Citywide
Facility Condition Assessment

Report of

Facility Condition Assessment

For
City of Manhattan Beach
Live Oak Park
1902 Valley Drive, Manhattan Beach, CA

September 4, 2013
(Rev A)

Provided By:

Faithful+Gould, Inc.

Provided For:

CITY OF MANHATTAN BEACH
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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 Live Oak Park located at 1902 Valley Drive, Manhattan Beach, CA (The Facility). The facility consisted of the following buildings:

- Recreation Hall
- Recreation Center
- Storage Shed P & R
- Kiln Enclosure

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. Identified recommended works that are required during the ten-year study period have been included with an allowance of 25% for professional fees and general contractor overhead/profit and management costs (where applicable).

Charts EX-1 through to EX-6 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 16, 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

Assumed site boundary

BUILDING SUMMARY

Table EX-1 Facility Details

BUILDING NAME:	Recreation Hall		LAT/LONG:	33° 53' 27" N / 118° 24' 39" W	
ADDRESS:	1902 Valley Drive, Manhattan Beach, CA 90266		OCCUPANCY STATUS: OCCUPIED ☒ VACANT ☐ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	3,025		GROSS SQUARE FOOTAGE OF LAND:	392,000 (estimated) Whole Facility	
CURRENT REPLACEMENT VALUE:	$577,849		YEAR OF CONSTRUCTION:	1959	
			BUILDING EUL:	100+ Years	
			BUILDING RUL:	50+ Years	
BUILDING USE:	Recreation		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The Recreation Hall is part of the Live Oak Park facility and is located along Valley Drive at the rear (west side) of the park. We understand that the site as a whole was developed in 1939 and the Recreation Hall was reportedly constructed in 1959.

The building has wood joist roof construction supported on lightweight wood framed walls, enclosed with cementitious stucco cladding. The low-sloped roof has built-up roofing with modified bitumen capsheet. The floor of the facility is concrete slabs-on-grade with reinforced concrete spread footing foundation. Windows are wood framed, single pane hopper-type units and doors are single-leaf flush metal and wood personnel doors. The interior finishes of the building include flooring of vinyl and quarry tile, and painted plaster and gypsum board walls and ceilings.

The heating for the building is provided by one ceiling suspended gas-fire cabinet heater; cooling is not provided to the facility. Hot domestic water is provided by one 30 US gallon gas-fired water heater.

The electrical system is supplied underground to a 100-amp electrical Main Distribution Panel with meter located on the rear wall of the building. The building's interior sub-panel supplies the power needs within the building. The lighting typically consisted of surface mounted fluorescent lamp fixtures. The building is not provided with an electronic security system, a fire sprinkler system, a fire alarm system, or an emergency generator.

Table EX-2 Facility Details

BUILDING NAME:	Recreation Center		LAT/LONG:	33° 53' 26" N / 118° 24' 38" W	
ADDRESS:	1902 Valley Drive, Manhattan Beach, CA 90266		OCCUPANCY STATUS: OCCUPIED ☒ VACANT ☐ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	3,136		GROSS SQUARE FOOTAGE OF LAND:	392,000 (estimated) Whole Facility	
CURRENT REPLACEMENT VALUE:	$700,978		YEAR OF CONSTRUCTION:	1993	
			BUILDING EUL:	100 Years	
			BUILDING RUL:	80 Years	
BUILDING USE:	Recreation		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The Recreation Center building forms a part of the Live Oak Park facility and is located along Valley Drive, adjacent to the tennis courts. We understand that the site as a whole was developed in 1939 and the building was constructed in 1993.

The building has wood rafter roof construction supported on concrete masonry and wood-framed walls and is enclosed with cementitious stucco cladding. A portion of the roof is steep-sloped, with clay tile roof covering, with the majority of the low-sloped roof having built-up roofing. The floors are cast-in-place reinforced concrete slabs-on-grade. Windows are aluminum-framed, single-pane fixed and slider units and doors are single-leaf flush metal doors. A wood-framed arbor / canopy is at the south side of the building. The interior finishes of the building include sealed concrete and vinyl tiled floors and painted gypsum board walls and ceilings.

Heating and cooling is provided by two rooftop package heat pump units, with 3- to 4-ton electric direct-exchange cooling. Domestic hot water is provided by a 50 US gallon capacity electric water heater.

The electrical system is supplied underground to a 200-amp electrical Main Distribution Panel with meter on the rear wall of the building. The building's interior sub-panels supply the power needs within the building. The lighting is typically surface mounted fluorescent lamp fixtures. The building is not provided with an electronic security system. The facility contains a wet-pipe fire sprinkler system, with a local flow alarm system. An emergency generator is not provided.

Table EX-3 Facility Details

BUILDING NAME:	Storage Shed P&R		LAT/LONG:	33° 53' 24" N / 118° 24' 39" W	
ADDRESS:	1902 Valley Drive, Manhattan Beach, CA 90266		OCCUPANCY STATUS: OCCUPIED ☐ VACANT ☒ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	193		GROSS SQUARE FOOTAGE OF LAND:	392,000 (estimated) Whole Facility	
CURRENT REPLACEMENT VALUE:	$18,457		YEAR OF CONSTRUCTION:	1999	
			BUILDING EUL:	50 Years	
			BUILDING RUL:	36 Years	
BUILDING USE:	Mechanical		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The Storage Shed P&R structure is a part of the Live Oak Park facility and is located at the northwest corner of the site, adjacent to Dorsey Field. We understand that the site as a whole was developed in 1939 and the Storage Shed P&R was constructed in 1999.

The building has conventional wood-framed walls supporting a wood-framed roof, with wood-framed floor with plywood deck floor. The roof covering is asphaltic fiberglass shingles over the plywood roof decking.

The exterior walls are painted wood siding, with one painted flush wood door. The building does not have windows.

The interior of the facility is unfinished. There is no heating or cooling provided in the building. The building also does not contain fire sprinkler, fire alarm, or security systems. We assume that its electrical service is supplied from the Recreation Hall's electrical Main Distribution Panel, which is located on that building's rear wall. The lighting consisted of a surface mounted fluorescent fixture.

Table EX-4 Facility Details

BUILDING NAME:	Kiln		LAT/LONG:	33° 53' 26" N / 118° 24' 39" W	
ADDRESS:	1902 Valley Drive, Manhattan Beach, CA 90266		OCCUPANCY STATUS: OCCUPIED ☒ VACANT ☐ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	150		GROSS SQUARE FOOTAGE OF LAND:	784,080 (estimated) Whole Facility	
CURRENT REPLACEMENT VALUE:	$22,500 (estimated)		YEAR OF CONSTRUCTION:	2001	
			BUILDING EUL:	50 Years	
			BUILDING RUL:	38 Years	
BUILDING USE:	Recreation		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The Kiln structure forms part of the Live Oak Park facility and is located at the west side of the site adjacent to the Recreation Center. We understand that the site as a whole was developed in 1939 and the Kiln was constructed in 2001.

