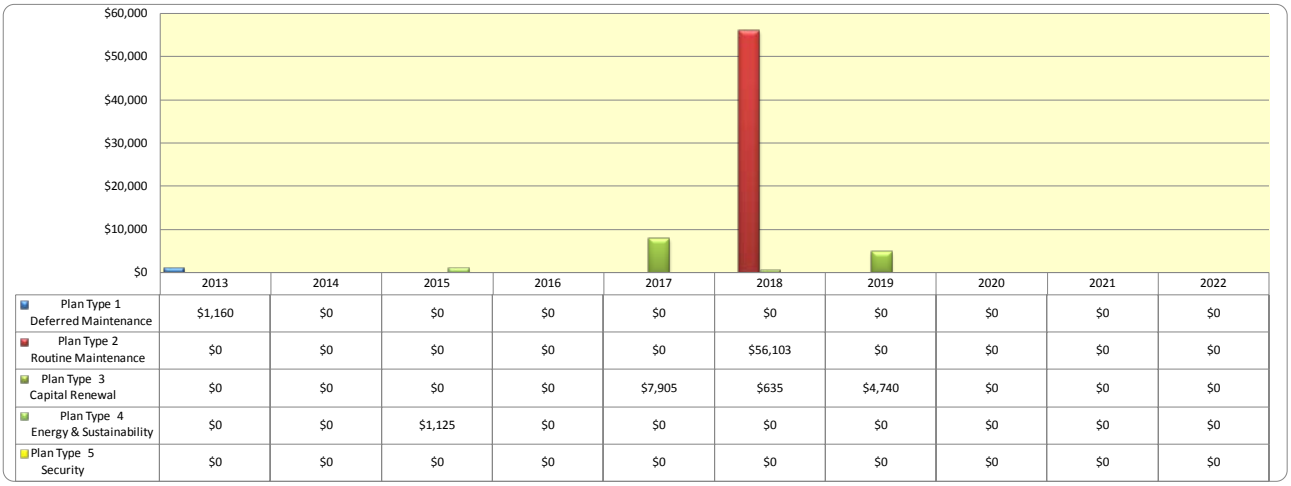


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Plan Type 1 Deferred Maintenance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 2 Routine Maintenance	$0	$0	$0	$0	$0	$825	$0	$0	$0	$0
Plan Type 3 Capital Renewal	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 4 Energy & Sustainability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 5 Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-46 illustrates that there is one key year for Plan Type 2 – Routine Maintenance.

Service Garage (Building D)

Chart EX-47 Year by Year Cumulative Expenditure per Category of Works

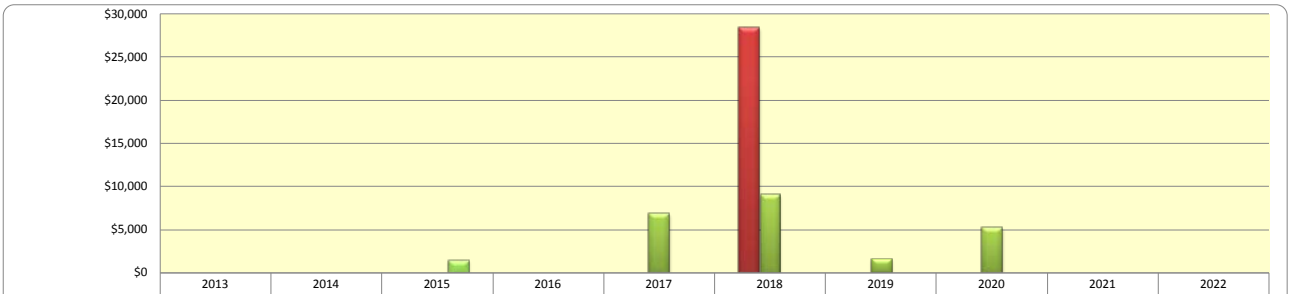


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Plan Type 1 Deferred Maintenance	$1,160	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 2 Routine Maintenance	$0	$0	$0	$0	$0	$56,103	$0	$0	$0	$0
Plan Type 3 Capital Renewal	$0	$0	$0	$0	$7,905	$635	$4,740	$0	$0	$0
Plan Type 4 Energy & Sustainability	$0	$0	$1,125	$0	$0	$0	$0	$0	$0	$0
Plan Type 5 Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-47 illustrates that there is one key year for Plan Type 2 – Routine Maintenance.

Engineering Offices (Building E)

Chart EX-48 Year by Year Cumulative Expenditure per Category of Works

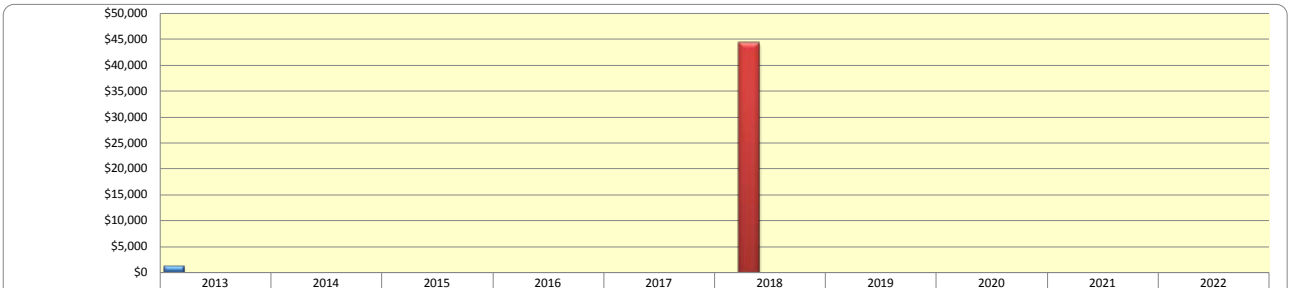


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Plan Type 1 Deferred Maintenance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 2 Routine Maintenance	$0	$0	$0	$0	$0	$28,495	$0	$0	$0	$0
Plan Type 3 Capital Renewal	$0	$0	$0	$0	$6,880	$9,072	$1,665	$5,250	$0	$0
Plan Type 4 Energy & Sustainability	$0	$0	$1,500	$0	$0	$0	$0	$0	$0	$0
Plan Type 5 Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-48 illustrates that there is one key year for Plan Type 2 – Routine Maintenance, and several key years for Plan Type 3 - Capital Renewal.

Storage Building (Building F)

Chart EX-49 Year by Year Cumulative Expenditure per Category of Works

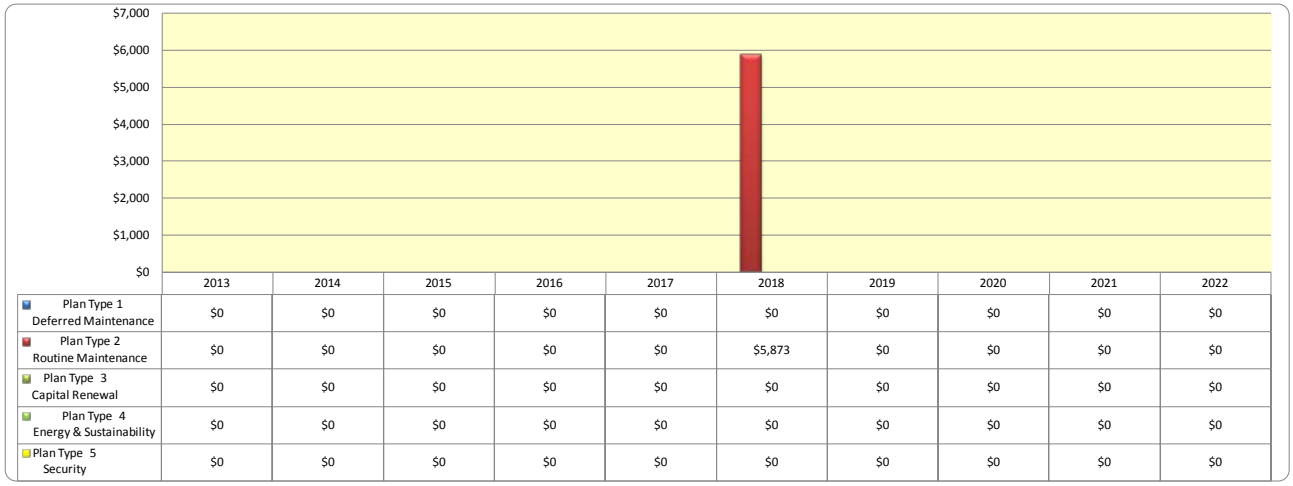


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Plan Type 1 Deferred Maintenance	$1,276	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 2 Routine Maintenance	$0	$0	$0	$0	$0	$44,390	$0	$0	$0	$0
Plan Type 3 Capital Renewal	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 4 Energy & Sustainability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 5 Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-49 illustrates that there is one key year for Plan Type 2 – Routine Maintenance.

Storage Building (Building G)

Chart EX-50 Year by Year Cumulative Expenditure per Category of Works

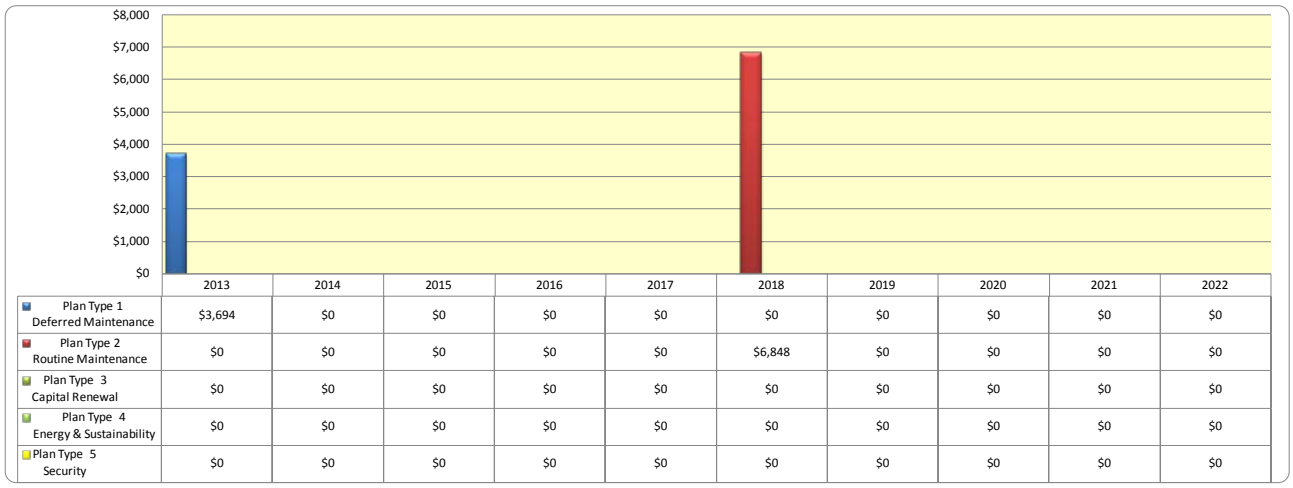


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Plan Type 1 Deferred Maintenance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 2 Routine Maintenance	$0	$0	$0	$0	$0	$5,873	$0	$0	$0	$0
Plan Type 3 Capital Renewal	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 4 Energy & Sustainability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 5 Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-50 illustrates that there is one key year for Plan Type 2 – Routine Maintenance.

Sand/ Gravel Hoppers

Chart EX-51 Year by Year Cumulative Expenditure per Category of Works

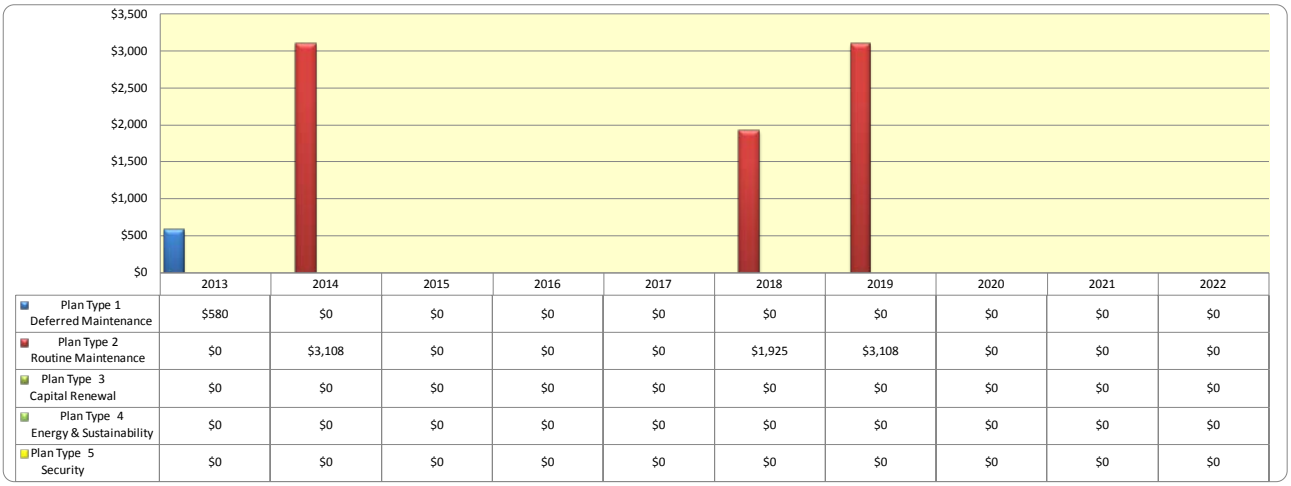


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Plan Type 1 Deferred Maintenance	$3,694	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 2 Routine Maintenance	$0	$0	$0	$0	$0	$6,848	$0	$0	$0	$0
Plan Type 3 Capital Renewal	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 4 Energy & Sustainability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 5 Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-51 illustrates that there is one key year for each of Plan Type 1 – Deferred Maintenance, and Plan Type 2 – Routine Maintenance.

Storage Building (Oil Tanks)

Chart EX-52 Year by Year Cumulative Expenditure per Category of Works

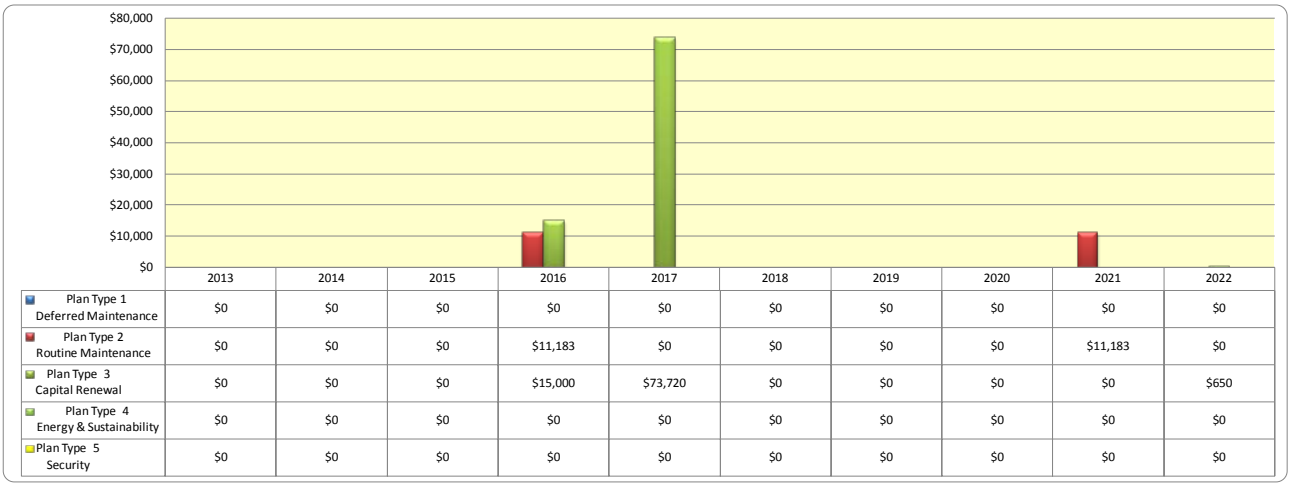


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Plan Type 1 Deferred Maintenance	$580	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 2 Routine Maintenance	$0	$3,108	$0	$0	$0	$1,925	$3,108	$0	$0	$0
Plan Type 3 Capital Renewal	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 4 Energy & Sustainability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 5 Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-52 illustrates that there are a number of key years for Plan Type 2 – Routine Maintenance.

Site Systems

Chart EX-53 Year by Year Cumulative Expenditure per Category of Works



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Plan Type 1 Deferred Maintenance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 2 Routine Maintenance	$0	$0	$0	$11,183	$0	$0	$0	$0	$11,183	$0
Plan Type 3 Capital Renewal	$0	$0	$0	$15,000	$73,720	$0	$0	$0	$0	$650
Plan Type 4 Energy & Sustainability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 5 Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-53 illustrates that there is one key year for Plan Type 3 – Capital Renewal.

SECTION 2 - A SUBSTRUCTURE

A10 FOUNDATIONS

DESCRIPTION

The description of the respective structural systems for each building is based upon our observation of exposed portions of the building structure. There were limited original construction drawings available for review.

A1010 STANDARD FOUNDATIONS

Buildings A, B, C, D, E, F, G, Sand / Gravel Hoppers and Storage Building (Oil Tanks)

A1011 Wall Foundations

The buildings are indicated in available drawings to be placed on steel-reinforced concrete footings, including separate spread footings or footings that were constructed as part of the concrete slabs-grade.

A1030 SLABS-ON-GRADE

Buildings A, B, C, D, E, F, G, Sand / Gravel Hoppers and Storage Building (Oil Tanks)

A1031 Standard Slab on Grade

The floors of each building consist of cast-in-place concrete slabs-on-grade, typically 4 1/2" thick and reinforced with welded wire fabric. The slabs have been turned down at the perimeter as part of the exterior wall foundations. Information was unavailable regarding the designed compressive strength of the concrete.

CONDITION

A1010 STANDARD FOUNDATIONS

Buildings A, B, C, D, E, F, G, Sand / Gravel Hoppers and Storage Building (Oil Tanks)

A1011 Wall Foundations

The structural framing and floors appeared to be in good condition. Therefore, we assume that the concrete supports are also in good condition. We do not anticipate that any actions will be necessary during the study period.

A1030 SLABS-ON-GRADE

Buildings A, B, C, D, E, F, G, Sand / Gravel Hoppers and Storage Building (Oil Tanks)

A1031 Standard Slab on Grade

The cast-in-place concrete slabs at each of the buildings appeared to be in fair to good condition, with limited cracking and not indications of settlement or lifting observed. We do not anticipate any expenditure during the cost study period, which relates to their replacement.

PROJECTED EXPENDITURES

No projected expenditures are identified for A Substructure during the study period.

SECTION 3 - B SHELL

B10 SUPERSTRUCTURE

DESCRIPTION

The description of the respective structural systems for each building is based upon our observation of exposed portions of the building structures. There were limited construction drawings available to review.

B1020 ROOF CONSTRUCTION

Building C and Sand / Gravel Hoppers

B1021 Flat Roof Construction

These buildings have nearly flat, low sloped roofs framed with a steel-reinforced concrete deck 6" thick supported on perimeter concrete masonry load-bearing walls at Building C or, a at the Sand / Gravel Hopper, a steel-reinforced concrete deck 10" to 12" thick supported by steel-reinforced concrete walls and columns (reference Photographs 31, 34 and 36 in Appendix B). The roof of the Sand / Gravel Hoppers is used as the loading platform for material filling of the hoppers.

B1022 Pitched Roof Construction

Buildings A, B, D, E, F and G

The buildings have sloped roofs constructed with pre-engineered manufactured steel beams of various depths and formed with a central ridge, with lateral steel purlins, supported by steel columns (reference Photographs 6, 24, 50, and 71 in Appendix B). The beam and purlin assemblies support approximately 1"-thick corrugated steel decking.

Storage Building (Oil Tanks)

The building has a sloped roof, most likely framed with manufactured wood trusses of 2" x 4" or 2" x 4" members, supported on perimeter wood-stud load-bearing walls. Wood rafters for this type of building are typically spaced at 24" on center, and supports ½ to 5/8"-thick plywood sheathing.

B1030 STRUCTURAL FRAME

Buildings A, B, D, E, F and G

B1031 Steel Frame Structure

The buildings are constructed with roof framing of pre-engineered, manufactured steel beams of various depths, sloped to form a central ridge and with lateral steel purlins, and supported by steel columns. Roofs have corrugated steel decking and walls have horizontal channel stiffeners and vertical steel stud framing. The framing is supported on concrete spread footings.

Building C and Sand / Gravel Hoppers

B1032 Concrete Frame Structure

The buildings have rigid steel reinforced concrete framing, with flat concrete roof decks supported on concrete masonry walls at Building C and supported by steel reinforced concrete walls and concrete columns at the Sand/Gravel Hoppers. The framing is supported on concrete foundation walls and spread footings.

Storage Building (Oil Tanks)

B1033 Wood Frame Structure

The building has wood-framed roof and load-bearing wall construction consisting of conventional light framing of manufactured trusses and wood stud walls, with plywood or solid wood roof sheathing, and supported on concrete and concrete masonry foundation walls and concrete spread footings.

CONDITION

B1020 ROOF CONSTRUCTION

Building C and Sand / Gravel Hoppers

B1021 Flat Roof Construction

The pitched roof structural construction at Building C appeared to be in good condition. There were no visible signs of distress or instability noted. We do not anticipate any expenditure during the cost study period which relates to replacement of the structure.

At the Sand/Gravel Hoppers, the roof deck was observed to have cracking and spalling on the underside of the roof deck and along its edges, with areas of exposed and rusting steel reinforcement. We recommend repairs be completed to the concrete framing in the near term to maintain the integrity of the system.

B1022 Pitched Roof Construction

Buildings A, B, D, E, F and G

The pitched roof structural construction appeared to be in good condition. There were no visible signs of distress or instability noted. We do not anticipate any expenditure during the cost study period which relates to replacement of the structure.

Storage Building (Oil Tanks)

The pitched roof structural construction appeared to be in good condition. There were no visible signs of distress or instability noted. We do not anticipate any expenditure during the cost study period which relates to replacement of the structure.

B1030 STRUCTURAL FRAME

Buildings A, B, D, E, F and G

B1031 Steel Frame Structure

The buildings' steel framed roof and wall construction appeared to be in good condition. We do not anticipate any expenditure during the study period which relates to replacement of the structural systems.

Building C and Sand / Gravel Hoppers

B1032 Concrete Frame Structure

The buildings' concrete framing appeared to be good condition at Building C and in fair condition at the Sand/Gravel Hoppers, where cracking and spalling was noted on the roof deck and along its edges, including areas of exposed and rusting steel reinforcement.

Storage Building (Oil Tanks)

B1033 Wood Frame Structure

The building's light wood framed roof and wall construction appeared to be in fair to good condition. We do not anticipate any expenditure during the study period which relates to replacement of the structural system.

B20 EXTERIOR ENCLOSURES

DESCRIPTION

B2010 EXTERIOR WALLS

B2011 Exterior Wall Construction

Building A

The building has exterior walls of prefinished ribbed metal siding, painted cementitious stucco and painted T1-11 plywood siding, which are typically placed over plywood or solid sheathing, some locations with painted wood trim (reference Photographs 1 through 4 in Appendix B). The drawings available for reference did not indicate insulation within the exterior walls.

Buildings B, D, E, F and G

The buildings have exterior walls of prefinished ribbed metal siding, typically placed over the superstructure without thermal insulation (reference Photographs 21, 23, 44 through 46, 60, 61, 67 and 72 in Appendix B).

Building C

The building has exterior walls of painted concrete masonry, supporting the roof's structural framing (reference Photograph 30 in Appendix B). The walls are uninsulated.

Sand/Gravel Hoppers

The building has an exterior wall only on the north side, set into the hillside, a painted retaining wall of steel-reinforced concrete (reference Photographs 32 through 34 in Appendix B).

Storage Building (Oil Tanks)

The building has exterior walls of painted T1-11 plywood siding on the structural wood framing that supports the roof's structural framing (reference Photographs 39 through 42 in Appendix B). The walls are uninsulated.

B2020 EXTERIOR WINDOWS

B2021 Windows

Buildings A, D and E

The building's windows are typically aluminum-framed with fixed and sliding single- or double-pane-glazed units (reference Photographs 1, 45 and 60 in Appendix B).

B2030 EXTERIOR DOORS

B2032 Solid Exterior Doors

Buildings A and C

The buildings contain swinging single-leaf flush metal doors in steel frames, some with glazing, with painted finishes (reference Photographs 1 and 30 in Appendix B). Door hardware consisted of lever handles and closers.

Buildings B, D and E

The buildings contain swinging single-leaf flush metal doors in steel frames, some with glazing, with painted finishes (reference Photographs 45 and 60 in Appendix B). Door hardware consisted of lever handles and closers.

B2034 Overhead Doors

Buildings B, D and E

The buildings have overhead service doors, of coiling, sectional or pivoting metal types and sliding overhead track types. The doors are typically manually operated on interior or exterior metal tracks (reference Photographs 21, 45, 46 and 60 in Appendix B).

Buildings F and G

The buildings have overhead service doors, of coiling and pivoting metal types. The doors are typically manually operated on interior metal tracks (reference Photographs 67 and 72 in Appendix B).

CONDITION

B2010 EXTERIOR WALLS

B2011 Exterior Wall Construction

Building A

The building's exterior walls are in fair condition. The painted surfaces appeared to be in good condition. However, there are locations, particularly on the north side of the building, with water damaged metal and plywood siding. We recommend repairs be completed to the siding in the near term and, based on the typical EUL of 4 years for exterior painting, we also recommend budgeting for re-painting and replacement of exterior sealants prior to mid-term in the study period, to maintain appearance and protect the wood components.

Buildings B, D, E, F and G

The buildings' metal siding exterior walls are in fair to good condition, with locations at Buildings D and F with impact-damage caused by vehicles or other equipment and, at Building D, locations of corrosion caused by long-term water infiltration. We recommend replacement of damaged siding or repairs where possible to correct the damage and deterioration. Based on an EUL of 4 years for exterior painting, we also recommend repainting of the facades and replacement of exterior sealants prior to mid-term in the study period.

Building C

The painted concrete masonry walls are in good condition. Based on an EUL of 4 years for exterior painting, we recommend repainting of the facades and replacement of exterior sealants prior to mid-term in the study period.

Sand/Gravel Hoppers

The painted concrete walls are in fair to good condition. Based on an EUL of 4 years for exterior painting, we recommend repainting of the walls and framing prior to mid-term in the study period.

Storage Building (Oil Tanks)

The exterior walls of the building are in fair condition, with locations of wood fascia and trim in poor condition, with water-caused deterioration. We recommend replacement of the deteriorated wood fascia, trim and plywood siding in the near term. Based on an EUL of 4 years for exterior painting, we recommend repainting of the facades and replacement of exterior sealants prior to mid-term in the study period.

B2020 EXTERIOR WINDOWS

B2021 Windows

Buildings A, D and E

The buildings are generally in fair condition, except the buildings at Building A which are in poor condition. The windows at building a require a vinyl double pane retrofit and sheet metal work to upgrade, repair and replace them.

B2030 EXTERIOR DOORS

B2032 Solid Exterior Doors

Buildings A and C

In general, the operation of the doors was satisfactory, operating without difficulty. Re-painting, at the time of other exterior re-painting, will be necessary to maintain appearance and to protect the metal surfaces.

Buildings B, D and E

In general, the operation of the doors was satisfactory, operating without any difficulty. Re-painting, at the time of other exterior re-painting, will be necessary to maintain appearance and to protect the metal surfaces.

B2034 Overhead Doors

Buildings B, D and E

Although some doors were open and certain other doors were locked at the time of our assessment, no significant damage was noted; the doors are considered to be in fair to good condition. Major repairs or replacements are not anticipated during the study period.

Buildings F and G

Although many doors were open and certain other doors were locked at the time of our assessment, no significant damage was noted; the doors are considered to be in fair condition. Major repairs or replacements are not anticipated during the study period.

B30 ROOFING

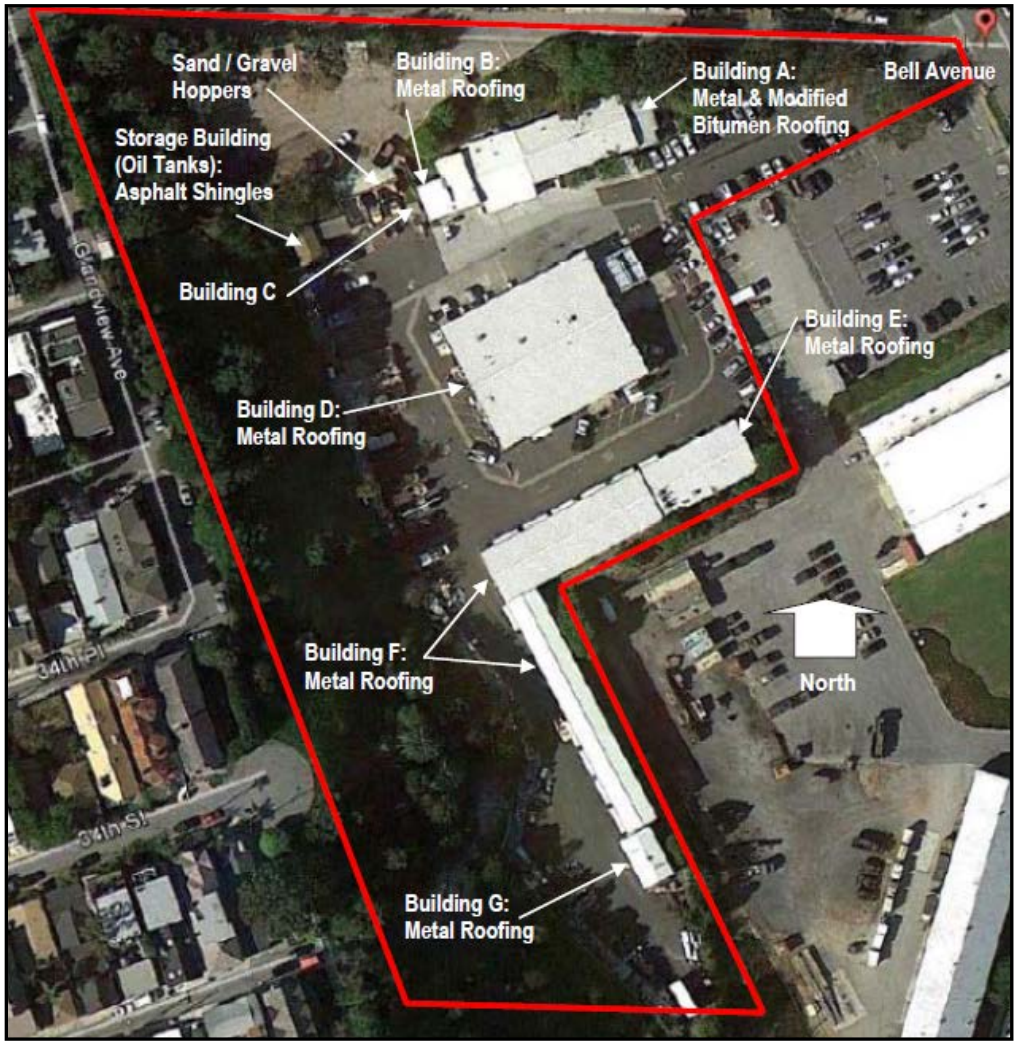
DESCRIPTION

B3010 ROOF COVERINGS

B3011 Roof Finishes

The facility contains nine separate structures with a total of four different roof finishes; seven structures have sloped roofs, with two having low-sloped, nearly flat roofs, as shown on the following aerial plan:

Overview of Roof Locations & Configurations



Building A

The sloped, gabled roofs of the building contain prefinished ribbed metal roofing panels (reference Photograph 5 in Appendix B). We understand that the roofing was installed in 1967. A circa 1997 addition at the east end of the building contains built-up roofing with modified bitumen capsheet with granular surface.

Buildings B, D, E, F and G

The sloped, gabled roofs of the buildings contain prefinished ribbed metal roofing panels (reference Photographs 22, 44, and 69 in Appendix B). We understand that the roofing was installed at the time of construction, in 1967 or 2000.

Building C and Sand/Gravel Hoppers

The low-sloped, nearly flat roofs have exposed concrete structural decking, without added roof finishes (reference Photographs 31 and 36 in Appendix B). The roofs are part of original construction, installed in circa 1967.

Storage Building (Oil Tanks)

The building has a sloped, gabled roof containing multi-tab asphaltic fiberglass shingle roofing (reference Photograph 41 in Appendix B), installed in circa 2003. Storm water drainage is directly over the roofs' edges.

B3016 Gutters & Downspouts

Storm water drainage from the roof is to aluminum gutters and downspouts, draining to grade.

Buildings B, D, E, F and G

Storm water drainage from the roof is to aluminum gutters and downspouts, draining to grade.

Table B30-1 Summary of Roof Coverings

Roof Component	Building A	Building B	Building C	Sand / Gravel Hoppers
Age *	46 years (Mtl. 1967) & 12 years (BUR 2001)	13 years (2000)	46 years (1967)	46 years (1967)
Roof Area (total / approx. square footage)	6,000 SF (Mtl.) 646 SF (BUR)	2,240 SF	104 SF	460 SF
Application / Membrane	Ribbed Metal & Built-Up	Ribbed Metal	Concrete	Concrete
Manufacturer / Model	Unknown	Unknown	N/A	N/A
Surface	Prefinished (Mtl.) & Granular (BUR)	Prefinished	Exposed	Exposed
Deck Type	Metal	Metal	Concrete	Concrete
Insulation	None	None	None	None
Cover Board	None	None	None	None
Drainage	Gutter & Downspouts	Gutters & Downspouts	Over Roof Edge	Over Roof Edge
Overflow Scuppers	None	None	None	None
Base Flashings	None	None	None	None
Cap Flashings	None	None	None	None
Perimeter Enclosure	None	None	None	None
Warranty (Manufacturer)	Unknown	Unknown	Unknown	Unknown
Warranty (Contractor)	Unknown	Unknown	Unknown	Unknown

*Actual install date unknown.

Roof Component	Storage Building (Oil Tanks)	Building D	Building E	Building F	Building G
Age *	10 years (2003)	46 years (1967) & 16 years (1997)	46 years (1967)	46 years (1967)	13 years (2000)
Roof Area (total / approx. square footage)	460 SF	13,940 SF	3,680 SF	11,490 SF	1,140 SF
Application / Membrane	Asphaltic Shingles	Ribbed Metal	Ribbed Metal	Ribbed Metal	Ribbed Metal
Manufacturer / Model	Unknown	Unknown	Unknown	Unknown	Unknown
Surface	Granular	Prefinished	Prefinished	Prefinished	Prefinished
Deck Type	Plywood	Metal	Metal	Metal	Metal
Insulation	None	None	None	None	Batts
Cover Board	None	None	None	None	None
Drainage	Over Roof Edge	Gutters & Downspouts	Gutters & Downspouts	Gutters & Downspouts	Gutters & Downspouts
Overflow Scuppers	None	None	None	None	None
Base Flashings	None	None	None	None	None
Cap Flashings	None	None	None	None	None
Perimeter Enclosure	None	None	None	None	None
Warranty (Manufacturer)	Unknown	Unknown	Unknown	Unknown	Unknown
Warranty (Contractor)	Unknown	Unknown	Unknown	Unknown	Unknown

*Actual install date unknown.

B3020 ROOF OPENINGS

B3021 Glazed Roof Openings

Building D

The building contains one 3' x 3' domed plastic lensed skylight on raised metal curbs.

Building G

The building contains two 3' x 6' corrugated translucent fiberglass skylights installed as part of the roofing system.

CONDITION

B3010 ROOF COVERINGS

B3011 Roof Finishes

Building A

The roofing of the building is in fair condition, with minor deficiencies, such as raised joints, accumulated landscaping debris and unattached cabling noted. Based on the observed conditions and an EUL of 40- to 50-years for metal roofing and 20- to 25-years for built-up roofing, we do not anticipate major repairs or replacement of the roofing during the study period, but recommend repainting of the metal roofing at the time of exterior wall and trim painting.

Buildings B, D, E, F and G

The roofing of the buildings is in fair condition, with minor deficiencies, such as deformed locations, minor corrosion, and raised joints. Based on the observed conditions and an EUL of 40- to 50-years for metal roofing, we do not anticipate major repairs or replacement of the roofing during the study period. However, recommend repainting of the metal roofing at the time of exterior wall and trim painting.

Building C and Sand/Gravel Hoppers

The pitched roof structural construction at Building C appeared to be in good condition. There were no visible signs of distress or instability noted. We do not anticipate any expenditure during the cost study period which relates to replacement of the structure. At the Sand/Gravel Hoppers, the roof deck was observed to have cracking and spalling on the underside of the roof deck and along its edges, with areas of exposed and rusting steel reinforcement. We recommended in section B1021 Flat Roof Construction that repairs be completed to the concrete framing in the near term to maintain the integrity of the system.

Storage Building (Oil Tanks)

The asphalt shingle roofing is considered to be in fair condition, with minor issues of torn or detached shingle tabs and accumulated landscape debris. Base on observed conditions and an EUL of 20-years for asphalt shingles, we do not anticipate significant repairs or replacement during the study period, but recommend routine maintenance of deficiencies to maintain the integrity of the roofing system.

B3016 Gutters & Downspouts

Building A

The metal gutters and downspouts are in fair to good condition, with no significant damage or locations of detachment noted. Base on observed conditions and an EUL of 25-years for metal gutters and downspouts, we do not anticipate significant repairs or replacement during the study period.

Buildings B, D, E, F and G

The metal gutters and downspouts are in fair to good condition, with no significant damage or locations of detachment noted. Base on observed conditions and an EUL of 25-years for metal gutters and downspouts, we do not anticipate significant repairs or replacement during the study period.

B3020 ROOF OPENINGS

B3021 Glazed Roof Openings

Building D

The building's skylight is in fair condition, with evidence of water infiltration on the interior framing. Based on observed conditions and an EUL of 30-years for manufactured skylights, we recommend replacement of the unit by the mid-term of the study period.

Building G

The building's fiberglass skylights appear to be in good condition, with no evidence of water infiltration noted. No significant capital expenditures are anticipated during the study period.

PROJECTED EXPENDITURES

Identified recommended works that are required during the 10 year study period are scheduled below. We recommend budgeting for additional project costs of between 25%-30% to allow for professional fees and general contractor overhead/profit and management costs.

Building A

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repair wood and metal siding; repaint repaired areas	1	LS	$25,000	$25,000	2013	3
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	2,830	SF	$3.25	$9,198	2015	5
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	2,830	SF	$3.25	$9,198	2019	5
B2021	Windows	Replace window units	1	LS	$10,000	$10,000	2013	3
B3011	Roof Finishes	Recoat metal roofing	6,000	SF	$1.75	$10,500	2018	4
		Total Anticipated Expenditure for B Shell				$63,896		

Building B

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	2,720	SF	$3.25	$8,840	2015	5
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	2,720	SF	$3.25	$8,840	2019	5
B3011	Roof Finishes	Recoat metal roofing	2,240	SF	$1.75	$3,920	2018	4
		Total Anticipated Expenditure for B Shell				$21,600		

Building C

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	300	SF	$3.25	$975	2015	5
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	300	SF	$3.25	$975	2019	5
		Total Anticipated Expenditure for B Shell				$1,950		

Building D

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repair metal siding; repaint repaired areas	200	SF	$5.80	$1,160	2013	3
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	6,930	SF	$3.25	$22,523	2015	5
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	6,930	SF	$3.25	$22,523	2019	5
B3011	Roof Finishes	Recoat metal roofing	13,940	SF	$1.75	$24,395	2018	4
D3021	Glazed Roof Openings	Replace the skylight	1	EACH	$635	$635	2018	3
		Total Anticipated Expenditure for B Shell				$71,235		

Building E

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	2,220	SF	$3.25	$7,215	2015	5
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	2,220	SF	$3.25	$7,215	2019	5
B3011	Roof Finishes	Recoat metal roofing	3,680	SF	$1.75	$6,440	2018	4
		Total Anticipated Expenditure for B Shell				$20,870		

Building F

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repair metal siding; repaint repaired areas	220	SF	$5.80	$1,276	2013	3
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	8,830	SF	$3.25	$28,698	2015	5
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	8,830	SF	$3.25	$28,698	2019	5
B3011	Roof Finishes	Recoat metal roofing	11,490	SF	$1.75	$20,108	2018	4
		Total Anticipated Expenditure for B Shell				$78,779		

Building G

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	1,410	SF	$3.25	$4,583	2015	5
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	1,410	SF	$3.25	$4,583	2019	5
B3011	Roof Finishes	Recoat metal roofing	1,140	SF	$1.75	$1,995	2018	4
		Total Anticipated Expenditure for B Shell				$11,160		

Sand/Gravel Hoppers

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B1021	Flat Roof Construction	Repair deteriorated concrete surfaces and edges	506	SF	$7.30	$3,694	2013	3
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	2,490	SF	$3.25	$8,093	2015	5
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	2,490	SF	$3.25	$8,093	2019	5
		Total Anticipated Expenditure for B Shell				$19,879		

Storage Building (Oil Tanks)

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repair deteriorated wood siding, fascia and trim	100	SF	$5.80	$580	2013	3
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	700	SF	$3.25	$2,275	2015	5
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	700	SF	$3.25	$2,275	2019	5
		Total Anticipated Expenditure for B Shell				$5,130		

SECTION 4 - C INTERIORS

C10 INTERIOR CONSTRUCTION

DESCRIPTION

C1010 PARTITIONS

C1011 Fixed Partitions

Building A

The building contains wood- and metal-stud framed partitions with gypsum board sheathing, with locations of concrete masonry foundation walls with metal furring and gypsum board sheathing (reference Photographs 8-10 in Appendix B). The partitioning separates the offices areas, the lunch room and kitchen, training rooms and locker/shower room and restrooms within the building.