The building has been prefabricated of precast concrete panels, including walls, floor and roof. The roof covering appears to be an applied coating over the structural precast concrete deck.

The building exterior includes the unfinished, ribbed precast concrete wall panels, galvanized metal louvered openings and a pair of painted metal doors inset with metal louvers.

The interior is utilitarian and unfinished, with exposed precast concrete walls, floor and ceiling. There is no heating or cooling provided at the building.

We assume that the electrical service is supplied directly from the Recreation Center's electrical Main Distribution Panel, which is located on that building's rear wall. The lighting consisted of surface mounted fluorescent fixtures.

The building does not contain fire sprinkler, fire alarm or security systems or have an emergency electrical generator.

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 Recreation Hall. 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 at the Recreation Hall were found to contain asbestos and considered ACM:

Table EX-5 Summary of Asbestos Results

Material Description	Material Location	Condition	Asbestos Percentage	Estimated Quantity*
Plaster	Throughout	Good	<1% Chrysotile	3,000
12" White VCT and Black Mastic	W. Hall	Good	2% Chrysotile	2,000
Spray Acoustic	Throughout	Good	4% Chrysotile	3,000
9" Tan VCT & Black Mastic	Storage Room	Good	5-7% Chrysotile	1,000
Roofing Materials	Roof	Good	Presumed	3,000

* 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 also 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.

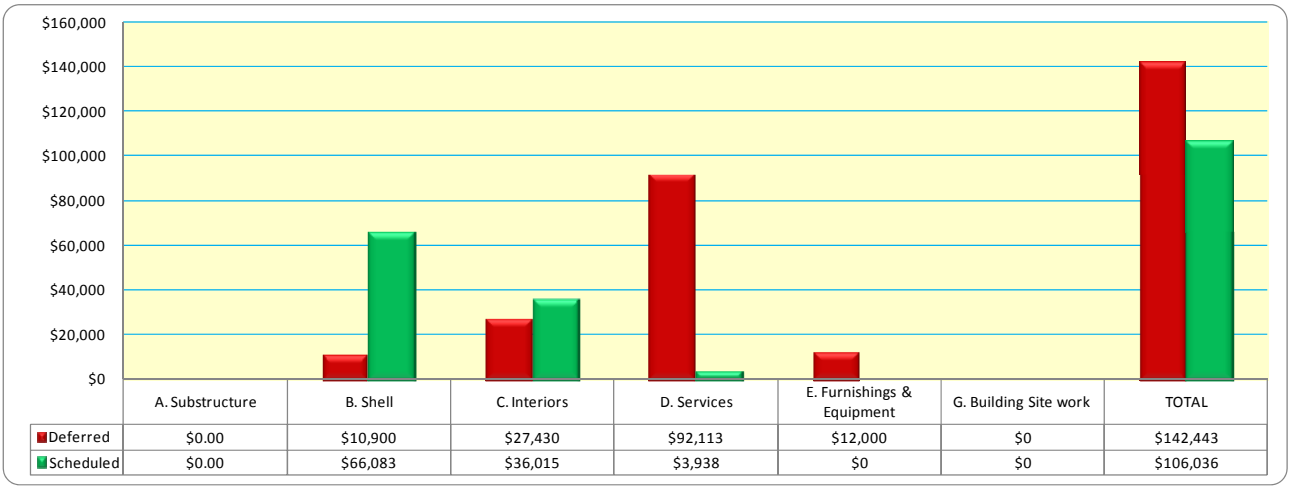
BUILDING EXPENDITURE SUMMARY

The building expenditure summary section provides an executive overview of the findings from the assessments. Charts EX-1 through to EX-4 provides a summary of anticipated expenditures over the study period for each of the buildings at the site. Chart EX-5 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 significance 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.

Recreation Hall

The results illustrate a total anticipated expenditure over the study period of circa $248,478.

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	$10,900	$27,430	$92,113	$12,000	$0	$142,443
Scheduled	$0.00	$66,083	$36,015	$3,938	$0	$0	$106,036

KEY FINDINGS

- B Shell: Repaint exterior wall surfaces at an estimated cost of $10,400 in years 2013, 2017 and 2021
- B Shell: Replace the roofing at an estimated cost of $37,510 in year 2014
- C Interiors: Reconfigure the restrooms for disabled accessibility at an estimated cost of $4,680 in year 2013
- C Interiors: Replace vinyl tile flooring at an estimated cost of $11,625 in year 2017
- C Interiors: Repaint interior walls and ceilings at an estimated cost of $22,750 in years 2013, 2017 and 2022
- D Services: Renovate restrooms at an estimated cost of $50,000 in year 2013
- D Services: Replace electrical panelboards at an estimated cost of $4,500 in year 2013
- D Services: Replace fire alarm system at an estimated cost of $15,125 in year 2013

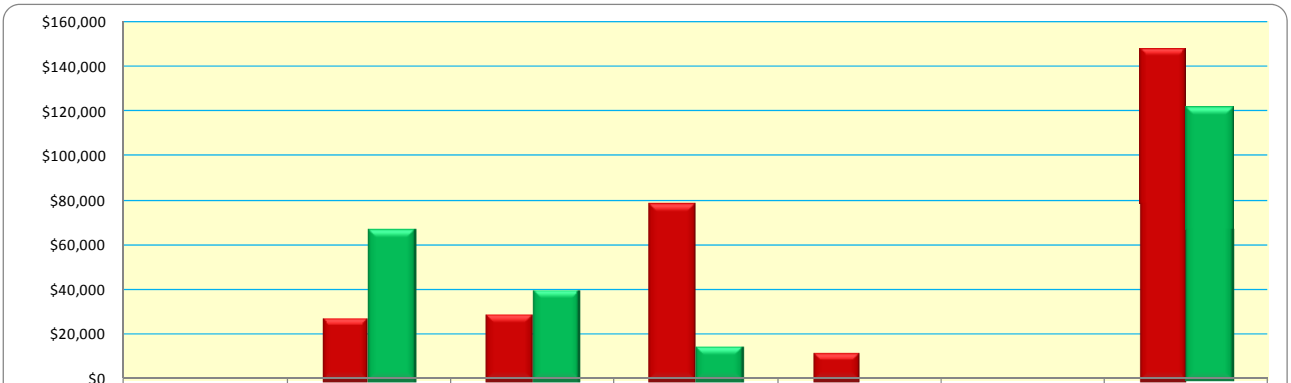
[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 10 year study period

- D Services: Replace security system at an estimated cost of $7.500 in year 2013
- D Services: Replace data system at an estimated cost of $6.806 in year 2013
- D Services: Modify fixed casework at an estimated cost of $12,000 in year 2013

Recreation Center

The results illustrate a total anticipated expenditure over the study period of circa $269,592.