Building D

The building contains metal-stud framed partitions, with gypsum board or plywood sheathing (reference Photograph 48-52 in Appendix B). The partitioning separates the various shops, garages, storage/warehouse and parts department areas within the building.

Building E

The building contains wood- and metal-stud framed partitions with gypsum board sheathing (reference Photographs 62A and 62B in Appendix B). The partitioning separates the offices areas, shops and restrooms within the building.

Building F

The building contains metal-stud framed partitions, with sheathing of plywood or metal siding (reference Photographs 70 and 71 in Appendix B). The partitioning separates the various shops, garages, and storage/warehouse areas within the building.

C1020 INTERIOR DOORS

C1021 Interior Doors

Building A

The building generally contains single and double leaf, flush panel wood and steel doors, some with glazing, in metal frames.

Building D

The building contains single leaf, flush panel steel doors, some with glazing or louvers, in metal frames.

Building E

The building contains single leaf, flush panel wood doors in metal frames.

C1023 Interior Door Hardware

Buildings A, D and E

The doors contained steel and aluminum hardware, typically consisting of lever door handles and door closers.

CONDITION

C1010 PARTITIONS

C1011 Fixed Partitions

Buildings A, D, E and F

The interior fixed partitions all appeared to be in fair to good condition, with no significant deficiencies found in relation to the wall structures. No major repair or replacement expenditures are anticipated during the study period.

C1020 INTERIOR DOORS

C1021 Interior Doors

Buildings A, D and E

The interior doors appeared to be in good condition with no significant deficiencies noted.

C1023 Interior Door Hardware

Buildings A, D and E

The hardware at each of the doors appeared satisfactory, with no issues of deterioration or failure noted. The operation of the door handles, locks and hinged swing were typically noted to be in fair to good condition. We do not anticipate any major expenditure during the study period.

C30 INTERIOR FINISHES

DESCRIPTION

C3010 WALL FINISHES

C3012 Wall Finishes to Interior Walls

Building A

Interior walls at the building typically have painted gypsum wallboard finishes, with locations of vinyl-clad gypsum board and ceramic tile (reference Photographs 8 through 14 in Appendix B).

Storage Building (Oil Tanks)

Interior walls at the building have painted gypsum wallboard finishes (reference Photographs 42 and 43 in Appendix B).

Building D

Interior walls at the building typically have unfinished or painted gypsum board, as well as exposed exterior wall metal siding (reference Photographs 48 through 52 in Appendix B).

Building E

Interior walls at the building typically have painted finishes on gypsum board (reference Photographs 62A and 62B in Appendix B).

Building F

Interior walls at the building typically have exposed exterior wall metal siding, with some partitions with painted finishes on gypsum board (reference Photographs 70 and 71 in Appendix B).

C3020 FLOOR FINISHES

C3023 Flooring

Building A

The flooring in the building is a combination of vinyl tile in the lunch room, kitchen and locker room, carpeting in office areas and ceramic tile in office areas, the restrooms and shower room (reference Photographs 9 through14 in Appendix B).

Building D

The flooring in the building is primarily unfinished concrete slabs-on-grade, with carpet and vinyl tile in office areas (reference Photographs 48 through 52 in Appendix B).

Building E

The flooring in the building is a combination of carpet and vinyl tile (reference Photographs 62A and 62B in Appendix B).

C3030 CEILING FINISHES

C3031 Ceiling Finishes

Building A

The ceiling finishes throughout the building predominantly consist of acoustical tile, with locations of painted gypsum board (reference Photographs 8 through 11 in Appendix B).

Storage Building (Oil Tanks)

The ceiling finishes of the building consist of painted gypsum board (reference Photographs 42 and 43 in Appendix B).

Building D

The building primarily does not have ceiling systems, with the roof structural systems exposed. In office areas, the ceiling finishes are of acoustical tile.

Building E

The ceiling finishes throughout the building predominantly consist of acoustical tile, with locations of painted gypsum board.

CONDITION

C3010 WALL FINISHES

C3012 Wall Finishes to Interior Walls

Building A

Interior wall finishes are in fair to good condition throughout the building. The EUL of these interior painted walls is 6 years at this location, and therefore, we recommend budgeting for re-painting of all the previously painted walls in the mid-term of the study period, to maintain the appearance of the building and work areas.

Storage Building (Oil Tanks)

The wall finishes are in poor condition, with wide spread peeling paint and water stained locations. We recommend re-painting of the interior walls in the early- and late-term of the study period.

Building D

The wall finishes are in fair condition, with locations of marking and staining noted. However, the building functions as a service and warehouse facility, with limited office space; within the office areas, we recommend re-painting of the interior walls in the mid-term of the study period, based on an EUL of 6 years.

Building E

Interior wall finishes are in fair to good condition throughout the building. The EUL of these interior painted walls is six-years, and therefore, we recommend budgeting for re-painting of all the previously painted walls in the mid-term of the study period, to maintain the appearance of the building and work areas.

Building F

The limited wall finishes are in fair condition, with locations of marking and staining noted. However, the building functions as a service and warehouse facility, without office space; therefore, we have not included expenditures for re-painting of interior walls, but expect any painting required can be completed as an operational expense.

C3020 FLOOR FINISHES

C3023 Flooring

Building A

The flooring appeared to be in fair overall condition, with locations of cracking or missing vinyl tile. We recommend replacement of damaged vinyl tile in the near term of the study period. Based on an EUL of five to seven years for

carpeting, we also recommend budgeting for its replacement during the mid- to late-term of the study period, to maintain the appearance of the building.

Building D

The limited amount of flooring is in fair condition. With an EUL of five to seven year for carpeting and 15 years for vinyl tile, replacement of the carpeting may be necessary during the study period. However, the estimated cost to replace the limited quantity of carpeting will fall below the threshold for inclusion in the capital expenditure forecast. We recommend replacement of carpeting as needed as an operational expense.

Building E

The flooring appeared to be in good overall condition. Based on an EUL of five to seven years for carpeting, we recommend budgeting for its replacement during the mid- to late-term of the study period, to maintain the appearance of the building.

C3030 CEILING FINISHES

C3031 Ceiling Finishes

Building A

The ceiling finishes throughout the building are in good condition. Painted surfaces usually have an EUL of 6 years, with acoustical tile having an EUL of 20 years; therefore, we anticipate that the gypsum board ceilings will require re-painting at time of repainting of the wall finishes.

Storage Building (Oil Tanks)

The ceiling finishes are in poor condition, with wide spread peeling paint and water stained locations. We recommend re-painting of the interior ceilings in the near-term of the study period.

Building D

The limited ceiling finishes in the office areas of the building are in good condition. Acoustical tile has a typical EUL of 20 years; therefore, we do not anticipate the need for significant repairs or replacements during the study period.

Building E

The ceiling finishes throughout the building are in good condition. Painted surfaces usually have an EUL of 6 years, with acoustical tile having an EUL of 20 years; therefore, we anticipate that the gypsum board ceilings will require re-painting at time of repainting of the wall finishes.

PROJECTED EXPENDITURES

Identified recommended works that are required during the 10 year study period are scheduled below. We recommend budgeting for additional project costs of between 25%-30% to allow for professional fees and general contractor overhead/profit and management costs.

Building A

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	8,820	SF	$3.25	$28,665	2017	5
C3023	Flooring	Replace carpet flooring	2,200	SF	$3.75	$8,250	2020	5
		Total Anticipated Expenditure for C Interiors				$36,915		

Building D

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	4,600	SF	$3.25	$14,950	2017	5
		Total Anticipated Expenditure for C Interiors				$14,950		

Building E

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	4,900	SF	$3.25	$5,800	2017	5
C3023	Flooring	Replace carpet	1,400	SF	$3.75	$5,250	2020	5
		Total Anticipated Expenditure for C Interiors				$21,175		

Storage Building (Oil Tanks)

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	1,570	SF	$3.25	$5,103	2017	5
		Total Anticipated Expenditure for C Interiors				$5,103		

SECTION 5 - D SERVICES

D20 PLUMBING

DESCRIPTION

D2010 PLUMBING FIXTURES

D2011 Water Closets

Building A

The building contains five floor-mounted vitreous china tank-less water closets with manual flush valve controls (reference Photograph 13 in Appendix B).

Building E

The building contains one floor-mounted vitreous china tank-less water closet with manual flush valve.

Building A

D2012 Urinals

The men's restroom contains three vitreous china wall-mounted waterless urinals (reference Photograph 12 in Appendix B).

D2013 Lavatories

Building A

The building contains six counter-top lavatories, three basins integral with a composite material countertop and three enameled steel basins recessed into a plastic laminate countertop, as well as one wall-mounted vitreous china lavatory. The lavatories have separate, wing-type and single-handle lever-type, non-metering faucets.

Building E

The building contains one wall-mounted vitreous china lavatory with a single-handle lever-type, non-metering faucet.

D2014 Sinks

Building A

The building contains two stainless steel sinks, one double-basin sink recessed into a plastic laminate countertop/base cabinet in the kitchen and a single sink recessed into a plastic laminate countertop/base cabinet in the training room.

Building A

D2017 Showers

The men's locker room has a gang-type shower stall with three separate shower heads, knob-type controls and a single floor drain (reference Photograph 11 in Appendix B). The floor and walls are finished with ceramic tile, the ceiling is painted sheathing and the entry has a raised curb with plastic curtain.

D2018 Drinking Fountains and Coolers

There is one floor-mounted Haws water cooler in the kitchen / lunch room area of the building.

D2020 DOMESTIC WATER DISTRIBUTION

D2021 Cold Water Service

Building A

The building contains domestic cold and hot water plumbing systems to men's and women's restrooms and shower rooms, janitor's closet, kitchen, and base cabinet sinks. Cold water piping throughout the building is assumed to consist of copper tubing; the cold water service for the facility is supplied directly from the street main's pressure. A tap is made to the water line downstream of a meter and routed to the plumbing fixtures and equipment via this copper pipe work.

Building E

The building contains domestic cold and hot water plumbing systems to a unisex restroom and janitor's closet. Cold water piping throughout the building is assumed to consist of copper tubing; the cold water service for the facility is supplied directly from the street main's pressure. A tap is made to the water line and routed to the plumbing via this copper pipe work.

D2022 Hot Water Service

Building A

Domestic hot water is provided in the kitchen, restrooms and shower rooms, generated via two natural-gas-fueled instant water heating units mounted on the exterior wall at the north side of the building (reference Photograph 20 in Appendix B).

Building E

Domestic hot water is provided in the restroom, generated via an electric water heater located in a janitor's closet adjacent to the restroom.

Table D20-1 Summary of the Domestic Water Heating Equipment at Building A

Location	Equipment Type	Manufacturer	Model #	Serial #	Fuel/ Rating	Capacity	≈ Year of Installation
North Exterior Wall	Domestic Water Heater	Noritz	NR98-SV	2010.05-005717	Natural Gas / 199,900 BTUH	202 Gal / Hour Recovery	2010
North Exterior Wall	Domestic Water Heater	Noritz	N-0751M	2009.08-045012	Natural Gas / 199,900 BTUH	202 Gal / Hour Recovery	2009

Table D20-2 Summary of the Domestic Water Heating Equipment at Building E

Location	Equipment Type	Manufacturer	Model #	Serial #	Fuel/ Rating	Capacity	≈ Year of Installation
Janitor's Closet	Domestic Water Heater	Unknown	Unknown	Unknown	Electric	20 Gal. (Assumed)	2002 (Assumed)

Unknown = Access limited or equipment had no name plates present.

D2030 SANITARY WASTE

D2031 Waste Piping

Buildings A and E

Waste piping was not observed at the buildings, but is assumed to consist of 2" to 4" diameter cast iron material, although some locations may have PVC lines.

D2090 OTHER PLUMBING SYSTEMS

D2091 Gas Distribution

Buildings A and E

The buildings are provided with natural gas service; typically this service is via 1" diameter steel piping, with the drawings indicating use of piping sizes of up to 2½"; the service lines outside of the buildings is indicated to be a 3" diameter line, running underground to the meter southeast of Building A near the Property's entrance gate. The service is provided for HVAC, plumbing and vehicle fueling equipment.

CONDITION

D2010 PLUMBING FIXTURES

D2011 Water Closets

Building A

The water closets are in good condition, flushed properly and did not have cracks in the china. With a typical EUL of 35 years, we do not anticipate the need for end-of-useful-life replacement during the study period. Each of the men's and women's locker rooms contained one disabled accessible water closet stall. However after discussions with City maintenance personnel we have included for a renovation of the restrooms to incorporate locker room early in the study period. All fixtures will be included for replacement at that time.

Building E

The water closet is considered to be in good condition, with no significant repairs or replacements during the study period.

D2012 Urinals

Building A

The waterless urinals appeared to be in good condition, operating properly and without cracking in the china. Therefore, based upon observed conditions and with a typical EUL of 35 years, we anticipate that there will be no requirement for

end-of-useful-life fixture replacement during the study period. However, men's locker room / restroom did not contain a disabled accessible urinal.

After discussions with City maintenance personnel we have included for a renovation of the restrooms to incorporate locker room early in the study period. All fixtures will be included for replacement at that time.

D2013 Lavatories

Building A

The lavatories and faucets appeared to be in fair to good condition. The faucet controls were disabled accessible type, the sinks drained properly and did not have cracking. Therefore, based upon observed conditions and with a typical EUL of 35 years, we do not anticipate that there will be a requirement for their replacement during the study period. Each of the restrooms contained disabled accessible lavatories.

After discussions with City maintenance personnel we have included for a renovation of the restrooms to incorporate locker room early in the study period. All fixtures will be included for replacement at that time.

Building E

The lavatory is considered to be in good condition, with no significant repairs or replacement during the study period.

D2014 Sinks

Building A

The sinks appeared to be in good condition. Based on observed conditions and with a typical EUL of 35 years, we do not anticipate the need for significant repair or replacement during the study period.

Building A

D2017 Showers

The showers are in poor to fair condition, with two of the three shower heads missing and the general lack of accessibility for the disabled. The entrance curb, lack of adjustable shower head, controls that require grasping, lack of grab bars and lack of seating bench make the showers inaccessible to the disabled. We recommend the addition of a separate accessible stall adjacent to the existing showers, as well as completion of repairs to the existing showers to make all stations operable in the near term of the study period.

After discussions with City maintenance personnel we have included for a renovation of the restrooms to incorporate locker room early in the study period. All fixtures will be included for replacement at that time.

D2018 Drinking Fountains and Coolers

The drinking fountain appeared to be in fair condition and is not accessible to the disabled, due to the limited clearance in front of the unit and the height of the spout and its operator. Based upon observed conditions, we recommend replacement of the drinking fountain early in the study period.

D2020 DOMESTIC WATER DISTRIBUTION

D2021 Cold Water Service

Building A

The domestic water systems appeared to be in good condition. No major problems were observed that could be attributed to age or deferred maintenance and no issues with the system were reported. With an EUL of 50 years, major repairs or replacements are not anticipated during the study period.

Building E

Cold water piping had no indications of leaks or deterioration observed. With an EUL of 50 years, major repairs or replacements are not anticipated during the study period.

D2022 Hot Water Service

Building A

The domestic water heaters appeared to be in good condition. They were observed to be functional and operating properly. Water heaters of this type generally have a typical EUL of 10 to 15 years; the water heaters were installed in circa 2009 and are not expected to require replacement during the study period.

Building E

The room containing the water heater as not made accessible to us during our assessment. However, the equipment is considered to be in good condition, functional and operating properly, according to the building occupants. Water heaters of this type generally have a typical EUL of 10 to 15 years; the water heater was installed in circa 2000 and, therefore, can be expected to require replacement during the study period.

D2030 SANITARY WASTE

Buildings A and E

D2031 Waste Piping

No visually apparent problems with the sanitary waste piping were observed. With sanitary waste piping having an EUL of more than 50 years, the replacement of the service piping is not anticipated during the study period.

After discussions with the City maintenance personnel we understand that a number of the City buildings have been having issues with sewer blockages and pipe deterioration, therefore we have been requested to include for camera inspections of the drainage/sewer system at the buildings.

D2090 OTHER PLUMBING SYSTEMS

Buildings A and E

D2091 Gas Distribution

There were no apparent items of concern with the gas distribution systems noted or reported to us. With natural gas distribution systems having an EUL of more than 50 years, the replacement of the service piping is not anticipated during the study period.

D30 HVAC

DESCRIPTION

D3040 AIR DISTRIBUTION SYSTEMS

D3041 Air Distribution Systems

Building A

The conditioned air is distributed from the pad-mounted package unit and the split system equipment throughout the building by rigid interior metal ducts located above the ceilings, within attic space and in walls, and through flexible duct connections to diffusers/grilles in the ceilings (reference Photograph 7 in Appendix B).

Building B

The conditioned air from the unit heaters is provided directly from the units, without ducts or transfer grilles.

Building D

The conditioned air is distributed from the split system / gas furnace equipment by rigid interior metal ducts located above the ceilings and through flexible duct connections to diffusers/grilles in the ceilings (reference Photograph 55 in Appendix B The conditioned air from the unit heaters is provided directly from the units, without ducts or transfer grilles.

Building E

The conditioned air is distributed from the pad-mounted package unit and split system equipment by rigid interior metal ducts located above the ceilings, within attic space and in walls, and through flexible duct connections to diffusers/grilles in the ceilings. The conditioned air from the building's through-wall air conditioning units is directly from the unit, without ducts or transfer grilles.

D3042 Exhaust Ventilation Systems

Building A

Ventilation of the restrooms, locker/shower rooms and kitchen is provided by rooftop exhaust fans (reference Photograph 19 in Appendix B). Refer to Table D30-1 for a summary of the exhaust ventilation equipment.

Building B

The building's vehicle repair bays are provided with an exhaust extraction system, with overhead mounted fan, flexible hoses for connection to vehicle exhaust pipes, and an exhaust duct through the south exterior wall (reference Photograph 26 in Appendix B). A sidewall exhaust fan is also provided in the north exterior wall of the building. Refer to Table D30-2 for a summary of the exhaust ventilation equipment.

Building D

The building's shops are ventilated by rooftop exhaust fans and the vehicle repair bays are provided with an exhaust extraction system, with overhead mounted fan, flexible hoses for connection to vehicle exhaust pipes, and exhaust ducts through the exterior walls. In addition, the carpentry shop has a dust collection system with interior hoods and fan/collection chambers located at the west side of the building. Refer to Table D30-3 for a summary of the exhaust ventilation equipment.

Building E

The building's restroom and shop areas are ventilated by rooftop exhaust fans. Refer to Table D30-4 for a summary of the exhaust ventilation equipment.

D3050 TERMINAL AND PACKAGED UNITS

D3051 Terminal Self-Contained Units

Building A

The building contains a gas-fired wall-mounted unit heater located in the lunch room area and a through-wall air conditioning unit with electric heating located in an office area at the north side of the building (reference Photograph 15 in Appendix B). The units were manufactured by Williams Furnace Company and Friedrich, respectively. Refer to the following Table D30-1 for further details of the terminal units.

Building B

The building contains gas-fired unit heaters suspended overhead from the roof framing, within the service bays (reference Photograph 27 in Appendix B). The units, manufactured by Reznor, are heating only units. Refer to the following Table D30-2 for further details of the HVAC equipment.

Building D

The building contains gas-fired unit heaters suspended overhead from the roof framing, within the service bays (reference Photograph 53 in Appendix B). The units, manufactured by Reznor, are heating only units. Refer to the following Table D30-3 for further details of the HVAC equipment.

Building E

The building contains gas-fired unit heaters suspended overhead from the roof framing, within the service bay (reference Photograph 65 in Appendix B). The unit, manufactured by Reznor, is a heating only unit. In addition, three through-wall air conditioning units are located in office areas at the south side of the building. Refer to the following Table D30-4 for further details of the HVAC equipment.

D3052 Package Units

Building A

The building is heated and cooled by one pad-mounted electric package unit and one split system of separate condensing unit and interior air handling unit. The units provide direct exchange cooling, with electric heating sections, installed in circa 1995 and 2008, respectively (reference Photographs 16-18 in Appendix B). The units, manufactured by Carrier, include a package unit mounted on a concrete pad at the north side of the building and split system on-grade condensing unit at the north side of the building and an attic space air handling unit. Refer to the following Table D30-1 for further details of the equipment.

Building D

The office areas of the building are provided heating and cooling a split system of separate condensing unit and interior furnace/air handling unit. The units provide direct exchange cooling, with a gas-fired furnace section, installed in circa 1995 (reference Photographs 55 and 56 in Appendix B). The units, manufactured by Carrier, include split system rooftop condensing unit and a mezzanine air handling unit. Refer to the following Table D30-3 for further details of the equipment.

Building E

The building is heated and cooled by one pad-mounted electric package unit and one split system of separate condensing unit and interior air handling unit. The units provide direct exchange cooling, with electric heating sections, installed in circa 1995 (reference Photograph 64 in Appendix B). The units, manufactured by Carrier, include a package unit mounted on a concrete pad at the east side of the building and split system rooftop condensing unit and an attic space air handling unit. Refer to the following Table D30-4 for further details of the equipment.

Table D30-1 Summary of the HVAC Equipment at Building A

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year Installed
Lunch Room	Gas-Fired Unit Heater	Williams Furnace Co.	35-GV-5	B12504	35,000 BTUH	Natural Gas	1967
Office	Through-Wall Heating / Cooling Unit	Friedrich	ES12L33-A	LFDR04089	12,100 BTUH Cooling / 10,700 BTUH Heating	Elec.	1993 (Assumed)
Pad-Mnted Condenser North of Bldg. / Plenum Air Handling Unit	Split System Heat Pump	Carrier	38YMA 030320	3996E04298	30,000 BTUH	Elec.	2008 (Assumed)
Pad-Mnted North of Bldg	Package Cooling Unit	Carrier	50TJQ006	4697G20048	5.5 – 6 Tons	Elec.	1995 (Assumed)
Rooftop	(3) Exhaust Fans	Unknown	Unknown	Unknown	Unknown	Elec.	Varies

Unknown = Access limited or equipment had no name plates present.
Assumed = Based on size of unit and area it serves / or possible year installed.

Table D30-2 Summary of the HVAC Equipment at Building B

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year Installed
Suspended Overhead	(2) Gas-Fired Unit Heaters	Reznor	Unknown	Unknown	75,000 BTUH	Natural Gas	2000
Suspended Overhead	Vehicle Exhaust Evacuation	PlymoVent	Unknown	Unknown	Unknown	Elec.	2002
Side Wall	Exhaust Fan	Unknown	Unknown	Unknown	Unknown	Elec.	2000
Enclosure West of Bldg	Compressor	Sullivan Palatek	15DR	99 006	Unknown	Elec.	2000 (Assumed)
Enclosure West of Bldg	Air Dryer	Sullivan Palatek	PRD-50	H050A 1150201025	50 SCFM @ 100 PSIG	Elec	2000 (Assumed)
Enclosure West of Bldg	Compressor	Palatek	15DR	Unknown	Unknown	Elec.	2000 (Assumed)

Unknown = Access limited or equipment had no name plates present.
Assumed = Based on size of unit and area it serves / or possible year installed.

Table D30-3 Summary of the HVAC Equipment at Building D

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year Installed
Suspended Overhead	(5) Gas-Fired Unit Heaters	Reznor	Unknown	Unknown	130 – 140 MBH (Assumed)	Natural Gas	1967 (Assumed)
Suspended Overhead	(3) Vehicle Exhaust Evacuation	PlymoVent	Unknown	Unknown	Unknown	Elec.	Varies
Rooftop Condenser / Mezzanine Air Handling Unit (Auto Parts)	Split System Air Conditioning / Gas-Fired Furnace	Carrier	58558383-CC	Unknown	2.5-Tons Cooling / 95 MBH Heating	Elec. / Natural Gas	1995 (Assumed)
Rooftop	(2) Exhaust Fans	Unknown	Unknown	Unknown	Unknown	Elec.	Varies

Unknown = Access limited or equipment had no name plates present.
Assumed = Based on size of unit and area it serves / or possible year installed.

Table D30-4 Summary of the HVAC Equipment at Building E

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year Installed
Pad-Mtd East of Bldg	Package Cooling Unit	Carrier	50TJ1004—B501GA	3397G20220	4 Tons	Elec.	1995 (Assumed)
South Exterior Wall	(3) Thru-Wall Air Conditioning Units	General Electric	Unknown	Unknown	1 – 2 Tons (Assumed)	Elec.	2008 (Assumed)
Rooftop Condenser / Plenum Air Handling Unit	Split System Heat Pump	Carrier	50H5030	Unknown	3 - Tons	Elec.	1995 (Assumed)
Rooftop	(3) Exhaust Fans	Unknown	Unknown	Unknown	Unknown	Elec.	1995 (Assumed)
Suspended Overhead	Gas-Fired Unit Heater	Reznor	Unknown	Unknown	130 – 140 MBH (Assumed)	Natural Gas	1967 Unknown
Suspended Overhead, Duct Through Roof	Exhaust Fan	Unknown	Unknown	Unknown	Unknown	Elec.	2000 Unknown

Unknown = Access limited or equipment had no name plates present.
Assumed = Based on size of unit and area it serves / or possible year installed.

D3060 HVAC INSTRUMENTATION AND CONTROLS

Buildings A, B, D and E

D3069 Other Controls & Instrumentation

The building users are able to control the room temperature in office areas via separate wall mounted electronic thermostats controlling the package and split system equipment. Switches directly on the units control the through wall air conditioning units and wall mounted heating units. Thermostatic controls on the units, as well as local switches, control the overhead gas-fired unit heaters.

CONDITION

D3040 AIR DISTRIBUTION SYSTEMS

D3041 Air Distribution Systems

Building A

The interior metal ductwork, partially observable within an attic space at the time of our assessment, reportedly distributes the tempered air insufficiently, with locations of inadequate air movement. We recommend testing and balancing of the system in the near term of the study period, to include repairs or modifications to the system in order to provide adequate air distribution.

Building D

The interior metal ductwork, partially observable within the mezzanine space at the time of our assessment, appears to distribute the tempered air sufficiently. With an EUL of 30 or more years, replacement of the air distribution systems is not anticipated during the study period.

Building E

The interior ductwork, partially observable within an attic space at the time of our assessment, reportedly distributes the tempered air sufficiently, with no locations reported to have inadequate air movement. With an EUL of 30 or more years, replacement of the air distribution systems is not anticipated during the study period.

Buildings A, D & E

Only a small proportion of the ducting in the buildings were reviewed but that portion was noted to be in fair to good condition with no deficiencies. We recommend that the duct work is cleaned every 5 years starting at the start of the study period, as it was unclear when they were last cleaned

D3042 Exhaust Ventilation Systems

Building A

The building's rooftop exhaust fans are in fair condition, having been installed at various times between 1995 and 2009. With an EUL of 15- to 20-years, replacement of a portion of the fans is anticipated during the study period.

Building B

The sidewall exhaust fan and the vehicle extraction system appear to be operating properly, in fair to good condition. Installed between 2000 and 2002 and an EUL of 15- to 20-years, replacement of exhaust ventilation systems is not anticipated during the study period.

Building D

The rooftop exhaust fans and the vehicle extraction systems appear to be operating properly, in fair to good condition. Installed between 1995 and 2000 and with an EUL of 15- to 20-years, replacement of the fans is anticipated during the study period.

Building E

The exhaust fans appear to be operating properly, in fair condition. Installed between 1995 and 2000 and with an EUL of 15- to 20-years, replacement of a portion of the fans is anticipated during the study period.

D3050 TERMINAL AND PACKAGED UNITS

D3051 Terminal Self-Contained Units

Building A

The wall-mounted heating unit and the through wall air conditioning unit, 46 years and 2 years old respectively, are in poor condition and have exceeded their useful life. Budgeting for their replacement in the near term of the study period is recommended.

Building B

The unit heaters appeared to be in fair condition, the original equipment installed in approximately 2000. The typical EUL of equipment such as this is 20 years and because they are already 13 years old, will exceed expected useful life during the study period. We recommend budgeting for their replacement in the latter part of the study period.

Building D

The unit heaters appeared to be in fair condition, perhaps equipment installed in 1995 and are 18 years old. The typical EUL of equipment such as this is 20 years and based on the observed condition and the age of units, will exceed expected useful life during the study period. We recommend budgeting for their replacement in the latter part of the study period.

Building E

The unit heater appeared to be in fair condition, perhaps original equipment installed in 1967 and is 46 years old. The typical EUL of equipment such as this is 20 years and based on the observed condition, has exceeded its expected useful life. We recommend budgeting for its replacement in the near term of the study period. The through wall air conditioning units appeared to be in good condition, being only 5 years old. Their replacement during the study period is not anticipated.

D3052 Package Units

Building A

The pad-mounted package heating and cooling unit is in fair condition, being nearly 20 years old. With a typical EUL of 15 to 20 years for this type of equipment, frequent repair and component replacement will become necessary and budgeting for the replacement of the unit is recommended for the mid-term of the study period. The split system equipment, approximately five years old, is in good condition and replacement during the study period is not anticipated.

Building D

The split system equipment, installed in approximately 1995, is 18 years old and appears to be in fair condition. With a typical EUL of fifteen to twenty years for this type of equipment, replacement of the units is anticipated during the study period.

Building E

The pad-mounted package heating and cooling unit is in fair condition, being nearly 20 years old. With a typical EUL of 15 to 20 years for this type of equipment, frequent repair and component replacement will become necessary during the study period; budgeting for the replacement of the unit is recommended for the mid-term of the study period. The split system equipment, also approximately 18 years old, will exceed its typical useful life soon and budgeting for its replacement by the mid-term is recommended.

D3060 HVAC INSTRUMENTATION AND CONTROLS

Buildings A, B, D and E

D3069 Other Controls & Instrumentation

The thermostats and switches appeared to be in fair condition and functional. We are unaware of any particular issues with the controls, but based on the age of the equipment and therefore, the age of the controls, we anticipate their replacement at the time of the replacement of the package and terminal units.

D40 FIRE PROTECTION

DESCRIPTION

D4030 FIRE PROTECTION SPECIALTIES

Buildings A, B, D, E, F and G

D4031 Fire Extinguishers

Multipurpose portable wall-mounted handheld fire extinguishers are provided throughout the buildings.

CONDITION

D4030 FIRE PROTECTION SPECIALTIES

Buildings A, B, D, E, F and G

D4031 Fire Extinguishers

The fire extinguishers appeared to be in fair to good condition. Tags have been applied to most extinguishers indicating that they are maintained on a yearly basis by the service contractor DCS Testing & Equipment, and that they were last inspected in February 2013. We do not anticipate a need for significant replacement of fire extinguishers during the study period.

PROJECTED EXPENDITURES

No projected expenditures are identified for D40 Fire Protection during the study period.

D50 ELECTRICAL

DESCRIPTION

The following information was obtained through our visual observations of each of the buildings' systems. The electrical systems include the service entrance equipment, exterior and interior panel boards, safety switches, and lighting fixtures. Limited drawings detailing electrical systems were available for review.

D5010 ELECTRICAL SERVICE & DISTRIBUTION

Buildings A, B, C, D, E, F and G

D5012 Low Tension Service & Dist.

The buildings are served by underground electrical service from the utility's pad mounted transformer located at the southeast corner of Building D. Service from the transformer is an electrical room in the southeast corner of Building D, enclosed with chain link fencing. The service is provided to a General Electric switchboard with meter, service rated at 400-amps, 480-volts, 3-phase, 3-wire (reference Photographs 58 and 59 in Appendix B). Adjacent transformers, rated at 150- to 75-KVA, step down the service to 120/208-volts. Underground service it routed to building panels from distribution mains, typically rated at 100-amps, 120/208-volts, 3-phase, 4-wire. Each building's interior panel board, with multiple breakers, provides power to building power receptacles, lighting and equipment loads, varying from 20- to 100-amp capacities.

D5020 LIGHTING & BRANCH WIRING

Buildings A, B, C, D, E, F and G

D5021 Branch Wiring Devices

The branch wiring devices at each of the buildings included wall-mounted switches and power receptacles that would be generally associated with these types of buildings. Branch wiring is distributed in electric metallic tubing (EMT), with some flexible metal conduit likely utilized within walls and ceilings.

D5022 Lighting Equipment

The interior lighting within the buildings is provided primarily single or multiple lamped 4' long surface-mounted 32-watt T8 fluorescent fixtures (reference Photographs 8, 23, 34, 51, 62, 70 and 73 in Appendix B), with electronic ballasts. Other fixture types used are ceiling recessed 2' x 4' 32-watt T8 fluorescent-lamped fixtures in office areas, suspended 250-watt metal halide lamped fixtures in shops and garage service bays and 250-watt mercury vapor lamped fixtures at the Sand/Gravel Hoppers. The lighting is typically controlled via local switching in the respective rooms, with some spaces in Building A having occupancy sensor switching; the San/Gravel Hoppers lights are photocell controlled.

D5030 COMMUNICATIONS & SECURITY

Building D

D5033 Telephone Systems

The main telephone systems board is located in the main electrical room, with underground service provided to the office areas of Buildings A, D and E (reference Photograph 59A in Appendix B).

D5090 OTHER ELECTRICAL SYSTEMS

Buildings A and E

D5092 Emergency Light & Power Systems

Illuminated exit signs, located along egress pathways and with battery back-up power, are provided in the buildings.

CONDITION

D5010 ELECTRICAL SERVICE AND DISTRIBUTION

Buildings A, B, C, D, E, F and G

D5012 Low Tension Service & Dist.

The electrical equipment was noted to be in fair condition, with no indication of deficiency or overloading. Electrical distribution systems tend to have a typical EUL of thirty years, but the useful life can be extended through preventive maintenance. We recommend completion of such regular preventive maintenance, including infrared thermal scanning and torque tightness testing, for the integrity of the system. We do not anticipate the need to replace the equipment during the cost study period.

D5020 LIGHTING & BRANCH WIRING

Buildings A, B, C, D, E, F and G

D5021 Branch Wiring Devices

The general receptacles and wiring appeared to be in fair condition within the buildings. We do not anticipate a need for significant repair or replacement during the cost study period.

D5022 Lighting Equipment

The interior lighting was observed to be in fair to good condition, with fixtures operating properly and limited number of broken lenses and housings that can be addressed as an operational expense. With an EUL for lighting fixtures of 20- to 25-years, and with many of the fixtures routinely replaced as needed, no significant repairs or replacements are anticipated during the study period. However, we recommend installation of occupancy sensor switching in all office areas as an energy efficiency measure, in Building A, D and E.

D5030 COMMUNICATIONS & SECURITY

Building D

D5033 Telephone Systems

The existing telephone equipment was observed to be in fair to good condition. We do not anticipate significant repairs or replacements during the cost study period.

D5090 OTHER ELECTRICAL SYSTEMS

Buildings A and E

D5092 Emergency Light & Power Systems

The limited number of exit signs appeared to be in fair to good condition. We do not anticipate the need for significant repairs or replacement during the cost study period.

PROJECTED EXPENDITURES

Identified recommended works that are required during the 10 year study period are scheduled below. We recommend budgeting for additional project costs of between 25%-30% to allow for professional fees and general contractor overhead/profit and management costs.

Building A

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
D20	Plumbing	Renovate restroom and incorporate locker room	1	LS	$40,000	$40,000	2013	3
D2018	Drinking Fountains and Coolers	Replace the drinking fountain	1	EACH	$1,520	$1,520	2014	3
D2031	Waste Piping	Undertake camera inspection of sewer lines	1	LS	$1,000	$1,000	2013	3
D3041	Air Distribution System	Test, balance and repair the system	1	LS	$3,100	$3,100	2013	4
D3041	Air Distribution Systems	Clean ductwork	5,748	SF	$0.25	$1,437	2013	3
D3041	Air Distribution Systems	Clean ductwork	5,748	SF	$0.25	$1,437	2018	3
D3042	Exhaust Ventilation Systems	Replace exhaust fan	1	EACH	$1,665	$1,665	2017	3
D3042	Exhaust Ventilation Systems	Replace exhaust fan	1	EACH	$1,665	$1,665	2019	3
D5051	Terminal Self-Contained Units	Replace wall-mounted heating unit and through wall air conditioning unit	2	EACH	$1,025	$2,050	2015	3
D3052	Package Units	Replace the pad-mounted package unit	6	TON	$2,096	$12,576	2018	3
D5022	Lighting Equipment	Install occupancy sensor switches	15	EACH	$187.50	$2,813	2015	4
		Total Anticipated Expenditure for D Services				$69,263		

Building B

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
D3051	Terminal Self-Contained Units	Replace gas-fired unit heaters	2	EACH	$1,025	$2,050	2020	3
		Total Anticipated Expenditure for D Services				$2,050		

Building D

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
D3041	Air Distribution Systems	Clean ductwork	12,050	SF	$0.25	$3,013	2013	3
D3041	Air Distribution Systems	Clean ductwork	12,050	SF	$0.25	$3,013	2018	3
D3042	Exhaust Ventilation Systems	Replace exhaust fan	1	EACH	$1,665	$1,665	2017	3
D3042	Exhaust Ventilation Systems	Replace exhaust fan	1	EACH	$1,665	$1,665	2019	3
D3051	Terminal Self-Contained Units	Replace gas-fired wall-mounted unit heaters	2	EACH	$1,025	$2,050	2017	3
D3051	Terminal Self-Contained Units	Replace gas-fired wall-mounted unit heaters	3	EACH	$1,025	$3,075	2019	3
D3052	Package Units	Replace split system units	1	EACH	$4,190	$4,190	2017	3
D5022	Lighting Equipment	Install occupancy sensor switches	6	EACH	$187.50	$1,125	2015	4
		Total Anticipated Expenditure for D Services				$19,795		

Building E

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
D2031	Waste Piping	Undertake camera inspection of sewer lines	1	LS	$1,000	$1,000	2013	3
D3041	Air Distribution Systems	Clean ductwork	3,120	SF	$0.25	$780	2013	3
D3041	Air Distribution Systems	Clean ductwork	3,120	SF	$0.25	$780	2018	3
D3042	Exhaust Ventilation Systems	Replace exhaust fan	1	EACH	$1,665	$1,665	2017	3
D3042	Exhaust Ventilation Systems	Replace exhaust fan	1	EACH	$1,665	$1,665	2019	3
D3051	Terminal Self-Contained Units	Replace gas-fired wall-mounted unit heater	1	EACH	$1,025	$1,025	2017	3
D3052	Package Units	Replace pad-mounted package unit	4	TON	$2,096	$8,384	2018	3
D3052	Package Units	Replace split system units	1	EACH	$4,190	$4,190	2017	3
D5022	Lighting Equipment	Install occupancy sensor switches	8	EACH	$187.50	$1,500	2015	4
		Total Anticipated Expenditure for D Services				$20,989		

SECTION 6 - E EQUIPMENT & FURNISHINGS

E10 EQUIPMENT

DESCRIPTION

E1030 VEHICULAR EQUIPMENT

Buildings B and D

E1031 Vehicular Service Equipment

The buildings contain service vehicle equipment, including portable and fixed hydraulic lifts, hoists, pneumatic tools, drills and grinders (reference Photographs 23 and 50 in Appendix B).

E1090 OTHER EQUIPMENT

Sand/Gravel Hoppers

E1099 Other Equipment

The building's primary function is to house sand and gravel hoppers for the bulk loading of maintenance trucks (reference Photograph 33 in Appendix B). The two hoppers are steel framed, set into the building's steel-reinforced concrete framework, with sheet steel side and wall panels and funneling mechanisms at the base of each hopper.

CONDITION

Buildings B and D

E1031 Vehicular Service Equipment

The equipment, utilized for Public Works vehicle maintenance, ranges in condition from fair to good, with replacement of equipment completed on an as-needed basis, as an operational expense.

E1090 OTHER EQUIPMENT

Sand/Gravel Hoppers

E1099 Other Equipment

The material hoppers, installed in 1967, are in poor operating condition and appear to not have been used for an extended period of time. The funneling mechanisms do not appear functional and the hoppers are debris filled. Because the

hoppers do not appear to be required for the day to day operations of the Public Works Department, we have not included estimated costs for their repair or replacement during the study period.

E20 FURNISHINGS

E2010 FIXED FURNISHINGS

DESCRIPTION

Buildings A, D and E

E2012 Fixed Casework

The buildings contain wood-constructed fixed base and wall cabinet casework (reference Photograph 9, 52 and 62 in Appendix B). The cabinets consist of hardwood frames with plastic-laminate-faced plywood interior panels, doors and drawers, with hinges, pulls and locking hasps.

CONDITION

Buildings A, D and E

E2012 Fixed Casework

The fixed casework appeared to be in fair condition and suitable for its use. Cabinets have a typical EUL of twenty-years and based on our observations, significant repairs or replacements are not anticipated during the study period.

PROJECTED EXPENDITURES

There are no projected expenditures for E Equipment & Furnishings during the study period.

SECTION 8 - G SITEWORK

G10 SITE IMPROVEMENTS

In addition to the buildings located at the site, we have also undertaken a cursory review and assessment of the major site assets to further assist the City in understanding the condition of the site over all. The FCI calculations which are located in the Executive Summary do not include any likely cost that has been shown in this section.

DESCRIPTION

G2010 ROADWAYS

G2012 Paving & Surfacing

A variable width asphaltic-concrete paved roadway traverses the site, from the entrance from Bell Avenue at the northeast corner, around the buildings and to the site southeast corner (reference Photograph 76, 78, 83 and 84 in Appendix B). A portion of the roadway is concrete pavement between Buildings A, B and D and at a fuel dispensing station at the east side of Building D. A concrete drainage gutter is typically provided at the center of the driving lanes. An upper loading area accessed from 36th Place is asphalt paved and provides truck access to the Sand/Gravel Hoppers and bulk material storage bins (reference Photographs 89-91 in Appendix B).