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	$27,950	$29,250	$78,665	$12,000	$0	$147,865
Scheduled	$0.00	$66,938	$40,020	$14,769	$0	$0	$121,727

KEY FINDINGS

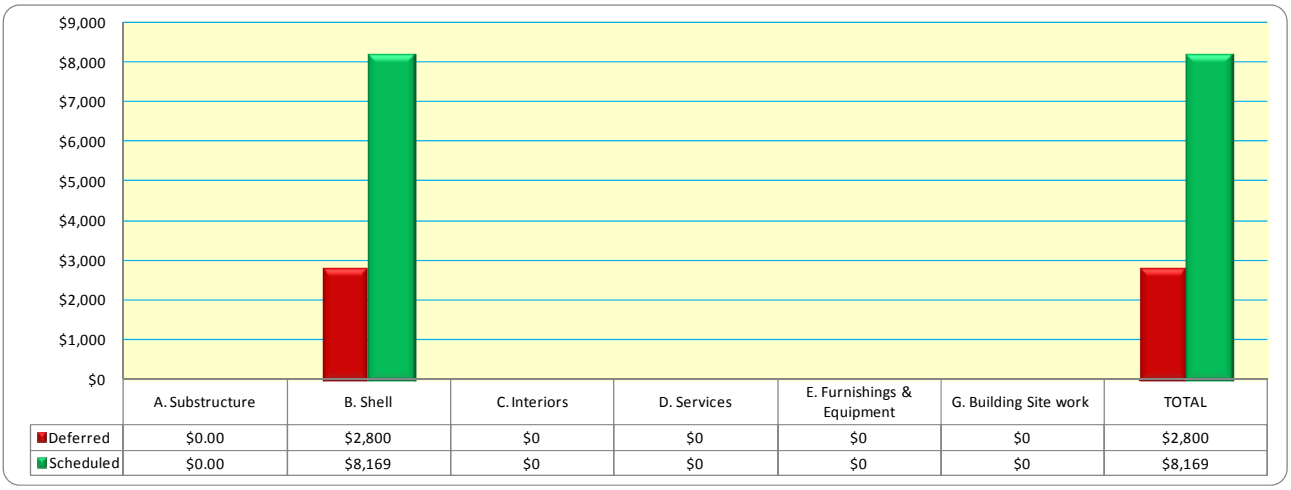
- B Shell: Repaint exterior painted surfaces at an estimated cost of $9,100 in years 2013, 2017 and 2021
- B Shell: Replace roofing covering at an estimated cost of $41,180 in year 2014
- C Interiors: Repaint interior wall and ceiling surfaces at an estimated cost of $29,250 in years 2013 and 2018
- C Interiors: Replace vinyl tile flooring at an estimated cost of $10,770 in year 2022
- D Services: Renovate restrooms at an estimated cost of $40,000 in year 2013
- D Services: Replace fire alarm system at an estimated cost of $15,680 in year 2013
- D Services: Replace security system at an estimated cost of $7,500 in year 2013
- D Services: Replace data system at an estimated cost of $7,056 in year 2013
- D Services: Modify fixed casework at an estimated cost of $12,000 in year 2013

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

Storage Shed P&R

The results illustrate a total anticipated expenditure over the study period of circa $10,969.

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	$2,800	$0	$0	$0	$0	$2,800
Scheduled	$0.00	$8,169	$0	$0	$0	$0	$8,169

KEY FINDINGS

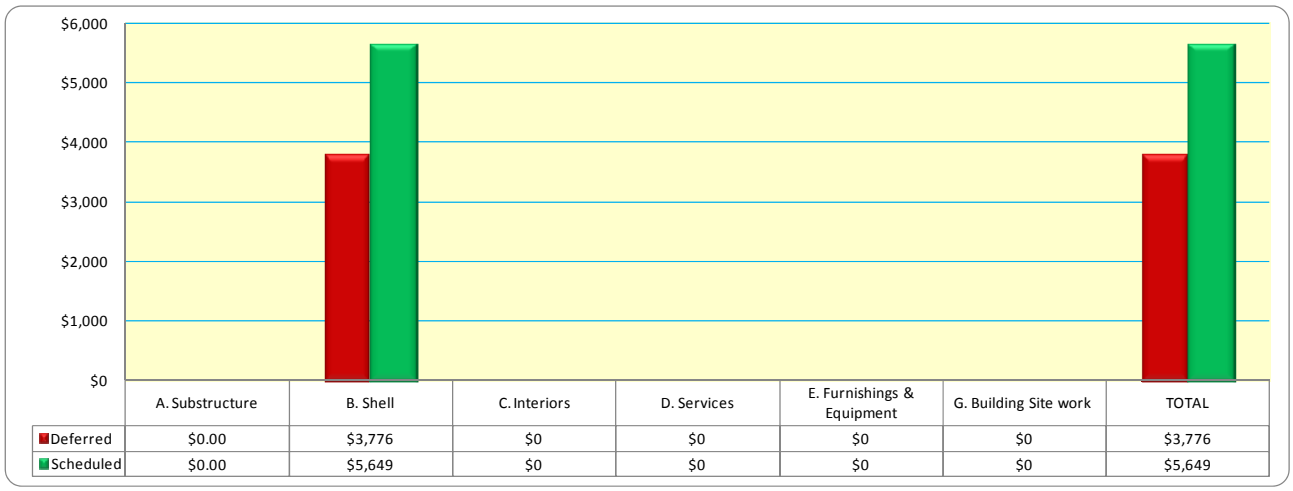
- B Shell: Repaint exterior wall surfaces at an estimated cost of $1,300 in years 2013, 2017 and 2021
- B Shell: Replace siding and trim at an estimated cost of $3,918 in year 2014

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

Kiln

The results illustrate a total anticipated expenditure over the study period of circa $9,425.

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	$3,776	$0	$0	$0	$0	$3,776
Scheduled	$0.00	$5,649	$0	$0	$0	$0	$5,649

KEY FINDINGS

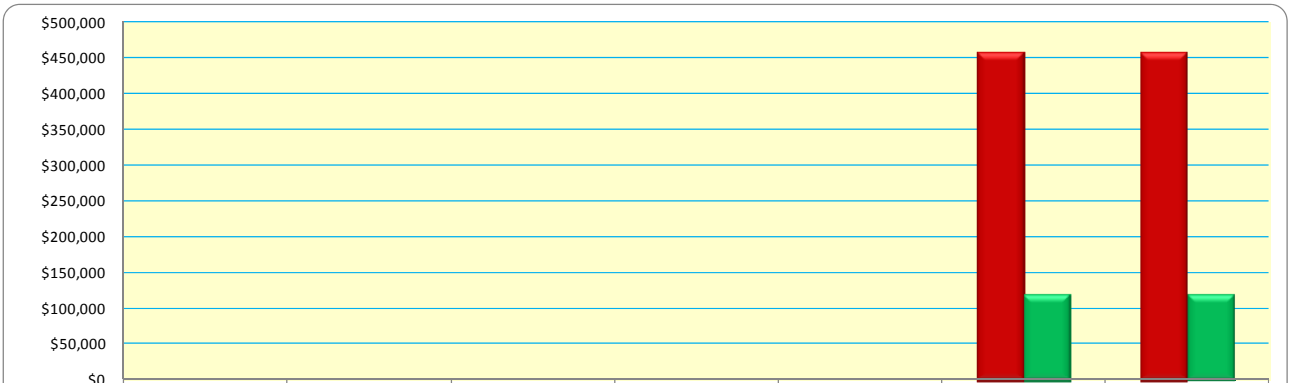
- B Shell: Repair exterior sealants at an estimated cost of $2,250 in year 2017
- B Shell: Clean and recoat the doors and louvers at an estimated cost of $2,099 in year 2014

[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 $577,670.

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	$0	$0	$457,500	$457,500
Scheduled	$0.00	$0	$0	$0	$0	$120,170	$120,170

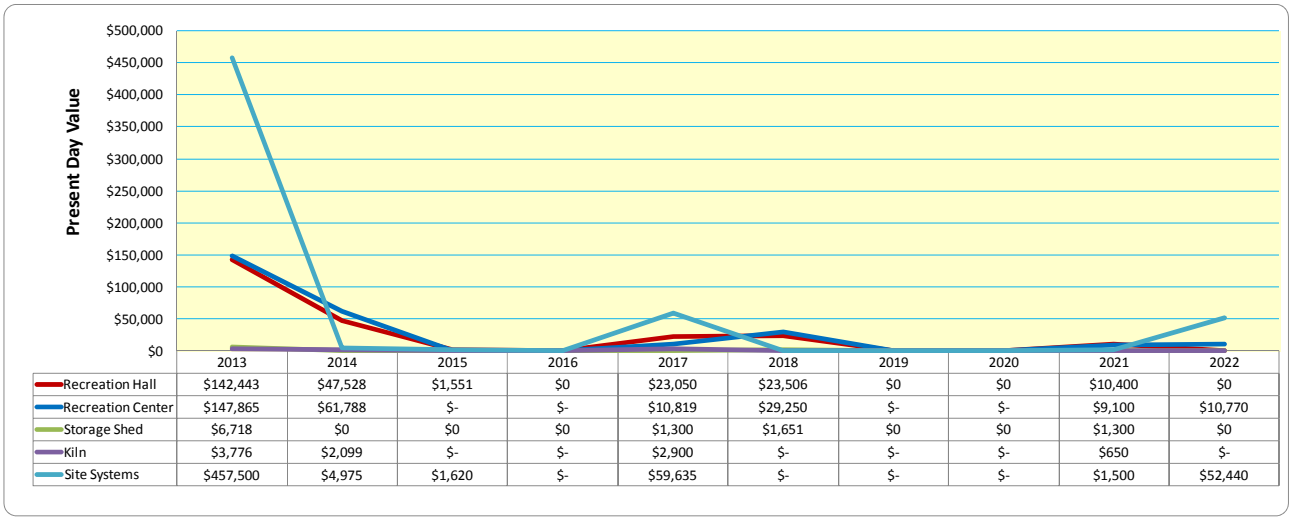
KEY FINDINGS

- G Building Sitework: Recoat and restripe the tennis courts at an estimated cost of $52,440 in year 2022
- G Building Sitework: Repair walkway at an estimated cost of $20,000 in year 2013
- G Building Sitework: Repair, recoat and restripe the basketball courts at an estimated cost of $58,135 in year 2017
- G Building Sitework: Replace light fixtures at the tennis courts at an estimated cost of $100,000 in year 2013
- G Building Sitework: Replace light fixtures at the Lop Field at an estimated cost of $150,000 in year 2013
- G Building Sitework: Replace light fixtures at the Dorsey Field at an estimated cost of $150,000 in year 2013

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

Chart EX-6 illustrates a summary of yearly anticipated expenditures over the cost study period for each of the Live Oak Park buildings and site systems. A detailed breakdown of anticipated expenditures is contained within Appendix A of this report.

Chart EX-6 Expenditure Forecast [1 & 2]



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recreation Hall	$142,443	$47,528	$1,551	$0	$23,050	$23,506	$0	$0	$10,400	$0
Recreation Center	$147,865	$61,788	$-	$-	$10,819	$29,250	$-	$-	$9,100	$10,770
Storage Shed	$6,718	$0	$0	$0	$1,300	$1,651	$0	$0	$1,300	$0
Kiln	$3,776	$2,099	$-	$-	$2,900	$-	$-	$-	$650	$-
Site Systems	$457,500	$4,975	$1,620	$-	$59,635	$-	$-	$-	$1,500	$52,440

[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 Live Oak Park buildings and site systems within year 2013 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.

Recreation Hall

Year 2013

- Repainting of exterior surfaces
- Restroom renovations
- Replacement of fire alarm system
- Replacement of security system
- Replacement of data system
- Fixed casework modifications

Site Systems

Year 2013

- Walkway repair
- Light fixture replacement

Recreation Center

Year 2013

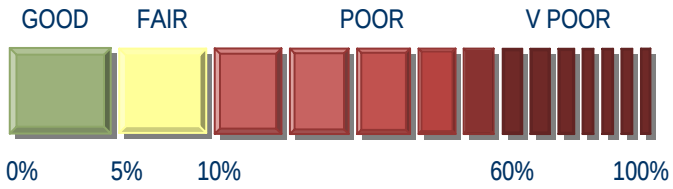
- Exterior door replacements
- Interior surfaces repainting
- Restroom renovations
- Replacement of fire alarm system
- Replacement of security system
- Replacement of data system
- Fixed casework modifications

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-6 will help interpret the results:

Table EX-6 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-7 provides calculations of the FCI for each of the Live Oak Park 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 all starting in the GOOD condition rating and ending with a POOR rating.