G2020 PARKING LOTS

G2022 Paving & Surfacing

Asphaltic-concrete-paved parking areas are provided along the entrance drive into the site from Bell Avenue, at the buildings, along loading platforms at the west side of the site and to the east of the fuel dispensing station at Building D. We were not provided with the original specification details of the paving and therefore cannot comment on the specific asphalt mix type, classification or its suitability for its existing use. Table G20-1 provides a summary of the site pavement systems.

Table G20-1 Schedule of Site Pavement Systems

System Type	System Surface	Location	Measurement	No. of Parking Spaces	No. of Disabled Parking Spaces
Drive Aisle and Parking	Asphalt	Entrance Drive, Internal Driving Aisles, Typical Parking Areas	8,460 SY	77 *	0
Drive Aisle and Parking	Concrete	Internal Driving Aisles & Parking Areas at Buildings A, B and D and at Fuel Dispensing Station	1,030 SY	0	0

* Includes spaces occupied by service equipment, trailers and storage containers

G2030 PEDESTRIAN PAVING

G2031 Paving & Surfacing

Concrete walkways are located along the front (south) side of Building A and along the east side of the site, adjacent to the fuel distribution station east of Building D. We were not provided with construction specifications or original installation details for the paving; therefore specific concrete mix, design strength, or its suitability for its existing use is not known.

G2040 SITE DEVELOPMENT

G2041 Fences & Gates

The site perimeter is enclosed by 6'-tall chain link fencing, separating the Property from the public streets along the north, at adjoining commercial property to the east, at recreational property to the south and residential areas to the west (Reference Photographs 76 and 89 in Appendix B). Vision screening fabric is installed on the full height of the fencing along the residential areas. Gates are provided at the entrance drive near Building A, along the entrance drive for access to an adjoin property and at upper loading area accessed from 36th Place. The gate near Building A is a rolling-type, galvanized steel-framed and with chain-drive and card-key proximity controls (Reference Photographs 77 and 89 in Appendix B). The other gates are wing-type, galvanized steel framed with chain link fabric. Chain link fencing enclosures are also provided at certain outside storage areas at the west side of the site.

G2042 Retaining Walls

There are concrete and concrete masonry retaining walls at the west side of the site, primarily where the sloping site has been excavated for roadway, parking and exterior storage areas (reference Photograph 87 in Appendix B). The walls vary in height from 2' to more than 6'.

G2049 Miscellaneous Structures

The site includes raised loading docks and storage platforms along its west side, west of Buildings D and F. The docks are typically constructed with concrete masonry front walls and reinforced concrete decks, with concrete and wood-framed access stairs. The dock heights are typically 3'-6" to 4' in height (reference Photographs 85 and 86 in Appendix B).

A wood-framed canopy with translucent corrugated fiberglass panel roofing is anchored to a concrete masonry retaining wall and with steel posts provides cover for pneumatic compressors. The structure is located adjacent to the Storage Building (Oil Tanks) and is chain link fence enclosed (reference Photograph 88 in Appendix B).

G2050 LANDSCAPING

G2055 Planting

Landscaping was prevalent at the park's perimeter, to the north, west and south east, and adjacent Building A and consisted of native species, as well as specimen shrubs, trees and ground cover.

G3060 FUEL DISTRIBUTION

G3062 Fuel Dispensing Stations

A canopy-covered vehicle fuel dispensing station is located at the northeast corner of Building D. The canopy is steel framed, with prefinished metal fascia, soffit and roof. There are gasoline and diesel fueling pumps, as well as a natural gas fueling pump, located on a raised island (reference Photographs 79 through 81 in Appendix B). Two additional natural gas fueling stations are located along the sidewalk to the east side of the site. The 1997 construction drawings indicate installation of two 10,000-gallon and one 4,000-gallon underground diesel and gasoline fuel tanks.

CONDITION

G2010 ROADWAYS

G2012 Paving & Surfacing

The asphalt paved areas throughout the site appeared to be in fair to good condition, with the exception of in the bulk loading area at the northwest corner of the site. With the primary site driving lanes, we noted minor areas of surface cracking within the wearing course of the driving aisle. However, in the upper loading area, significant surface cracking, alligator cracking, erosion and general deterioration was noted. Alligator cracking is a series of interconnected cracks caused by fatigue failure of the asphalt surface under repeated vehicle loading which is also indicative of sub-base and sub-grade deterioration. We recommend sub-base repairs, base course patching and resurfacing be completed in the upper, bulk loading area in the near term of the study period. The concrete paved areas throughout the site also appeared to be in fair to good condition, with some locations of open cracking noted. Within the study period, routine repairs and patching of the asphalt pavement should be completed, with application of crack-filler, surface seal coating and application of striping/marking is recommended in the mid-term of the study period.

G2020 PARKING LOTS

G2022 Paving & Surfacing

The asphalt paved parking areas throughout the site appeared to be in fair to good condition. We noted minor areas of surface cracking within the wearing course of the parking areas and their drive aisle. The asphalt paved parking areas should undergo asphaltic-based crack filling, seal coating and re-application of surface markings every three- to five-years to extend the life of the pavements.

G2030 PEDESTRIAN PAVING

G2031 Paving & Surfacing

The limited amount of concrete pedestrian walkways appeared to be in good condition, with only minor issues of cracking and surface spalling observed. The walkways will likely require routine maintenance and section replacement during the

study period and these should be addressed on an as-needed basis as part of routine maintenance and funded as an operational expense.

One area of major concern is present at the south side of the yard at the slope from the alley/dump to the main administration building. There is serious erosion issues present which we anticipate will require slope stabilization. We have included a budgetary expenditure amount in the study at this time, however we recommend that the City have a structural/land survey undertaken to ascertain the issues and necessary works to repair the issue.

G2040 SITE DEVELOPMENT

G2041 Fences & Gates

The chain link fencing throughout the site generally appeared to be in fair condition, with some sections of fencing deformed or detached from posts and railings. The dates of installation of the fencing are not known, but with an EUL of 40 years, we do not anticipate significant expenditures for repairs or replacements during the study period. The rolling gate was operating properly during our site visit, but the EUL for its operator is 15 years; budgeting for the replacement of the gate's operation system is recommended during the study period.

G2042 Retaining Walls

The retaining walls appeared to generally be in fair condition, with limited locations of cracking. No anticipated issues have been identified, except for the slope erosion which has been discussed in Section G2031.

G2049 Miscellaneous Structures

The loading platforms and equipment canopy are in fair condition; no significant repairs or replacement are anticipated during the study period.

G2050 LANDSCAPING

G2055 Planting

The planted materials are in good overall condition, although they will need routine maintenance and replacements during the study period; these conditions should be addressed on an as-needed basis as part of maintenance and funded as operational expenses.

G3060 FUEL DISTRIBUTION

G3062 Fuel Dispensing Stations

The vehicle fuel dispensing station was being utilized during our site assessment and appeared to be in good condition. Other than normal maintenance, significant replacements are not anticipated during the study period.

G40 SITE ELECTRICAL UTILITIES

DESCRIPTION

G4020 SITE LIGHTING

G4021 Fixtures & Transformers

Exterior lighting throughout the site consisted primarily of pole-mounted fixtures utilizing high-intensity discharge (HID) lamping, including 150-watt metal halide, 250-watt mercury vapor, and 150-watt high pressure sodium fixtures. Additional site lighting is provided by wall-mounted HID fixtures at the buildings.

G4090 OTHER SITE ELECTRICAL UTILITIES

G4092 Site Emergency Power Generation

The site is provided emergency power, backed-up by an Onan diesel-fueled generator located at the east side of Building E (reference Photograph 93 in Appendix B). The Onan-manufactured transfer switch is wall mounted in the main electrical room in Building D. The generator has an approximately 100-gallon capacity diesel storage tank under the generator set.

Table G40-1 provides a summary of the generator equipment:

Table G40-1 Summary of the Generator Equipment

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year Installed
East of Building E	Diesel Generator	Onan	600SGCB	K9305 24143	1800 RPM 400 Amps 40 KW / 40 KVA (1 Phase) 60 KW / 75 KVA (3 Phase)	Diesel	1995 (Assumed)

CONDITION

G4020 SITE LIGHTING

G4021 Fixtures & Transformers

The site lighting appeared to be in fair to good condition, although our assessment was completed during daylight hours. No issues were observed and there were no reported instances of malfunction or disrepair. We do not anticipate significant repairs or replacements during the study period.

G4090 OTHER SITE ELECTRICAL UTILITIES

G4092 Site Emergency Power Generation

Emergency generator, transfer switch and distribution system, installed in approximately 1995, appeared to be in fair condition. The metal housing of the generator was noted to have areas of peeling paint and corrosion and we recommend that housing be cleaned and repainted at the time of building exterior painting. Based on the age of the equipment, 18 years old, the observed condition and an EUL of 20- to 25-years, we recommend budgeting for replacement of the generator set in the mid- to late-term of the study period. We recommend the repainting of the enclosure as it have deterioration present.

PROJECTED EXPENDITURES

Identified recommended works that are required during the 10 year study period are scheduled below. We recommend budgeting for additional project costs of between 25%-30% to allow for professional fees and general contractor overhead/profit and management costs.

Element No. Item	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
G2012	Paving & Surfacing	Repair, mill and resurface the asphalt pavement at bulk loading area	1,000	SY	$15	$15,000	2016	3
G2012	Paving & Surfacing	Seal coat and re-stripe the asphalt pavement	1,830	SY	$1.50	$2,745	2016	3
G2012	Paving & Surfacing	Seal coat and re-stripe the asphalt pavement	1,830	SY	$1.50	$2,745	2021	3
G2020	Paving & Surfacing	Seal coat and re-stripe the asphalt pavement	5,625	SY	$1.50	$8,438	2016	3
G2020	Paving & Surfacing	Seal coat and re-stripe the asphalt pavement	5,625	SY	$1.50	$8,438	2021	3
G2031	Paving & Surfacing	Budgetary expenditure for stabilization works to the slope erosion issue	1	LS	$350,000	$350,000	2013	2
G2041	Fences & Gates	Replace gate operator	1	EACH	$650	$650	2022	3
G4092	Site Emergency Power Generation	Repaint enclosure	1	LS	$500	$500	2013	3
G4092	Site Emergency Power Generation	Replace the emergency generator set	40	KW	$1,843	$73,720	2017	3
		Total Anticipated Expenditure for G Building Sitework				$462,235		

Appendix A

Ten-Year
Expenditure Forecast
2013 - 2022

FAITHFUL+GOULD
CONSTRUCTIVE EXPERTISE

10 YEAR EXPENDITURE FORECAST

Manhattan Beach Public Works - Building A
3621 Bell Avenue
Manhattan Beach, CA
Rev A

Element No.	Component Description	Estimated Useful Life or Replacement Cycle (Yrs)	Remaining Useful Life (Yrs)	Quantity	Unit of Measurement	Unit Cost	Plan Type	Priority	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Total	Combined Total
						$			1	2	3	4	5	6	7	8	9	10			
									Deferred	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Deferred	Scheduled	
A. SUBSTRUCTURE																					
								A. SUBSTRUCTURE SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
B. SHELL																					
B2011	Repair wood and metal siding; repaint repaired areas	N/A	0	1.00	LS	$25,000.00	Deferred Maintenance	3	$25,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$25,000	$0	$25,000
B2011	Repaint exterior painted surfaces	4	2	2,830.00	SF	$3.25	Routine Maintenance	5	$0	$0	$9,198	$0	$0	$0	$9,198	$0	$0	$0	$0	$18,395	$18,395
B2021	Replace window units	20	0	1.00	LS	$10,000.00	Deferred Maintenance	3	$10,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,000	$0	$10,000
B3011	Recoat metal roofing	20	5	6,000.00	SF	$1.75	Capital Renewal	4	$0	$0	$0	$0	$0	$10,500	$0	$0	$0	$0	$0	$10,500	$10,500
								B. SHELL SUB-TOTALS	$35,000	$0	$9,198	$0	$0	$10,500	$9,198	$0	$0	$0	$35,000	$28,895	$63,895
C. INTERIORS																					
C3012	Repaint interior wall and ceiling surfaces	6	4	8,820.00	SF	$3.25	Routine Maintenance	5	$0	$0	$0	$0	$28,665	$0	$0	$0	$0	$0	$0	$28,665	$28,665
C3023	Replace carpet flooring	10	7	2,200.00	SF	$3.75	Capital Renewal	5	$0	$0	$0	$0	$0	$0	$0	$8,250	$0	$0	$0	$8,250	$8,250
								C. INTERIORS SUB-TOTALS	$0	$0	$0	$0	$28,665	$0	$0	$8,250	$0	$0	$0	$36,915	$36,915
D. SERVICES																					
D20	Renovate restroom and incorporate locker room	15	0	1	LS	$40,000.00	Deferred Maintenance	3	$40,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$40,000	$0	$40,000
D2018	Replace the drinking fountain	20	1	1	EACH	$1,520.00	Capital Renewal	3	$0	$1,520	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,520	$1,520
D2031	Undertake camera inspection of sewer line	N/A	0	1	LS	$1,000.00	Deferred Maintenance	3	$1,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,000	$0	$1,000
D3041	Test, balance and repair the system	N/A	0	1	LS	$3,100.00	Deferred Maintenance	4	$3,100	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,100	$0	$3,100
D3041	Clean ductwork	5	0	5,748	SF	$0.25	Deferred Maintenance	3	$1,437	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,437	$0	$1,437
D3041	Clean ductwork	5	5	5,748	SF	$0.25	Routine Maintenance	3	$0	$0	$0	$0	$0	$1,437	$0	$0	$0	$0	$0	$1,437	$1,437
D3042	Replace rooftop exhaust fans	20	Varies	1	EACH	$1,665.00	Energy & Sustainability	3	$0	$0	$0	$0	$1,665	$0	$0	$0	$0	$0	$0	$1,665	$1,665
D3042	Replace rooftop exhaust fans	20	Varies	1	EACH	$1,665.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$1,665	$0	$0	$0	$0	$1,665	$1,665
D5051	Replace the wall-mounted heating unit and through-wall air conditioning unit	20	2	2	EACH	$1,025.00	Energy & Sustainability	3	$0	$0	$2,050	$0	$0	$0	$0	$0	$0	$0	$0	$2,050	$2,050
D3052	Replace pad-mounted package unit	25	5	6	TON	$2,096.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$12,576	$0	$0	$0	$0	$0	$12,576	$12,576
D5022	Install lighting occupancy sensor switches	10	2	15	EACH	$187.50	Energy & Sustainability	4	$0	$0	$2,813	$0	$0	$0	$0	$0	$0	$0	$0	$2,813	$2,813
								D. SERVICES SUB-TOTALS	$45,537	$1,520	$4,863	$0	$1,665	$14,013	$1,665	$0	$0	$0	$45,537	$23,726	$69,263
E. EQUIPMENT & FURNISHING																					
								E. EQUIPMENT & FURNISHING SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
F. SPECIAL CONSTRUCTION AND DEMOLITION																					
								F. SPECIAL CONSTRUCTION AND DEMOLITION SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
G. BUILDING SITEWORK																					
								G. BUILDING SITEWORK SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Z. GENERAL																					
								Z. GENERAL SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
								Expenditure Totals per Year	$80,537	$1,520	$14,060	$0	$30,330	$24,513	$10,863	$8,250	$0	$0	$80,537	$89,536	$170,073
								Total Cost (Inflated @ 4% per Yr.)	$80,537	$1,581	$15,207	$0	$35,482	$29,824	$13,745	$10,856	$0	$0	$80,537	$106,695	$187,232

10 YEAR EXPENDITURE FORECAST

Manhattan Beach Public Works - Site Systems
1600 Manhattan Beach Boulevard
Manhattan Beach, CA
Rev A

Element No.	Component Description	Estimated Useful Life or Replacement Cycle (Yrs)	Remaining Useful Life (Yrs)	Quantity	Unit of Measurement	Unit Cost	Plan Type	Priority	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Total	Combined Total
						$			1	2	3	4	5	6	7	8	9	10			
									Deferred	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Deferred	Scheduled	
A. SUBSTRUCTURE																					
								A. SUBSTRUCTURE SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
B. SHELL																					
								B. SHELL SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
C. INTERIORS																					
								C. INTERIORS SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
D. SERVICES																					
								D. SERVICES SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
E. EQUIPMENT & FURNISHING																					
								E. EQUIPMENT & FURNISHING SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
F. SPECIAL CONSTRUCTION AND DEMOLITION																					
								F. SPECIAL CONSTRUCTION AND DEMOLITION SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
G. BUILDING SITEWORK																					
G2012	Repair, mill and resurface asphalt pavement at bulk loading area	20	3	1,000.00	SY	$15.00	Capital Renewal	3	$0	$0	$0	$15,000	$0	$0	$0	$0	$0	$0	$0	$15,000	$15,000
G2012	Seal coat and re-stripe the asphalt pavement	5	3	1,830.00	SY	$1.50	Routine Maintenance	3	$0	$0	$0	$2,745	$0	$0	$0	$0	$2,745	$0	$0	$5,490	$5,490
G2020	Seal coat and re-stripe the parking area asphalt pavement	5	3	5,625.00	SY	$1.50	Routine Maintenance	3	$0	$0	$0	$8,438	$0	$0	$0	$0	$8,438	$0	$0	$16,875	$16,875
G2031	Budgetary expenditure for stabilization works to the slope erosion issue	N/A	0	1.00	LS	$350,000.00	Deferred Maintenance	2	$350,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$350,000	$0	$350,000
G2041	Replace gate operator	15	9	1.00	EACH	$650.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$650	$0	$650	$650
G4092	Repaint enclosure	15	0	1.00	LS	$500.00	Deferred Maintenance	3	$500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$500	$0	$500
G4092	Replace the emergency generator set	25	4	40.00	KW	$1,843.00	Capital Renewal	3	$0	$0	$0	$0	$73,720	$0	$0	$0	$0	$0	$0	$73,720	$73,720
								G. BUILDING SITEWORK SUB-TOTALS	$350,500	$0	$0	$26,183	$73,720	$0	$0	$0	$11,183	$650	$350,500	$111,735	$462,235
Z. GENERAL																					
								Z. GENERAL SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
								Expenditure Totals per Year	$350,500	$0	$0	$26,183	$73,720	$0	$0	$0	$11,183	$650	$350,500	$111,735	$462,235
								Total Cost (Inflated @ 4% per Yr.)	$350,500	$0	$0	$29,452	$86,242	$0	$0	$0	$15,304	$925	$350,500	$131,923	$482,423

10 YEAR EXPENDITURE FORECAST

Manhattan Beach Public Works - Building B
3621 Bell Avenue
Manhattan Beach, CA
Rev A

Element No.	Component Description	Estimated Useful Life or Replacement Cycle (Yrs)	Remaining Useful Life (Yrs)	Quantity	Unit of Measurement	Unit Cost	Plan Type	Priority	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Total	Combined Total
						$			1	2	3	4	5	6	7	8	9	10			
									Deferred	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Deferred	Scheduled	
A. SUBSTRUCTURE																					
								A. SUBSTRUCTURE SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
B. SHELL																					
B2011	Repaint exterior painted surfaces	4	2	2,720.00	SF	$3.25	Routine Maintenance	5	$0	$0	$8,840	$0	$0	$0	$8,840	$0	$0	$0	$0	$17,680	$17,680
B3011	Recoat metal roofing	10	5	2,240.00	SF	$1.75	Capital Renewal	4	$0	$0	$0	$0	$0	$3,920	$0	$0	$0	$0	$0	$3,920	$3,920
								B. SHELL SUB-TOTALS	$0	$0	$8,840	$0	$0	$3,920	$8,840	$0	$0	$0	$0	$21,600	$21,600
C. INTERIORS																					
								C. INTERIORS SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
D. SERVICES																					
D3051	Replace gas-fired unit heaters	20	7	2.00	EACH	$1,025.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$2,050	$0	$0	$0	$2,050	$2,050
								D. SERVICES SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$2,050	$0	$0	$0	$2,050	$2,050
E. EQUIPMENT & FURNISHING																					
								E. EQUIPMENT & FURNISHING SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
F. SPECIAL CONSTRUCTION AND DEMOLITION																					
								F. SPECIAL CONSTRUCTION AND DEMOLITION SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
G. BUILDING SITEWORK																					
								G. BUILDING SITEWORK SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Z. GENERAL																					
								Z. GENERAL SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
							Expenditure Totals per Year		$0	$0	$8,840	$0	$0	$3,920	$8,840	$2,050	$0	$0	$0	$23,650	$23,650
							Total Cost (Inflated @ 4% per Yr.)		$0	$0	$9,561	$0	$0	$4,769	$11,185	$2,698	$0	$0	$0	$28,214	$28,214

10 YEAR EXPENDITURE FORECAST

Manhattan Beach Public Works - Building C
3621 Bell Avenue
Manhattan Beach, CA
Rev A