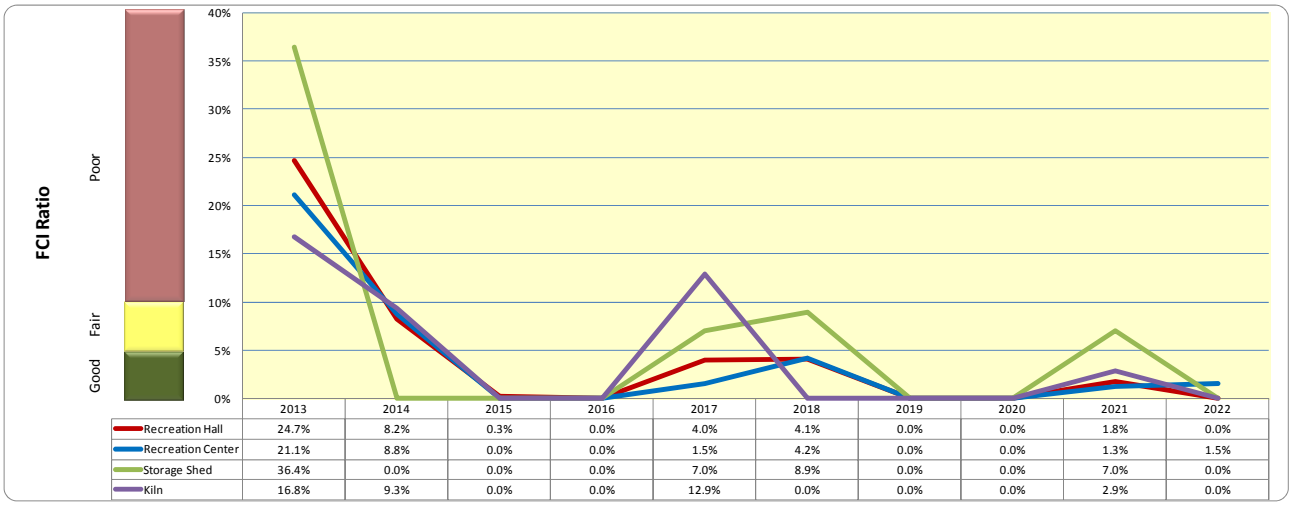
Table EX-7 Facility Condition Index

Building Name	FCI	Gross Square Foot (GSF)	CRV per GSF	Current Replacement Value (CRV)	Deferred Maintenance Value (DM) [1 & 2]	FCI Ratio	Property Condition Rating
Recreation Hall	Current FCI Ratio	3,025	$191	$577,849	$142,443	24.7%	POOR
Recreation Hall	Year 10 FCI Ratio	3,025	$191	$577,849	$248,478	43.0%	POOR
Recreation Center	Current FCI Ratio	3,136	$225	$700,978	$147,865	21.1%	POOR
Recreation Center	Year 10 FCI Ratio	3,136	$225	$700,978	$269,592	38.5%	POOR
Storage Shed P&R	Current FCI Ratio	193	$96	$18,457	$6,718	36.4%	POOR
Storage Shed P&R	Year 10 FCI Ratio	193	$96	$18,457	$10,969	59.4%	POOR
Kiln	Current FCI Ratio	150	$150	$22,500	$3,776	16.8%	POOR
Kiln	Year 10 FCI Ratio	150	$150	$22,500	$9,425	41.9%	POOR

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

Chart EX-7 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, starting in the POOR condition rating, however as the identified works are undertaken the buildings conditions fall into the GOOD condition rating.

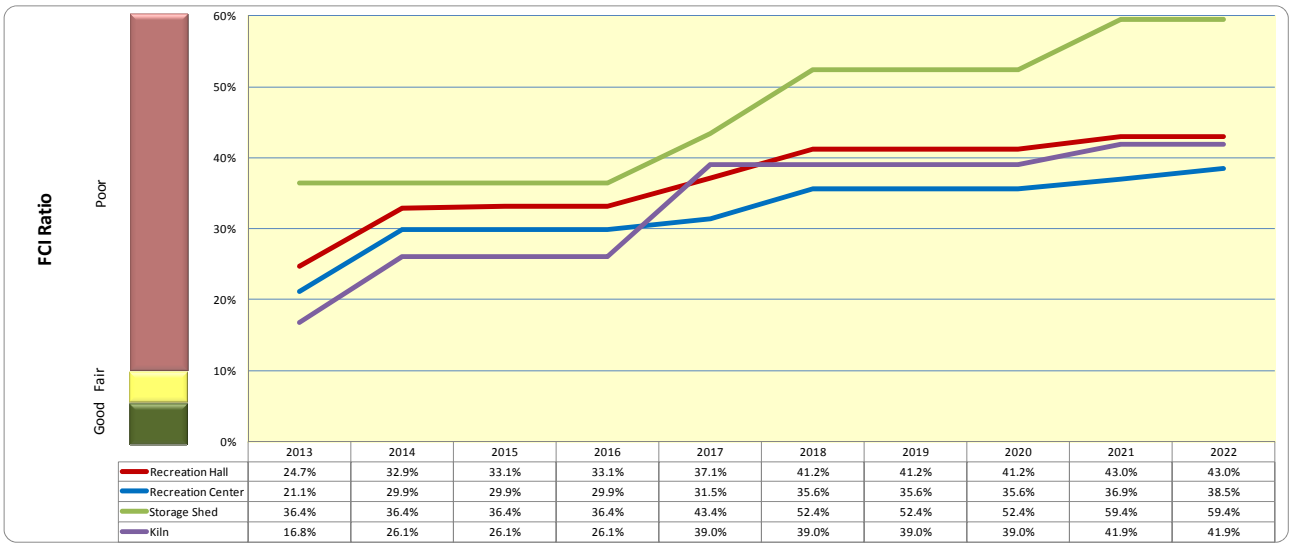
Chart EX-7 Year by Year Effects of FCI over the Study Period



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recreation Hall	24.7%	8.2%	0.3%	0.0%	4.0%	4.1%	0.0%	0.0%	1.8%	0.0%
Recreation Center	21.1%	8.8%	0.0%	0.0%	1.5%	4.2%	0.0%	0.0%	1.3%	1.5%
Storage Shed	36.4%	0.0%	0.0%	0.0%	7.0%	8.9%	0.0%	0.0%	7.0%	0.0%
Kiln	16.8%	9.3%	0.0%	0.0%	12.9%	0.0%	0.0%	0.0%	2.9%	0.0%

Chart EX-8 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. All of the buildings start of the study period are in the POOR condition rating, and remain there throughout the remainder of the study period.

Chart EX-8 Cumulative Effects of FCI over the Study Period



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Recreation Hall	24.7%	32.9%	33.1%	33.1%	37.1%	41.2%	41.2%	41.2%	43.0%	43.0%
Recreation Center	21.1%	29.9%	29.9%	29.9%	31.5%	35.6%	35.6%	35.6%	36.9%	38.5%
Storage Shed	36.4%	36.4%	36.4%	36.4%	43.4%	52.4%	52.4%	52.4%	59.4%	59.4%
Kiln	16.8%	26.1%	26.1%	26.1%	39.0%	39.0%	39.0%	39.0%	41.9%	41.9%

PRIORITIZATION OF WORK

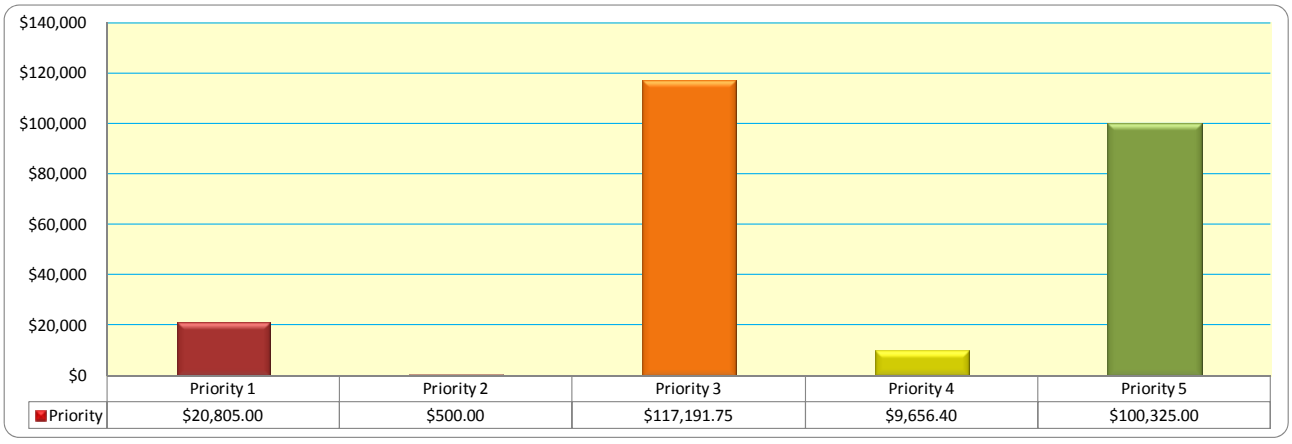
Faithful+Gould has prioritized the identified work in order to assist with analyzing the deficiencies found during the assessments. The following Priorities are shown below:

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-9 through to EX-13 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.

Recreation Hall

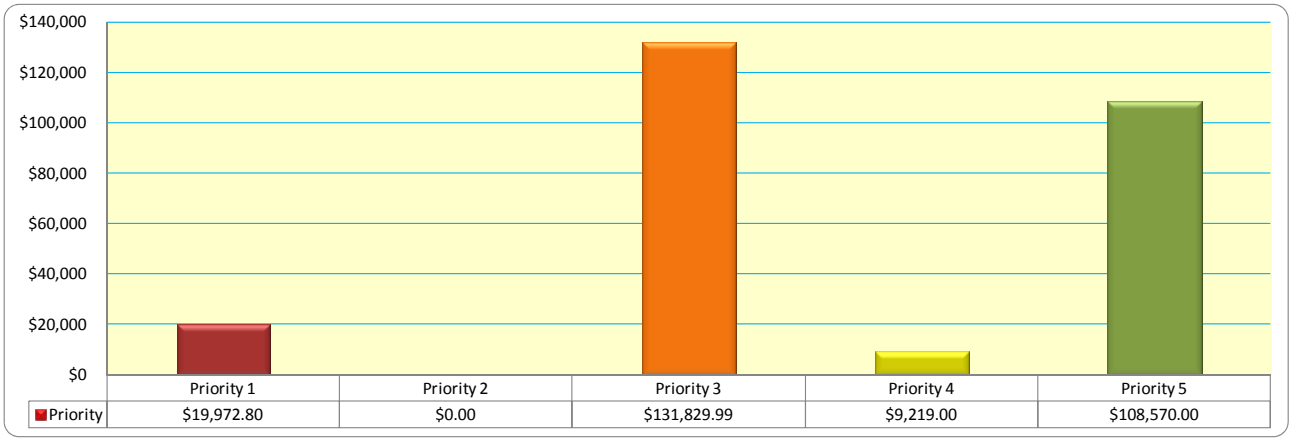
Chart EX-9 Cumulative Prioritization of Work



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

Recreation Center

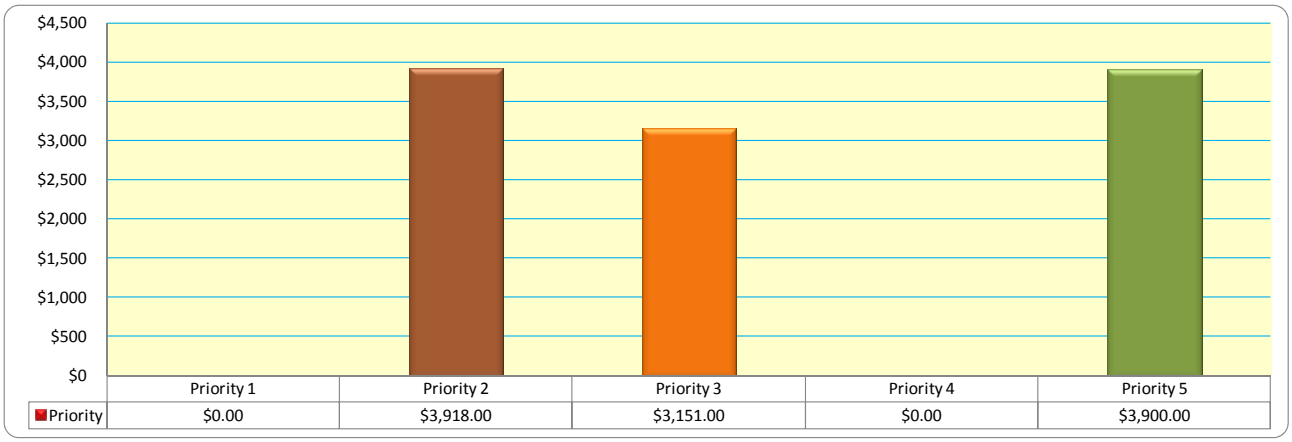
Chart EX-10 Cumulative Prioritization of Work



Priorities 3 and 5 appear to require the greatest amount of expenditure in this study. These categories illustrates that the majority of the work which needs to be undertaken is associated with normal replacements and with the appearance of the building.

Storage Shed P&R

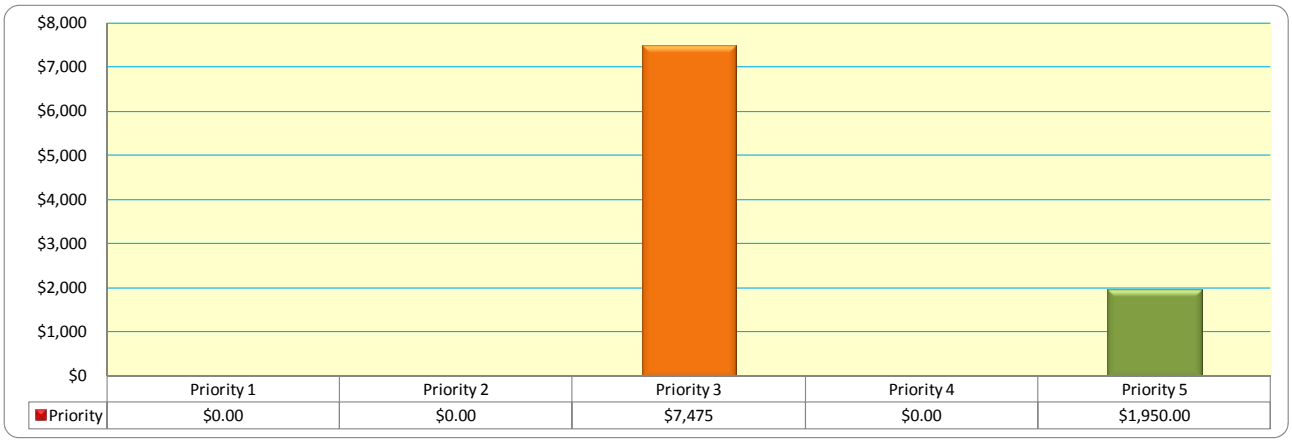
Chart EX-11 Cumulative Prioritization of Work



Priority 2 appears to require the greatest amount of expenditure in this study. This category illustrates that the majority of the work which needs to be undertaken is associated with systems or components that are inoperable or compromise the building.