Element No.	Component Description	Estimated Useful Life or Replacement Cycle (Yrs)	Remaining Useful Life (Yrs)	Quantity	Unit of Measurement	Unit Cost	Plan Type	Priority	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Total	Combined Total
						$			1	2	3	4	5	6	7	8	9	10			
									Deferred	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Deferred	Scheduled	
A. SUBSTRUCTURE																					
								A. SUBSTRUCTURE SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
B. SHELL																					
B2011	Repaint exterior painted surfaces	4	2	300.00	SF	$3.25	Routine Maintenance	5	$0	$0	$975	$0	$0	$0	$975	$0	$0	$0	$0	$1,950	$1,950
								B. SHELL SUB-TOTALS	$0	$0	$975	$0	$0	$0	$975	$0	$0	$0	$0	$1,950	$1,950
C. INTERIORS																					
								C. INTERIORS SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
D. SERVICES																					
								D. SERVICES SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
E. EQUIPMENT & FURNISHING																					
								E. EQUIPMENT & FURNISHING SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
F. SPECIAL CONSTRUCTION AND DEMOLITION																					
								F. SPECIAL CONSTRUCTION AND DEMOLITION SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
G. BUILDING SITEWORK																					
								G. BUILDING SITEWORK SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Z. GENERAL																					
								Z. GENERAL SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
								Expenditure Totals per Year	$0	$0	$975	$0	$0	$0	$975	$0	$0	$0	$0	$1,950	$1,950
								Total Cost (Inflated @ 4% per Yr.)	$0	$0	$1,055	$0	$0	$0	$1,234	$0	$0	$0	$0	$2,288	$2,288

10 YEAR EXPENDITURE FORECAST

Manhattan Beach Public Works - Sand/Gravel Hoppers
3621 Bell Avenue
Manhattan Beach, CA
Rev A

Element No.	Component Description	Estimated Useful Life or Replacement Cycle (Yrs)	Remaining Useful Life (Yrs)	Quantity	Unit of Measurement	Unit Cost	Plan Type	Priority	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Total	Combined Total
						$			1	2	3	4	5	6	7	8	9	10			
									Deferred	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Deferred	Scheduled	
A. SUBSTRUCTURE																					
							A. SUBSTRUCTURE SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
B. SHELL																					
B1021	Repair deteriorated concrete surfaces and edges	N/A	0	506.00	SF	$7.30	Deferred Maintenance	3	$3,694	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,694	$0	$3,694
B2011	Repaint exterior painted surfaces	4	2	2,490.00	SF	$3.25	Routine Maintenance	5	$0	$0	$8,093	$0	$0	$0	$8,093	$0	$0	$0	$0	$16,185	$16,185
							B. SHELL SUB-TOTALS		$3,694	$0	$8,093	$0	$0	$0	$8,093	$0	$0	$0	$3,694	$16,185	$19,879
C. INTERIORS																					
							C. INTERIORS SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
D. SERVICES																					
							D. SERVICES SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
E. EQUIPMENT & FURNISHING																					
							E. EQUIPMENT & FURNISHING SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
F. SPECIAL CONSTRUCTION AND DEMOLITION																					
							F. SPECIAL CONSTRUCTION AND DEMOLITION SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
G. BUILDING SITEWORK																					
							G. BUILDING SITEWORK SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Z. GENERAL																					
							Z. GENERAL SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
							Expenditure Totals per Year		$3,694	$0	$8,093	$0	$0	$0	$8,093	$0	$0	$0	$3,694	$16,185	$19,879
							Total Cost (Inflated @ 4% per Yr.)		$3,694	$0	$8,753	$0	$0	$0	$10,240	$0	$0	$0	$3,694	$18,992	$22,686

10 YEAR EXPENDITURE FORECAST

Manhattan Beach Public Works - Storage Building (Oil Tanks)
3621 Bell Avenue
Manhattan Beach, CA
Rev A

Element No.	Component Description	Estimated Useful Life or Replacement Cycle (Yrs)	Remaining Useful Life (Yrs)	Quantity	Unit of Measurement	Unit Cost	Plan Type	Priority	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Total	Combined Total
						$			1	2	3	4	5	6	7	8	9	10			
									Deferred	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Deferred	Scheduled	
A. SUBSTRUCTURE																					
							A. SUBSTRUCTURE SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
B. SHELL																					
B2011	Repair deteriorated wood siding, fascia and trim	N/A	0	100.00	SF	$5.80	Deferred Maintenance	3	$580	$0	$0	$0	$0	$0	$0	$0	$0	$0	$580	$0	$580
B2011	Repaint exterior painted surfaces	4	2	700.00	SF	$3.25	Routine Maintenance	5	$0	$0	$2,275	$0	$0	$0	$2,275	$0	$0	$0	$0	$4,550	$4,550
							B. SHELL SUB-TOTALS		$580	$0	$2,275	$0	$0	$0	$2,275	$0	$0	$0	$580	$4,550	$5,130
C. INTERIORS																					
C3012	Repaint interior wall and ceiling surfaces	6	4	1,570.00	SF	$3.25	Routine Maintenance	5	$0	$0	$0	$0	$5,103	$0	$0	$0	$0	$0	$0	$5,103	$5,103
							C. INTERIORS SUB-TOTALS		$0	$0	$0	$0	$5,103	$0	$0	$0	$0	$0	$0	$5,103	$5,103
D. SERVICES																					
							D. SERVICES SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
E. EQUIPMENT & FURNISHING																					
							E. EQUIPMENT & FURNISHING SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
F. SPECIAL CONSTRUCTION AND DEMOLITION																					
							F. SPECIAL CONSTRUCTION AND DEMOLITION SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
G. BUILDING SITEWORK																					
							G. BUILDING SITEWORK SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Z. GENERAL																					
							Z. GENERAL SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
							Expenditure Totals per Year		$580	$0	$2,275	$0	$5,103	$0	$2,275	$0	$0	$0	$580	$9,653	$10,233
							Total Cost (Inflated @ 4% per Yr.)		$580	$0	$2,461	$0	$5,969	$0	$2,879	$0	$0	$0	$580	$11,308	$11,888

10 YEAR EXPENDITURE FORECAST

Manhattan Beach Public Works - Building D
3621 Bell Avenue
Manhattan Beach, CA
Rev A

Element No.	Component Description	Estimated Useful Life or Replacement Cycle (Yrs)	Remaining Useful Life (Yrs)	Quantity	Unit of Measurement	Unit Cost	Plan Type	Priority	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Total	Combined Total
						$			1	2	3	4	5	6	7	8	9	10			
									Deferred	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Deferred	Scheduled	
A. SUBSTRUCTURE																					
								A. SUBSTRUCTURE SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
B. SHELL																					
B2011	Repair metal siding; repaint repaired areas	N/A	0	200.00	SF	$5.80	Deferred Maintenance	3	$1,160	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,160	$0	$1,160
B2011	Repaint exterior painted surfaces	4	2	6,930.00	SF	$3.25	Routine Maintenance	5	$0	$0	$22,523	$0	$0	$0	$22,523	$0	$0	$0	$0	$45,045	$45,045
B3011	Recoat metal roofing	20	5	13,940.00	SF	$1.75	Capital Renewal	4	$0	$0	$0	$0	$0	$24,395	$0	$0	$0	$0	$0	$24,395	$24,395
B3021	Replace skylight	25	5	1.00	EACH	$635.00	Capital Renewal	3	$0	$0	$0	$0	$0	$635	$0	$0	$0	$0	$0	$635	$635
								B. SHELL SUB-TOTALS	$1,160	$0	$22,523	$0	$0	$25,030	$22,523	$0	$0	$0	$1,160	$70,075	$71,235
C. INTERIORS																					
C3012	Repaint interior wall surfaces	6	4	4,600.00	SF	$3.25	Routine Maintenance	5	$0	$0	$0	$0	$14,950	$0	$0	$0	$0	$0	$0	$14,950	$14,950
								C. INTERIORS SUB-TOTALS	$0	$0	$0	$0	$14,950	$0	$0	$0	$0	$0	$0	$14,950	$14,950
D. SERVICES																					
D3041	Clean ductwork	5	0	12,050.00	SF	$0.25	Deferred Maintenance	3	$3,013	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,013	$0	$3,013
D3041	Clean ductwork	5	5	12,050.00	SF	$0.25	Routine Maintenance	3	$0	$0	$0	$0	$0	$3,013	$0	$0	$0	$0	$0	$3,013	$3,013
D3042	Replace exhaust fan	20	4	1.00	EACH	$1,665.00	Energy & Sustainability	3	$0	$0	$0	$0	$1,665	$0	$0	$0	$0	$0	$0	$1,665	$1,665
D3042	Replace exhaust fan	20	6	1.00	EACH	$1,665.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$1,665	$0	$0	$0	$0	$1,665	$1,665
D3051	Replace gas-fired wall-mounted unit heaters	20	4	2.00	EACH	$1,025.00	Energy & Sustainability	3	$0	$0	$0	$0	$2,050	$0	$0	$0	$0	$0	$0	$2,050	$2,050
D3051	Replace gas-fired wall-mounted unit heaters	20	6	3.00	EACH	$1,025.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$3,075	$0	$0	$0	$0	$3,075	$3,075
D3052	Replace split system units	20	4	1.00	EACH	$4,190.00	Energy & Sustainability	3	$0	$0	$0	$0	$4,190	$0	$0	$0	$0	$0	$0	$4,190	$4,190
D5022	Install occupancy sensor switches	10	2	6.00	EACH	$187.50	Energy & Sustainability	4	$0	$0	$1,125	$0	$0	$0	$0	$0	$0	$0	$0	$1,125	$1,125
								D. SERVICES SUB-TOTALS	$3,013	$0	$1,125	$0	$7,905	$3,013	$4,740	$0	$0	$0	$3,013	$16,783	$19,795
E. EQUIPMENT & FURNISHING																					
								E. EQUIPMENT & FURNISHING SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
F. SPECIAL CONSTRUCTION AND DEMOLITION																					
								F. SPECIAL CONSTRUCTION AND DEMOLITION SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
G. BUILDING SITEWORK																					
								G. BUILDING SITEWORK SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Z. GENERAL																					
								Z. GENERAL SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
								Expenditure Totals per Year	$4,173	$0	$23,648	$0	$22,855	$28,043	$27,263	$0	$0	$0	$4,173	$101,808	$105,980
								Total Cost (Inflated @ 4% per Yr.)	$4,173	$0	$25,577	$0	$26,737	$34,118	$34,496	$0	$0	$0	$4,173	$120,928	$125,101

10 YEAR EXPENDITURE FORECAST

Manhattan Beach Public Works - Building E
3621 Bell Avenue
Manhattan Beach, CA
Rev A

Element No.	Component Description	Estimated Useful Life or Replacement Cycle (Yrs)	Remaining Useful Life (Yrs)	Quantity	Unit of Measurement	Unit Cost	Plan Type	Priority	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Total	Combined Total
						$			1	2	3	4	5	6	7	8	9	10			
									Deferred	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Deferred	Scheduled	
A. SUBSTRUCTURE																					
								A. SUBSTRUCTURE SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
B. SHELL																					
B2011	Repaint exterior painted surfaces	4	2	2,220.00	SF	$3.25	Routine Maintenance	5	$0	$0	$7,215	$0	$0	$0	$7,215	$0	$0	$0	$0	$14,430	$14,430
B3011	Recoat metal roofing	20	5	3,680.00	SF	$1.75	Capital Renewal	4	$0	$0	$0	$0	$0	$6,440	$0	$0	$0	$0	$0	$6,440	$6,440
								B. SHELL SUB-TOTALS	$0	$0	$7,215	$0	$0	$6,440	$7,215	$0	$0	$0	$0	$20,870	$20,870
C. INTERIORS																					
C3012	Repaint interior wall surfaces	6	4	4,900.00	SF	$3.25	Routine Maintenance	5	$0	$0	$0	$0	$15,925	$0	$0	$0	$0	$0	$0	$15,925	$15,925
C3023	Replace carpet flooring	10	7	1,400.00	SF	$3.75	Capital Renewal	5	$0	$0	$0	$0	$0	$0	$0	$5,250	$0	$0	$0	$5,250	$5,250
								C. INTERIORS SUB-TOTALS	$0	$0	$0	$0	$15,925	$0	$0	$5,250	$0	$0	$0	$21,175	$21,175
D. SERVICES																					
D2031	Undertake camera inspection of sewer lines	N/A	0	1.00	LS	$1,000.00	Deferred Maintenance	3	$1,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,000	$0	$1,000
D3041	Clean ductwork	5	5	3,120.00	SF	$0.25	Deferred Maintenance	3	$780	$0	$0	$0	$0	$0	$0	$0	$0	$0	$780	$0	$780
D3041	Clean ductwork	5	5	3,120.00	SF	$0.25	Routine Maintenance	3	$0	$0	$0	$0	$0	$780	$0	$0	$0	$0	$0	$780	$780
D3042	Replace exhaust fan	20	6	1.00	EACH	$1,665.00	Energy & Sustainability	3	$0	$0	$0	$0	$1,665	$0	$0	$0	$0	$0	$0	$1,665	$1,665
D3042	Replace exhaust fan	20	4	1.00	EACH	$1,665.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$1,665	$0	$0	$0	$0	$1,665	$1,665
D3051	Replace gas-fired wall-mounted unit heater	20	4	1.00	EACH	$1,025.00	Energy & Sustainability	3	$0	$0	$0	$0	$1,025	$0	$0	$0	$0	$0	$0	$1,025	$1,025
D3052	Replace pad-mounted package unit	20	5	4.00	TON	$2,096.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$8,384	$0	$0	$0	$0	$0	$8,384	$8,384
D3052	Replace split system units	20	4	1.00	EACH	$4,190.00	Energy & Sustainability	3	$0	$0	$0	$0	$4,190	$0	$0	$0	$0	$0	$0	$4,190	$4,190
D5022	Install occupancy sensor switches	10	2	8.00	EACH	$187.50	Energy & Sustainability	4	$0	$0	$1,500	$0	$0	$0	$0	$0	$0	$0	$0	$1,500	$1,500
								D. SERVICES SUB-TOTALS	$1,780	$0	$1,500	$0	$6,880	$9,164	$1,665	$0	$0	$0	$1,780	$19,209	$20,989
E. EQUIPMENT & FURNISHING																					
								E. EQUIPMENT & FURNISHING SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
F. SPECIAL CONSTRUCTION AND DEMOLITION																					
								F. SPECIAL CONSTRUCTION AND DEMOLITION SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
G. BUILDING SITEWORK																					
								G. BUILDING SITEWORK SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Z. GENERAL																					
								Z. GENERAL SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
								Expenditure Totals per Year	$1,780	$0	$8,715	$0	$22,805	$15,604	$8,880	$5,250	$0	$0	$1,780	$61,254	$63,034
								Total Cost (Inflated @ 4% per Yr.)	$1,780	$0	$9,426	$0	$26,679	$18,985	$11,236	$6,909	$0	$0	$1,780	$73,234	$75,014

10 YEAR EXPENDITURE FORECAST

Manhattan Beach Public Works - Building F
3621 Bell Avenue
Manhattan Beach, CA
Rev A

Element No.	Component Description	Estimated Useful Life or Replacement Cycle (Yrs)	Remaining Useful Life (Yrs)	Quantity	Unit of Measurement	Unit Cost	Plan Type	Priority	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Total	Combined Total
						$			1	2	3	4	5	6	7	8	9	10			
									Deferred	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Deferred	Scheduled	
A. SUBSTRUCTURE																					
							A. SUBSTRUCTURE SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
B. SHELL																					
B2011	Repair metal siding; repaint repaired areas	N/A	0	220.00	SF	$5.80	Deferred Maintenance	3	$1,276	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,276	$0	$1,276
B2011	Repaint exterior painted surfaces	4	2	8,830.00	SF	$3.25	Routine Maintenance	5	$0	$0	$28,698	$0	$0	$0	$28,698	$0	$0	$0	$0	$57,395	$57,395
B3011	Recoat metal roofing	20	5	11,490.00	SF	$1.75	Capital Renewal	4	$0	$0	$0	$0	$0	$20,108	$0	$0	$0	$0	$0	$20,108	$20,108
							B. SHELL SUB-TOTALS		$1,276	$0	$28,698	$0	$0	$20,108	$28,698	$0	$0	$0	$1,276	$77,503	$78,779
C. INTERIORS																					
							C. INTERIORS SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
D. SERVICES																					
							D. SERVICES SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
E. EQUIPMENT & FURNISHING																					
							E. EQUIPMENT & FURNISHING SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
F. SPECIAL CONSTRUCTION AND DEMOLITION																					
							F. SPECIAL CONSTRUCTION AND DEMOLITION SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
G. BUILDING SITEWORK																					
							G. BUILDING SITEWORK SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Z. GENERAL																					
							Z. GENERAL SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
							Expenditure Totals per Year		$1,276	$0	$28,698	$0	$0	$20,108	$28,698	$0	$0	$0	$1,276	$77,503	$78,779
							Total Cost (Inflated @ 4% per Yr.)		$1,276	$0	$31,039	$0	$0	$24,464	$36,311	$0	$0	$0	$1,276	$91,815	$93,091

10 YEAR EXPENDITURE FORECAST

Manhattan Beach Public Works - Building F
3621 Bell Avenue
Manhattan Beach, CA
Rev A

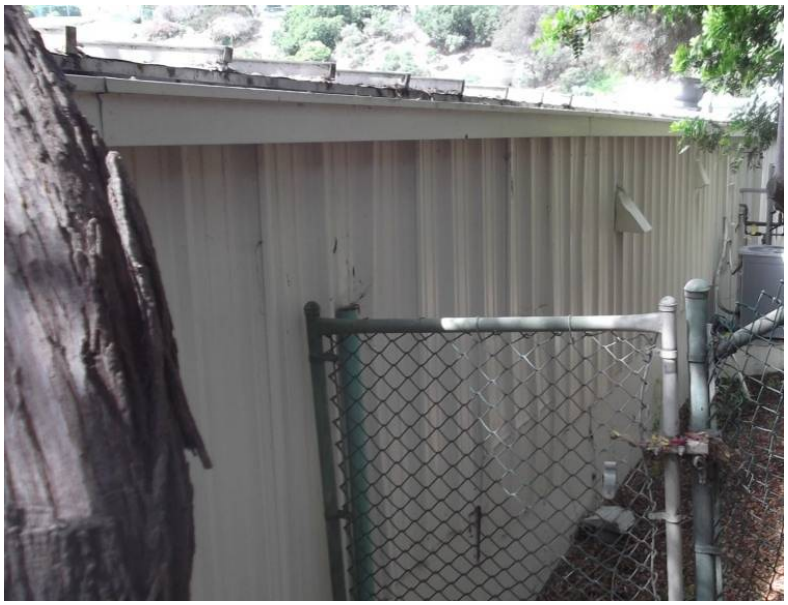
Element No.	Component Description	Estimated Useful Life or Replacement Cycle (Yrs)	Remaining Useful Life (Yrs)	Quantity	Unit of Measurement	Unit Cost	Plan Type	Priority	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Total	Combined Total
						$			1	2	3	4	5	6	7	8	9	10			
									Deferred	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Deferred	Scheduled	
A. SUBSTRUCTURE																					
								A. SUBSTRUCTURE SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
B. SHELL																					
B2011	Repaint exterior painted surfaces	4	2	1,410.00	SF	$3.25	Routine Maintenance	5	$0	$0	$4,583	$0	$0	$0	$4,583	$0	$0	$0	$0	$9,165	$9,165
B3011	Recoat metal roofing	20	5	1,140.00	SF	$1.75	Capital Renewal	4	$0	$0	$0	$0	$0	$1,995	$0	$0	$0	$0	$0	$1,995	$1,995
								B. SHELL SUB-TOTALS	$0	$0	$4,583	$0	$0	$1,995	$4,583	$0	$0	$0	$0	$11,160	$11,160
C. INTERIORS																					
								C. INTERIORS SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
D. SERVICES																					
								D. SERVICES SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
E. EQUIPMENT & FURNISHING																					
								E. EQUIPMENT & FURNISHING SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
F. SPECIAL CONSTRUCTION AND DEMOLITION																					
								F. SPECIAL CONSTRUCTION AND DEMOLITION SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
G. BUILDING SITEWORK																					
								G. BUILDING SITEWORK SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Z. GENERAL																					
								Z. GENERAL SUB-TOTALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
							Expenditure Totals per Year		$0	$0	$4,583	$0	$0	$1,995	$4,583	$0	$0	$0	$0	$11,160	$11,160
							Total Cost (Inflated @ 4% per Yr.)		$0	$0	$4,956	$0	$0	$2,427	$5,798	$0	$0	$0	$0	$13,182	$13,182

Appendix B
Photographs

FAITHFUL+GOULD
CONSTRUCTIVE EXPERTISE

Photograph 1

View of the front of Building A



Photograph 2

View of rear of Building A

Photograph 3

View of deteriorated wood siding at Building A

Photograph 4

View of deteriorated metal siding at Building A

Photograph 5

View of the roofing Building A

Photograph 6

View of roof framing of Building A

Photograph 7

View of the “attic” space in Building A, containing HVAC ductwork

Photograph 8

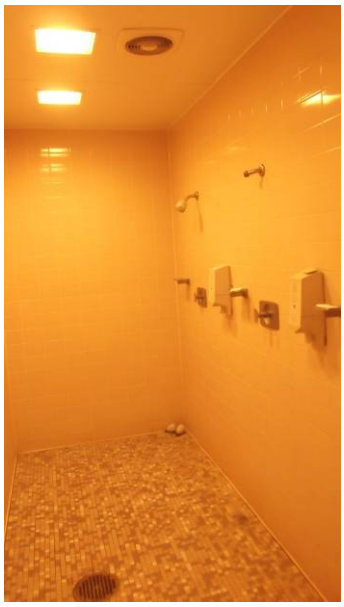
View of the interior of Building A

Photograph 9

View of the interior of Building A

Photograph 10

View of the interior of Building A – men's locker / shower room



Photograph 11

View of the interior of Building A – men's shower

Photograph 12

View of the interior of Building A – men's restroom

Photograph 13

View of the interior of Building A – men's restroom

Photograph 14

View of deteriorated vinyl flooring in the men's restroom in Building A

Photograph 15

View of the unit heater in Building A

Photograph 16

View of the package unit serving Building A

Photograph 17

View of the split system condenser serving Building A

Photograph 18

View of the split system air handling unit in the “attic” space of Building A

Photograph 19

View of the rooftop fan on Building A

Photograph 20

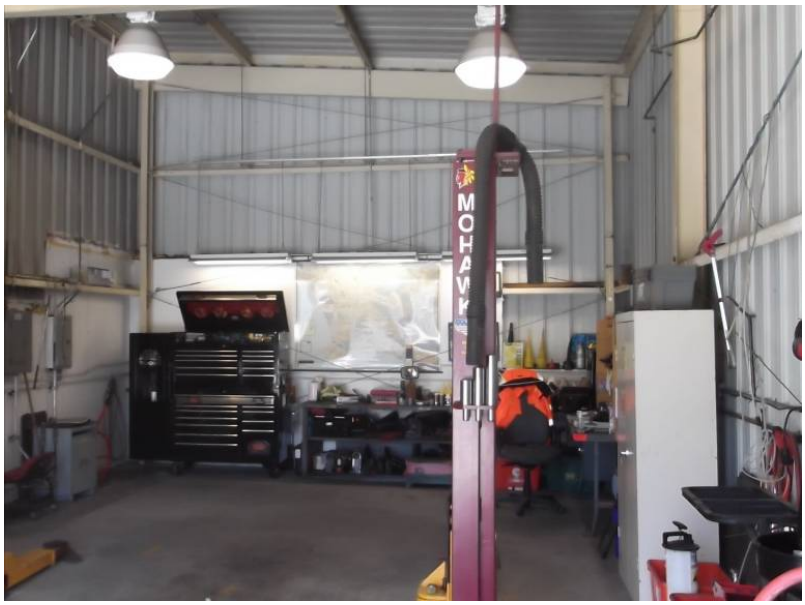
View of the one of the domestic water heaters at Building A

Photograph 21

View of the front of Building B

Photograph 22

View of the rear and roof of Building B



Photographs 23

Views of the interior of Building B

Photograph 24

View of the roof framing and overhead coiling door at Building B

Photograph 25

View of exterior wall metal siding deterioration in Building B

Photograph 26

View of exterior wall metal siding deterioration in Building B

Photograph 27

View of the gas-fired unit heaters in Building B

Photograph 28

View of vehicle exhaust extraction equipment in Building B

Photograph 29

View of the electrical panel and transformer in Building B

Photograph 30

View of building typical of Building C

Photograph 31

View of the roof of Building C

Photograph 32

View of the Sand/Gravel Hoppers

Photograph 33

View of the sand and gravel hoppers

Photographs 34A and 34B

View of the steel and concrete framing of the Sand/Gravel Hoppers

Photograph 35

View of concrete deterioration in the Sand/Gravel Hoppers

Photograph 36

View of the upper deck/roof of the Sand/Gravel Hoppers

Photograph 37

View of the concrete deterioration at the upper deck of the Sand/Gravel Hoppers

Photograph 38

View of the concrete deterioration at the upper deck of the Sand/Gravel Hoppers

Photograph 39

View of the Storage Building (Oil Tanks)

Photograph 40

View of the deteriorated wood fascia of the Storage Building (Oil Tanks) 7

Photograph 41

View of the roof of the Storage Building (Oil Tanks)

Photograph 42

View of the interior of Storage Building (Oil Tanks)

Photograph 43

View of the wall and ceiling deterioration in the Storage Building (Oil Tanks)

Photograph 44

View of Building D

Photograph 45

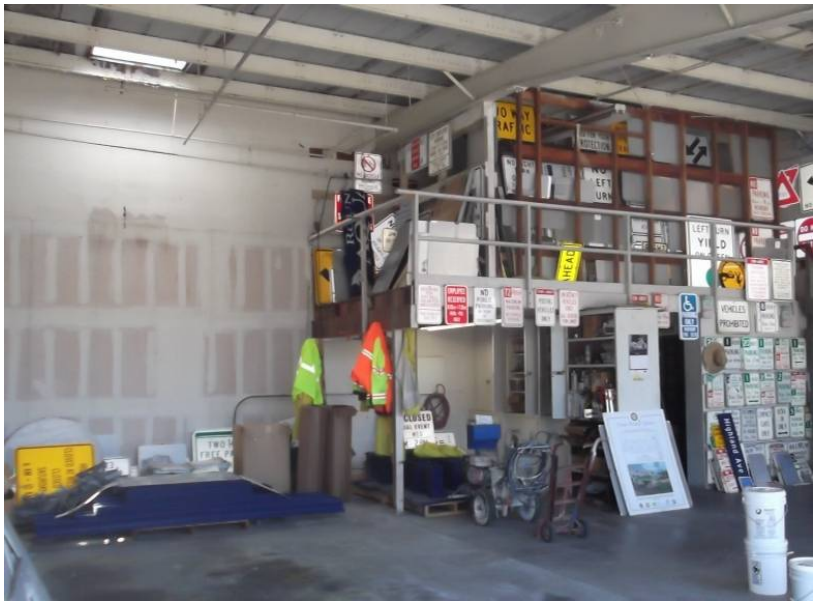
View of north side of Building D

Photograph 46

View of the west side of Building D

Photograph 47

View of metal siding damage at Building D

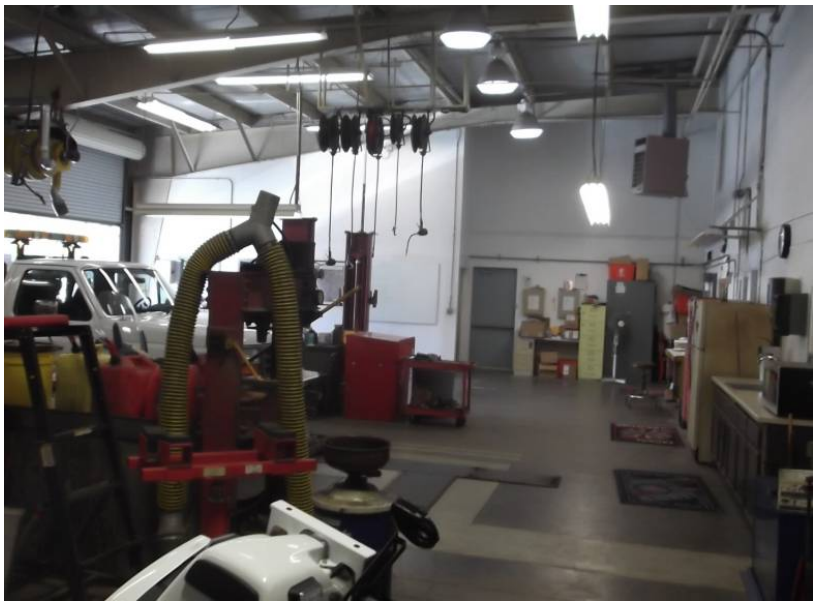


Photograph 48

View of interior of Building D

Photograph 49

View of deterioration under the skylight in Building D

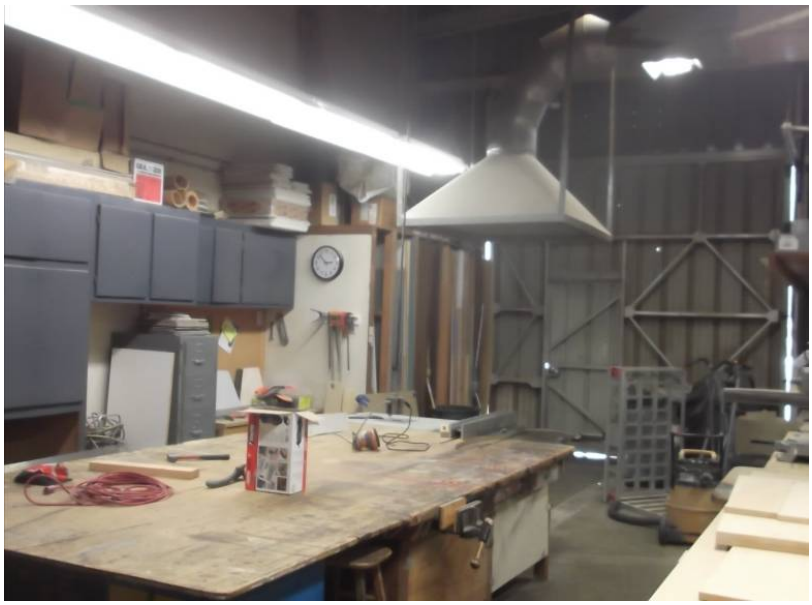


Photograph 50

View of interior of Building D

Photograph 51

View of interior of Building D



Photograph 52

View of interior of Building D

Photograph 53

View of a gas-fired unit heater in Building D

Photograph 54

View of the vehicle exhaust extraction equipment in Building D

Photograph 55

View of the split system air handling unit in Building D

Photograph 56

View of split system's rooftop condensing at Building D

Photograph 57

View of a rooftop exhaust fan at Building D

Photograph 58

View of the site's pad-mounted transformer adjacent to Building D

Photographs 59A and 59B

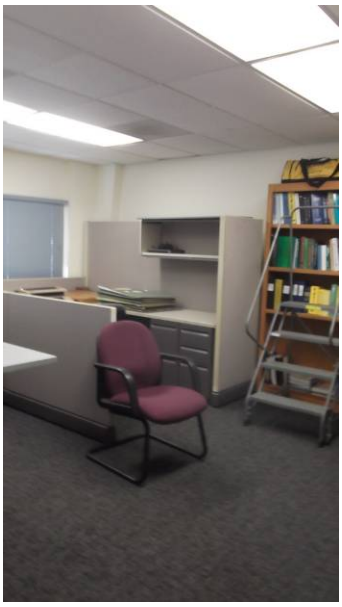
View of main telephone panel and the main electrical switchgear in the Building D electrical room

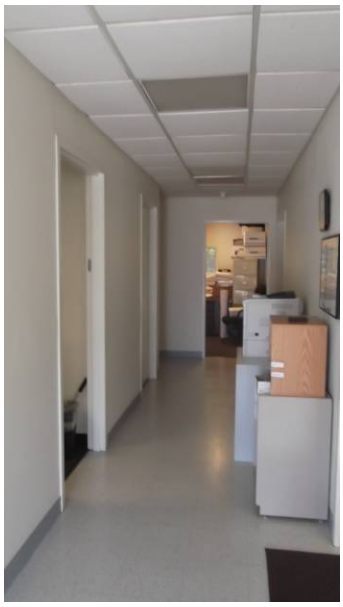
Photograph 60

View of the front of Building E

Photograph 61

View of rear of Building E





Photographs 62A and 62B

Interior views of Building E

Photograph 63

View of ductwork above the ceiling in Building E

Photograph 64

View of the pad-mounted package unit at Building E

Photograph 65

View of a gas-fired unit heater at Building E

Photograph 66

View of a through-wall air conditioning unit at Building E

Photograph 67

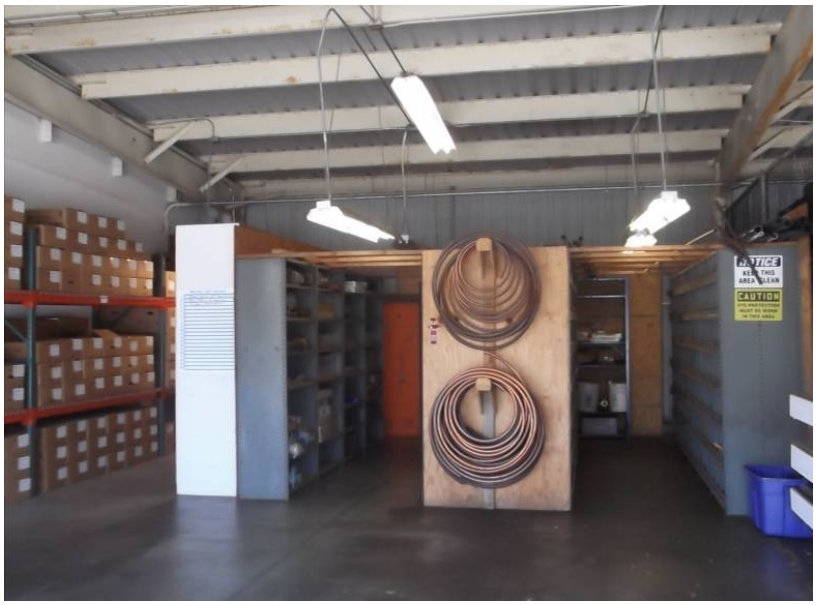
View of Building F

Photograph 68

View of the rear of Building F

Photograph 69

View of the roofs of Building F



Photograph 70

View of interior of Building F

Photograph 71

View of interior of Building F

Photograph 72

View of Building G

Photograph 73

View of the interior of Building G

Photograph 74

Overview of the site, looking east

Photograph 75

Overview of the site, looking northeast

Photograph 76

View of entrance drive from Bell Avenue

Photograph 77

View of rolling gate adjacent to Building A

Photograph 78

View of the concrete pavement between Building A and D

Photograph 79

View of fuel dispensing station adjacent to Building D

Photograph 80

View of the fuel dispensing equipment adjacent to Building D

Photograph 81

View of the natural gas dispensing station adjacent to Building D

Photograph 82

View of site's natural gas meter/service

Photograph 83

View of asphalt pavement with center concrete gutter, adjacent to Building D

Photograph 84

View of cracking in the asphalt pavement

Photograph 85

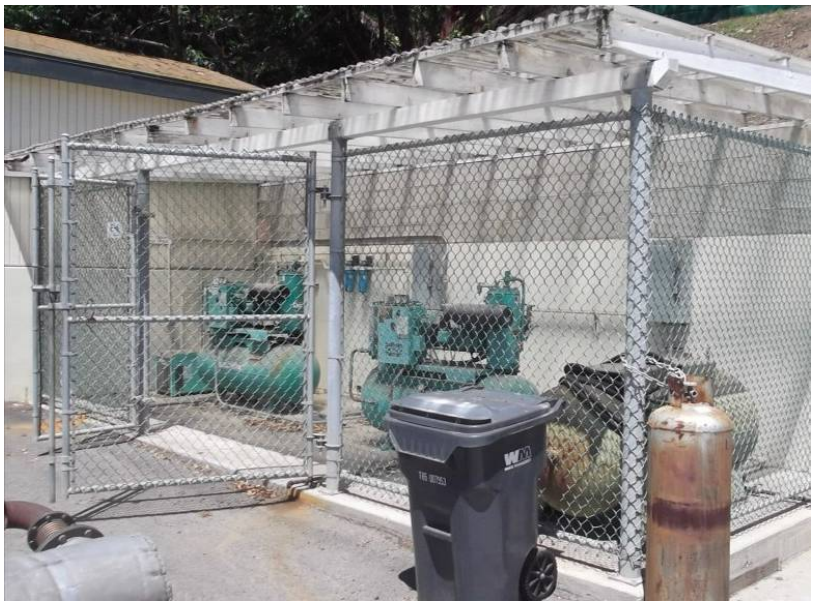
View of loading platforms at the west side of the site

Photograph 86

View of loading platforms at the west side of the site

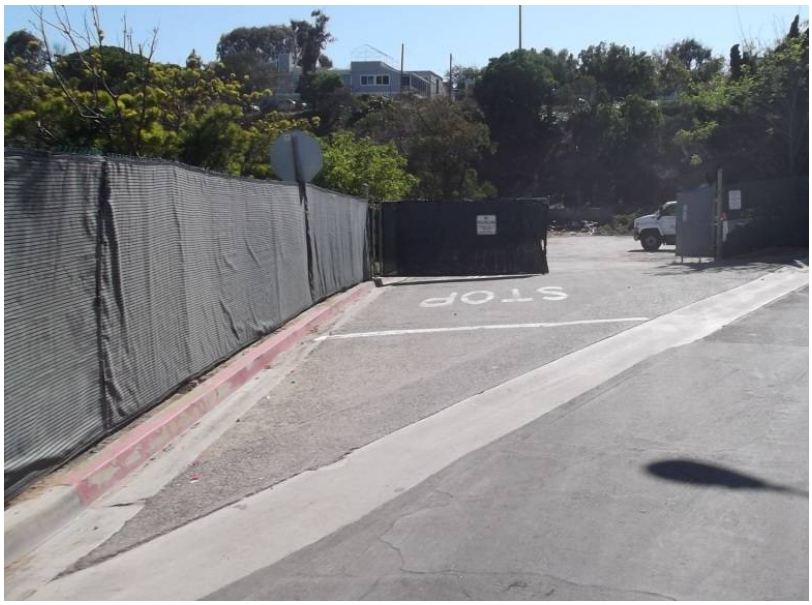
Photograph 87

View of retaining walls along the west side of the site



Photograph 88

View of pneumatic compressors structure adjacent to Storage Building (Oil Tanks)



Photograph 89

View of entrance to the upper bulk loading area, accessed from 36th Place

Photograph 90

View of the upper bulk loading area

Photograph 91

View of deteriorated asphalt pavement in the bulk loading area

Photograph 92

View of the bulk loading storage bins

Photograph 93

View of site’s emergency generator

Appendix C

Asset Inventory

ASSET INVENTORY

Public Works Yard

D20 PLUMBING

Building A

Location	Equipment Type	Manufacturer	Model #	Serial #	Fuel/ Rating	Capacity	≈ Year of Installation
North Exterior Wall	Domestic Water Heater	Noritz	NR98-SV	2010.05-005717	Natural Gas / 199,900 BTUH	202 Gal / Hour Recovery	2010
North Exterior Wall	Domestic Water Heater	Noritz	N-0751M	2009.08-045012	Natural Gas / 199,900 BTUH	202 Gal / Hour Recovery	2009

Building E

Location	Equipment Type	Manufacturer	Model #	Serial #	Fuel/ Rating	Capacity	≈ Year of Installation
Janitor's Closet	Domestic Water Heater	Unknown	Unknown	Unknown	Electric	40 Gal. (Assumed)	2002 (Assumed)

D30 HVAC

Building A

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year Installed
Lunch Room	Gas-Fired Unit Heater	Williams Furnace Co.	35-GV-5	B12504	35,000 BTUH	Natural Gas	1967
Office	Through-Wall Heating / Cooling Unit	Friedrich	ES12L33-A	LFDR04089	12,100 BTUH Cooling / 10,700 BTUH Heating	Elec.	1993 (Assumed)
Pad-Mnted Condenser North of Bldg. / Plenum Air Handling Unit	Split System Heat Pump	Carrier	38YMA 030320	3996E04298	30,000 BTUH	Elec.	2008 (Assumed)

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year Installed
Pad-Mnted North of Bldg	Package Cooling Unit	Carrier	50TJQ006	4697G20048	5.5 – 6 Tons	Elec.	1995 (Assumed)
Rooftop	(3) Exhaust Fans	Unknown	Unknown	Unknown	Unknown	Elec.	Varies

Unknown = Access limited or equipment had no name plates present.
Assumed = Based on size of unit and area it serves / or possible year installed.