Kiln

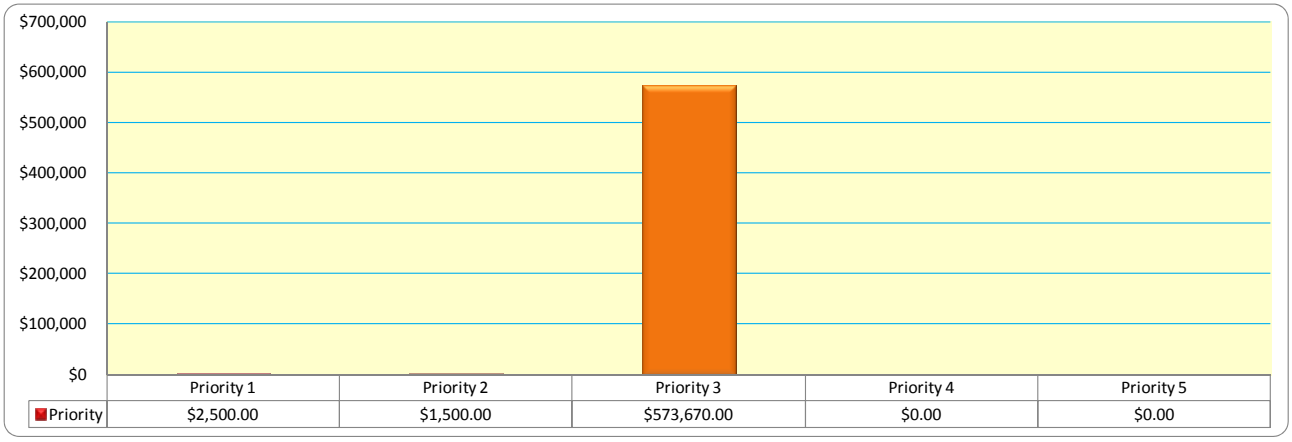
Chart EX-12 Cumulative Prioritization of Work



Priority 3 appears to require the greatest amount of expenditure in this study. This category illustrates that the majority of the work which needs to be undertaken is associated with normal replacements for the building.

Site Systems

Chart EX-13 Cumulative Prioritization of Work

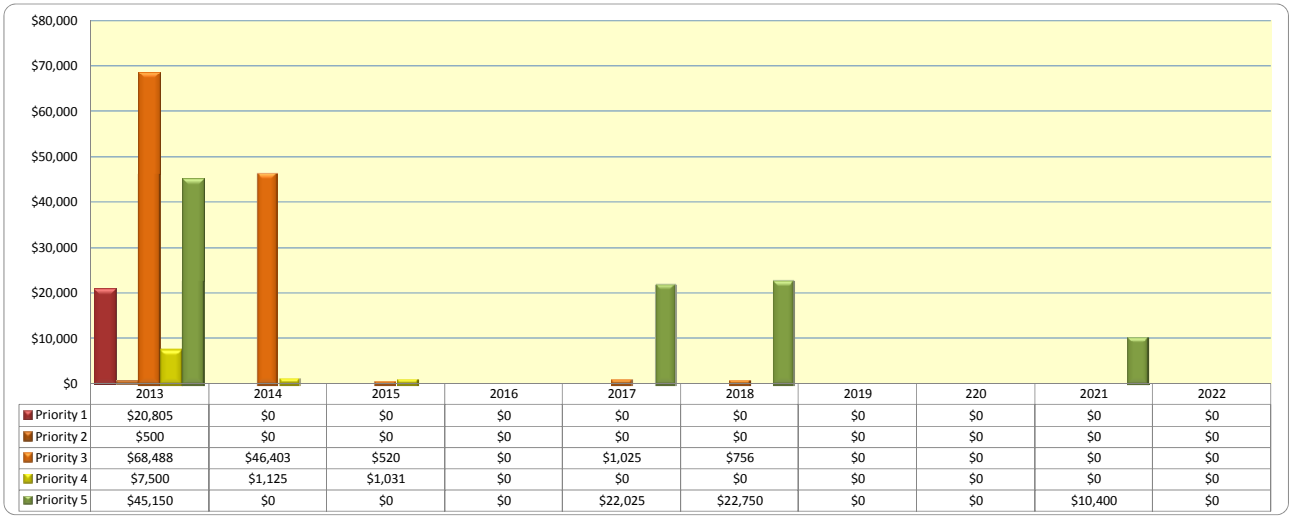


Priority 3 appears to require the greatest amount of expenditure in this study. This category illustrates that the majority of the work which needs to be undertaken is associated with normal replacements for the site.

Chart EX-14 through to EX-18 illustrates the expenditure per priority code, per each year within the 10 year study period.