Building B

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year Installed
Suspended Overhead	(2) Gas-Fired Unit Heaters	Reznor	Unknown	Unknown	75,000 BTUH	Natural Gas	2000
Suspended Overhead	Vehicle Exhaust Evacuation	PlymoVent	Unknown	Unknown	Unknown	Elec.	2002
Side Wall	Exhaust Fan	Unknown	Unknown	Unknown	Unknown	Elec.	2000
Enclosure West of Bldg	Compressor	Sullivan Palatek	15DR	99 006	Unknown	Elec.	2000 (Assumed)
Enclosure West of Bldg	Air Dryer	Sullivan Palatek	PRD-50	H050A 1150201025	50 SCFM @ 100 PSIG	Elec	2000 (Assumed)
Enclosure West of Bldg	Compressor	Palatek	15DR	Unknown	Unknown	Elec.	2000 (Assumed)

Building D

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year Installed
Suspended Overhead	(5) Gas-Fired Unit Heaters	Reznor	Unknown	Unknown	130 – 140 MBH (Assumed)	Natural Gas	1995 (Assumed)
Suspended Overhead	(3) Vehicle Exhaust Evacuation	PlymoVent	Unknown	Unknown	Unknown	Elec.	Varies

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year Installed
Rooftop Condenser / Mezzanine Air Handling Unit (Auto Parts)	Split System Air Conditioning / Gas-Fired Furnace	Carrier	58558383-CC	Unknown	2.5-Tons Cooling / 95 MBH Heating	Elec. / Natural Gas	1995 (Assumed)
Rooftop	(2) Exhaust Fans	Unknown	Unknown	Unknown	Unknown	Elec.	Varies

Building E

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year Installed
Pad-Mtd East of Bldg	Package Cooling Unit	Carrier	50TJ1004—B501GA	3397G20220	4 Tons	Elec.	1995 (Assumed)
South Exterior Wall	(3) Through Wall Air Conditioning Units	General Electric	Unknown	Unknown	1 – 2 Tons (Assumed)	Elec.	2008 (Assumed)
Rooftop Condenser / Plenum Air Handling Unit	Split System Heat Pump	Carrier	50H5030	Unknown	3 - Tons	Elec.	1995 (Assumed)
Rooftop	(3) Exhaust Fans	Unknown	Unknown	Unknown	Unknown	Elec.	1995 (Assumed)
Suspended Overhead	Gas-Fired Unit Heater	Reznor	Unknown	Unknown	130 – 140 MBH (Assumed)	Natural Gas	1967 Unknown
Suspended Overhead, Duct Through Roof	Exhaust Fan	Unknown	Unknown	Unknown	Unknown	Elec.	2000 Unknown

G40 SITE ELECTRICAL UTILITIES

Building E

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year Installed
East of Building E	Diesel Generator	Onan	600SGCB	K930524 143	1800 RPM 400 Amps 40 KW / 40 KVA (1 Phase) 60 KW / 75 KVA (3 Phase)	Diesel	1995 (Assumed)

Appendix D

Document Review and
Warranty Information

DOCUMENT REVIEW & WARRANTY INFORMATION

Public Works Department

In addition to the completion of our visual evaluation, Faithful+Gould interviewed the various representatives from the City of Manhattan Beach (where possible), and reviewed the following documentation:

Construction drawings, 12 sheets, prepared by the Public Works Department, Engineering Division, dated January 31, 1967

Renovation drawings, 41 sheets, prepared by Boa Architects, DKM Engineers, William Yang and Associates, Newman Engineering Associates, dated March 11, 1997

Renovation drawings, 41 sheets, prepared by Boa Architects, DKM Engineers, William Yang and Associates, Newman Engineering Associates, dated October 28, 1998

Dimensioned floor plans and electrical plans, 52 sheets, prepared by Public Works Department, dated July 27, 1997

Comprehensive Energy Audit; PE Consulting; dated October 13, 2009

Roofing Evaluation Report; Tremco Inc.; dated June 4, 2013

Appendix E

Environmental Report:
Asbestos & Lead-Based Paint

FAITHFUL GOULD

ANDERSEN ENVIRONMENTAL
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LIMITED ASBESTOS & LEAD–BASED PAINT ASSESSMENT REPORT

Presented To:

Faithful & Gould
3400 North Central Avenue, Suite 2400
Pheonix, AZ 85014

Assessment Location:
Public Works Yard
3621 Bell Avenue
Manhattan Beach, CA 90266

Andersen Environmental Project No. 1304-584

Report Date: July 1, 2013

TABLE OF CONTENTS

1.0 INTRODUCTION

This report presents the results of Andersen Environmental's Limited Asbestos & Lead-Based Paint Assessment of 3621 Bell Avenue, Manhattan Beach, CA 90266 (referred to hereunder as the subject property). This document is prepared for the sole use of The City of Manhattan Beach and any regulatory agencies that are directly involved in this project. No other party should rely on the information contained herein without prior written consent of The City of Manhattan Beach. The scope of services, inspection methodology, and results are presented below.

2.0 SCOPE OF WORK

The purpose of this inspection and survey is to identify the Asbestos Containing Materials (ACM) and Lead-Based Paint (LBP) present within the interiors and exteriors of the subject property building. As the asbestos sampling is destructive in nature, and may void any roof warrantees, the roofing materials of the building were not sampled during this assessment.

The Lead and Asbestos Assessment was conducted in readily accessible areas only. Since destructive investigation was not been performed during this survey, concealed asbestos-containing materials may present. Additional suspect materials uncovered within wall or ceiling cavities or beneath floor or roof finishes that were not included in this assessment, may require additional sampling and analysis.

Asbestos

The purpose of this assessment was to perform bulk sampling of suspect materials in order to determine the presence or absence of ACM associated with the two buildings at the subject property. The scope of this assessment included reviewing any provided building records and/or previous investigation records, visually identifying homogeneous areas and functional spaces, collecting bulk samples of suspect ACM, interpreting the laboratory results, producing a written report of our findings, recommendations, floor plans and approximations of ACM quantities.

Lead-Based Paint

The purpose of this assessment was to perform an X-Ray Fluorescence (XRF) survey of the two buildings onsite in order to determine which components may be covered with lead laden coatings. To comply with Title 17, EPA and HUD guidelines, painted and varnished surfaces in every accessible "room equivalent" were sampled for the presence of lead-based paint (LBP) and the condition of the painted surfaces was assessed. The intent was to ascertain the presence of LBP above the Los Angeles County action level using X-Ray Fluorescence. If LBP was found, the inspection would identify individual architectural components and their respective concentrations of lead in such a manner that this report would be used to characterize the presence of LBP at this property. The scope of work also included producing a written report of our findings and recommendations.

3.0 PROPERTY DESCRIPTION

The subject property consists of three single-story structures consisting of a Public Services office building, a maintenance garage and a storage building. The construction of all three buildings consists of metal framing on a concrete pad foundation with metal exterior siding and standing seam metal roofs. Portions of the exterior of the Public Services Building are finished with stucco. The interior finishes

include drywall walls and ceilings, acoustic ceiling tiles with vinyl floor tiles, carpeted floors or unfinished concrete.

4.0 INSPECTOR'S QUALIFICATIONS

Andersen Environmental performed the lead inspection at the site using a Niton XRF spectrum analyzer instrument. Freddy Torres has completed an EPA approved curriculum in Lead in Construction Inspector / Risk Assessor Training.

Benjamin Curry and Lamont Leiva of Andersen Environmental performed the asbestos inspection at the site. Lamont Leiva is certified by the State of California Division of Occupational Safety and Health (DOSH) as Certified Site Surveillance Technician and worked under the supervision of Benjamin Curry, a DOSH Certified Asbestos Consultant.

Personnel certificates have been provided in ***Appendix C.***

5.0 TESTING PROTOCOL

Asbestos

The sampling was performed in accordance with requirements of the following regulations:

- Asbestos Hazard Emergency Response Act (AHERA); 40 CFR 763 Subpart E
- Asbestos School Hazard Abatement Reauthorization Act (ASHARA); Section 206 of the Toxic Substance Control Act
- National Emissions Standards for Hazardous Air Pollutants (NESHAPS); 40 CFR 61 Subpart M.

This report is a record of activities, observations, analytical results and recommendations performed to date.

Lead-Based Paint

The sampling was performed in accordance with requirements of the following regulations:

- Chapter 7 of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing[i].
- Title 17, California Code of Regulations
- EPA Lead Based Paint Program

XRF Testing: Testing of the painted surfaces was patterned after the inspection protocol in Chapter 7 of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing[ii]. In every "room equivalent" within the tested property, one representative surface of each "testing combination" was tested. Multiple readings were collected to resolve inconsistencies in the test results.

Regulatory Compliance: Several public (government) agencies have a published "regulatory action level" to classify LBP. To further complicate matters, some of the established "levels" are quantified in different units of measurement. Listed below are the current regulatory agencies that have defined LBP, along with the respective action level:

Agency	Ordinance #	Action level (mg / cm^2)	Action level (ppm[iii])
HUD / EPA	24 CFR 35.86 & 40 CFR 745.103	1.0 mg / cm^2	5,000 ppm
L.A. County	Title 11, 11.28.010	0.7 mg / cm^2	600 ppm[iv]
OSHA / CAL OSHA	29 CFR 1926.62 & Title 8, 1532.1	*Not Specified*	600 ppm[v]

HUD / EPA have recently issued the following guidance regarding units of measurement for paint samples:

"Report lead paint amounts in mg/cm² because this unit of measurement does not depend on the number of layers of non-lead-based paint and can usually be obtained without damaging the painted surface. All measurements of lead in paint should be in mg/cm², unless the surface area cannot be measured or if all paint cannot be removed from the measured surface area. In such cases, concentrations may be reported in weight percent (%) or parts per million by weight (ppm)."[vi]

Furthermore, EPA has previously issued guidance on lead content classification as follows:

"… The rule, at 24 CFR 35.86 and 40 CFR 745.103 states that a lead-based paint free finding must demonstrate that the building is free of 'paint or other surface coatings that contain lead in excess of 1.0 milligrams per square centimeter *(1.0 mg / cm^2)* or 0.5 percent by weight *(5000 ppm)*.' The State standards are not applicable, whether more or less stringent, since a State cannot amend Federal requirements."[vii]

In recognition of the various action levels the testing results are classified as follows for this report:

- Painted surfaces with readings at or above 0.7 mg / cm^2 are considered - Positive
- Painted surfaces with readings below 0.7 mg / cm^2 are considered - Negative

The individual readings have been provided on all field data sheets. Any future change in action levels by one of the regulating agencies may affect the classification of results.

For purposes of this survey, any material containing any detectable level of lead is subject to OSHA's Lead Exposure in Construction Rule (29 CFR Part 1926). Any work that disturbs these materials must be performed in accordance with these and any other applicable standards.

6.0 METHOD OF TESTING

Asbestos

All samples were collected using a clean knife, chisel or the appropriate tools. The sample location was first moistened with water in order to limit dust release. Each sample was extracted carefully so as not to disturb adjacent materials while still penetrating through all layers of the material sampled. Each sample was sealed in the appropriate sized plastic zip lock bag and the bag then labeled with a unique identification number. The sample number, description and location was then recorded on a log and plotted on a floor plan of the structure or area. Sampling tools were cleaned after collecting each sample. Any excess dust or debris from the sample location was cleaned using a moistened cloth. Whenever possible, samples were collected from previously damaged portions of the material in order to minimize damage to the material.

A total of eighty two (82) samples were submitted to LA Testing in South Pasadena, California. LA Testing is accredited under the NIST/NVLAP program for asbestos in bulk material by polarized light microscopy and the State of California for asbestos analysis.

The analyses of the samples in this report were performed using polarized light microscopy using the EPA method 600/R-93/116. The phase abundances provided are visually estimated and expressed as

percent area. Total percentage of sample constituents may total greater than 100 due to trace amounts. The limit of detection for this analytical method is less than one percent. In multilayer samples, unless otherwise specified, the asbestos concentration is reported for the layer where asbestos is found. These results lie within the statistical limits of variability calculated for standard reference samples routinely analyzed in the laboratory. On a per sample basis, the accuracy and precision of the results depend on the type of sample and its asbestos content.

Lead-Based Paint

Paint Testing: The method employed was X-ray fluorescence (XRF) using a Niton XLp 303A by Thermo Scientific, this unit uses a radioactive source of Cadmium 109. It was calibrated to NIST standard lead concentration samples prior to and after its use. Uncoated surfaces and other bare materials were not tested. The instrument was operated in "Quick Mode," where the duration for each test result is determined by a combination of:

- The actual reading relative to the designated action level;
- Age of the radioactive source;
- The substrate on which the test was taken.

The instrument's calibration was verified according to the manufacturer's specifications in compliance with the Performance Characteristic Sheet (PCS) developed for this instrument.

The readings from this instrument produce a 95% confidence level that the "lead" reading accurately reflects the actual level of lead in the tested surfaces, relative to the federal action level.

7.0 SUMMARY OF RESULTS

Asbestos

The following materials were found to contain asbestos and are considered ACM or ACCM:

Material Description	Material Locations	Condition	Asbestos Percentage	Estimated Quantity*
Drywall & Joint Compound	Throughout Public Services Building	Good	<1% Chrysotile	5,656
12" Brown Vinyl Floor Tile & Mastic	Throughout Public Services Building	Good	2% Chrysotile	1,560
12" Tan Vinyl Floor Tile & Mastic	Throughout Public Services Building	Good	2% Chrysotile	956
Drywall & Joint Compound	Throughout Maintenance Shop	Good	2% Chrysotile	980
Roofing Materials (Penetration Mastic)	Roofs of All Buildings	Good	Presumed	500

* These quantities are only approximations. The exact quantities should be measured by the abatement contractor during the bidding process.

Unless further sampling analysis is conducted, all of the drywall/joint compound in the Public Services Building must be treated as an Asbestos Containing Construction Material (ACCM).

All other suspect materials sampled during this assessment tested negative for asbestos.

Lead-Based Paint

Paint Sampling: All analyzed lead paints and glazes are not considered to be lead-based. However, the removal of material containing any detectable level of lead is subject to OSHA's Lead Exposure in Construction Rule (29 CFR part 1926) and Title 8, Section 1542.1 of the California Code of Regulations.

8.0 RECOMMENDATIONS

Given the clients anticipated renovation of the subject property buildings, Andersen Environmental recommends the following:

Asbestos

Samples that were found to contain less than one percent (<1%) asbestos by PLM analysis should be further analyzed using the 1000 point count method. This analysis method has a lower detection limit and may if performed yield results lower than the regulatory levels of Cal-OSHA.

If materials found to contain asbestos and/or presumed to contain asbestos are going to be disturbed or removed; by law, they must first be abated and properly disposed of by a licensed and Cal/OSHA registered asbestos abatement contractor prior to any renovation or demolition activities.

In as such that no destructive investigation has been performed during the survey, the report may not reveal concealed asbestos-containing materials. Subsequently, additional investigation including construction documents review and/or destructive investigation is recommended as a precaution to prevent accidental exposure when construction or demolition is planned for this facility. Any suspect materials that are uncovered during construction activities; that were not sampled during this assessment, should be considered asbestos containing, unless sampled to prove otherwise.

It is highly recommended that abatement monitoring be performed by the asbestos consultant (Andersen Environmental) if asbestos abatement is to be performed while non-abatement persons (employees, tenants, other building occupants, or general public) are present in adjacent areas. Abatement monitoring included the collection of air samples in adjacent areas to demonstrate that asbestos fibers are not migrating out of the regulated areas. In addition to air sampling, the monitoring includes oversight of the abatement contractor to ensure that the work is being conducted in compliance with all applicable regulations and in accordance with the scope of work and abatement specifications. Such abatement monitoring serves to limit the legal liabilities of the building owner.

Lead-Based Paint

All analyzed lead paints and glazes are not considered to be lead-based. However, the removal of material containing any detectable level of lead is subject to OSHA's Lead Exposure in Construction Rule (29 CFR part 1926) and Title 8, Section 1542.1 of the California Code of Regulations.

9.0 RENOVATION, REPAIR AND PAINTING (RRP) RULE

Anyone performing renovation, repair and painting projects that disturb painted surfaces in residences, child care facilities, and schools built before 1978 must be EPA RRP certified and follow specific lead safe work practices to prevent lead contamination. The rule applies where more than 6 square feet per room or 20 square feet outside will be "disturbed" by workers(s) being compensated.

10.0 INSPECTION LIMITATIONS

This Assessment was planned, developed, and implemented based on Andersen Environmental previous experience in performing asbestos and lead-based paint assessments. This inspection was patterned after Chapter 7 of the *HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (1997 Revision)* and NESHAPS; 40 CFR 61 Subpart M. Andersen Environmental utilized state-of-the-art-practices and techniques in accordance with regulatory standards while performing this assessment. Andersen Environmental evaluation of the relative risk of exposure to lead identified during this inspection/risk assessment is based on conditions observed at the time of the inspection. Andersen Environmental cannot be responsible for changing conditions that may alter the relative exposure risk or for future changes in accepted methodology. Andersen Environmental uses only qualified personnel to perform building surveys. Reasonable effort was made to survey accessible suspect materials. Additional suspect materials may be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas.

Andersen Environmental cannot warrant that these buildings do not contain LBP or ACM in locations other than those identified in this report.

Enclosed are the diagram(s), actual test results, and all relevant certifications and licenses.

Survey and Report by:

Benjamin Curry
DOSH Certified Asbestos Consultant No. 09-4549
CDPH Certified Lead Inspector/Assessor/Supervisor No. 20747

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[i] 1997 Revision
[ii] 1997 Revision
[iii] Parts per million
[iv] Applies to sale and application of LBP.
[v] Applies to construction related activities
[vi] Chapter 7 of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (1997 Revision).
[vii] Office of Pollution Prevention and Toxics, (August 20, 1996)

Appendix F

Glossary of Terms

Acronyms & Glossary of Terms

CMU	Concrete Masonry Unit
BUR	Built-Up Roof
EIFS	Exterior Insulation and Finish System
EPDM	Ethylene Propylene Diene Monomer
SC	Solid Core Doors
HM	Hollow Metal Doors
MH	Man Holes
ABC	Aggregate Base Course
EMT	Electrical Metallic Conduit
EUL	Estimated Useful Life
RUL	Recommended Useful Life
EOL	End of Life
FCI	Facility Condition Index
CRV	Current Replacement Value
DM	Deferred Maintenance
SF	Square Foot
SY	Square Yards
PSF	Pounds-Per-Square-Foot
PSI	Pounds-Per-Square-Inch
NFPA	National Fire Protection Association
FACP	Fire Alarm Control Panel
NAC	Notification Appliance Circuit
FCC	Fire Command Center
HVAC	Heating Ventilating and Air conditioning
VAV	Variable Air Volume
AHU	Main Air Handling Units
HP	Horse Power
FSS	Fuel Supply System
MDP	Main Distribution Panel
SES	Service Entrance Switchboard's
NEMA	National Electrical Manufactures Association
HID	Intensity Discharge
EMT	Electrical Metallic Tubing
KVA	kilovolt-ampere
RO	Reverse Osmosis
BTU/HR	British Thermal Units per Hour
kW	Kilowatt
FPM	Feet per Minute (Elevator Speed)
Amp	Amperage

Acronyms & Glossary of Terms

BTU – British Thermal Unit; the energy required to raise the temperature of one pound of water by one degree.

Building Envelope - The enclosure of the building that protects the building's interior from the outside elements, namely the exterior walls, roof and soffit areas.

Building Systems – Interacting or independent components or assemblies, which from single integrated units, that comprise a building and its site work, such as, pavement and flatwork, structural frame, roofing, exterior walls, plumbing, HVAC, electrical, etc.

Caulking – Soft, putty-like material used to fill joints, seams, and cracks.

Codes – See building codes.

Component – A fully functional portion of a building system, piece of equipment, or building element.

Deferred Maintenance – Physical deficiencies that cannot be remedied with routine maintenance, normal operating maintenance, etc., excluding de minimis conditions that generally do not present a material physical deficiency to the subject property.

Expected Useful Life (EUL) – The average amount of time in years that an item, component or system is estimated to function when installed new and assuming routine maintenance is practiced.

Facility – All or any portion of buildings, structures, site improvements, complexes, equipment, roads, walks, passageways, parking lots, or other real or personal property located on site.

Flashing – A thin, impervious sheet of material placed in construction to prevent water penetration or to direct the flow of water. Flashing is used especially at roof hips and valleys, roof penetrations, joints between a roof and a vertical wall, and in masonry walls to direct the flow of water and moisture.

Remaining Useful Life (RUL) – A subjective estimate based upon observations, or average estimates of similar items, components, or systems, or a combination thereof, of a number of remaining years that an item, component, or system is established to be able to function in accordance with its intended purpose before warranting replacement. Such period of time is affected by the initial quality of an item, component, or system, the quality of the initial installation, the quality and amount of preventative maintenance exercised, climatic conditions, extent of use, etc.

Thermal Resistance (R) – A unit used to measure a material's resistance to heat transfer. The formula for thermal resistance is: R = Thickness(in inches)/K

Structural Frame – The components or building systems that support the building's nonvariable forces or weights (dead loads) and variable forces or weights (live loads).

Warranty – Legally enforceable assurance of quality or performance of a product or work, or of the duration of satisfactory performance. Warranty guarantee and guaranty are substantially identical in meaning; nevertheless, confusion frequently arises from supposed distinctions attributed to guarantee (or guaranty) being exclusively indicative of duration of satisfactory performance or of a legally enforceable assurance furnished by a manufacturer or other third party. The uniform commercial code provisions on sales (effective in all states except Louisiana) use warranty but recognize the continuation of the use of guarantee and guaranty.