Recreation Hall

Chart EX-14 Year by Year Cumulative Prioritization of Work

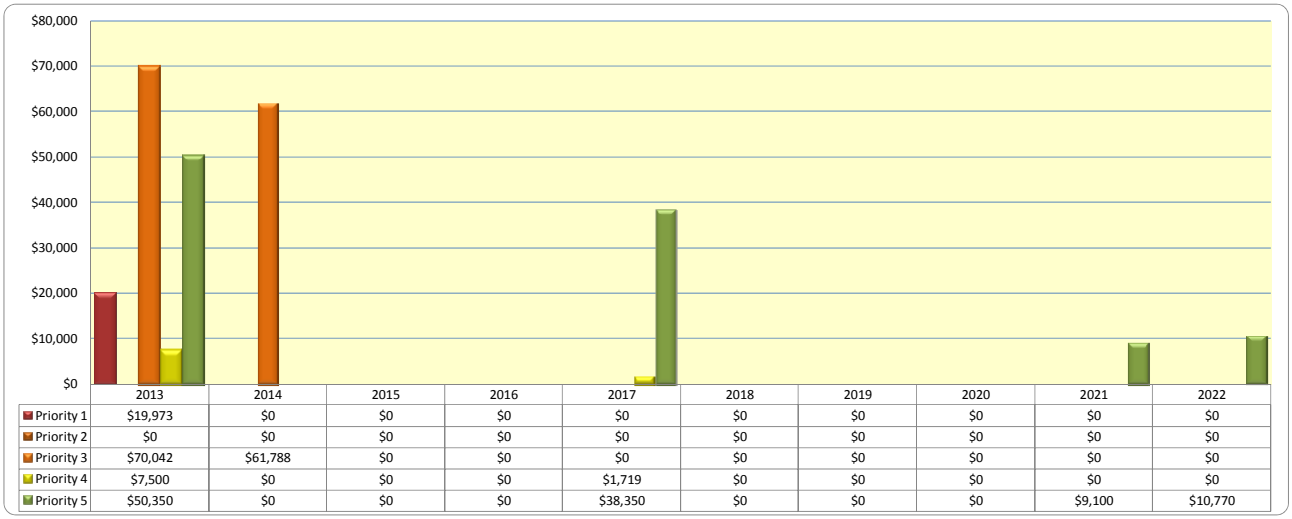


	2013	2014	2015	2016	2017	2018	2019	220	2021	2022
Priority 1	$20,805	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$500	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$68,488	$46,403	$520	$0	$1,025	$756	$0	$0	$0	$0
Priority 4	$7,500	$1,125	$1,031	$0	$0	$0	$0	$0	$0	$0
Priority 5	$45,150	$0	$0	$0	$22,025	$22,750	$0	$0	$10,400	$0

Chart EX-14 illustrates that there is one key year for Priority 3 coding, at the start of the study period.

Recreation Center

Chart EX-15 Year by Year Cumulative Prioritization of Work

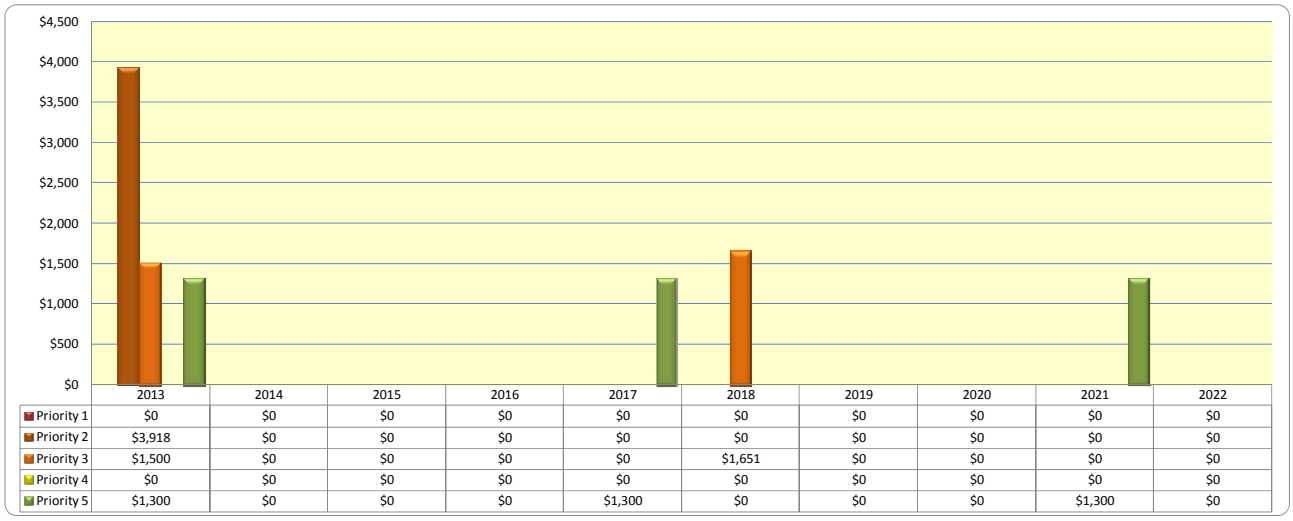


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Priority 1	$19,973	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$70,042	$61,788	$0	$0	$0	$0	$0	$0	$0	$0
Priority 4	$7,500	$0	$0	$0	$1,719	$0	$0	$0	$0	$0
Priority 5	$50,350	$0	$0	$0	$38,350	$0	$0	$0	$9,100	$10,770

Chart EX-15 illustrates that there are two key years for Priority 3 coding, at the start of the study period.

Storage Shed P&R

Chart EX-16 Year by Year Cumulative Prioritization of Work

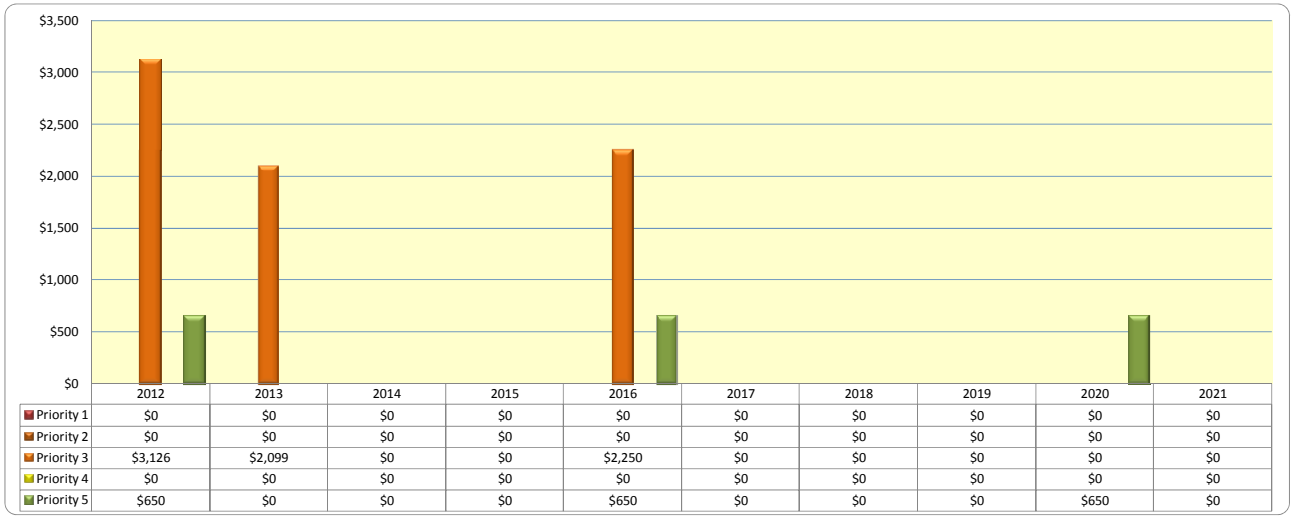


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Priority 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$3,918	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$1,500	$0	$0	$0	$0	$1,651	$0	$0	$0	$0
Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 5	$1,300	$0	$0	$0	$1,300	$0	$0	$0	$1,300	$0

Chart EX-16 illustrates that there is one key year for Priority 2 coding, at the start of the study period.

Kiln

Chart EX-17 Year by Year Cumulative Prioritization of Work



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
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	$3,126	$2,099	$0	$0	$2,250	$0	$0	$0	$0	$0
Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 5	$650	$0	$0	$0	$650	$0	$0	$0	$650	$0

Chart EX-17 illustrates that there three two key years for Priority 3 coding, at the start and mid-term.

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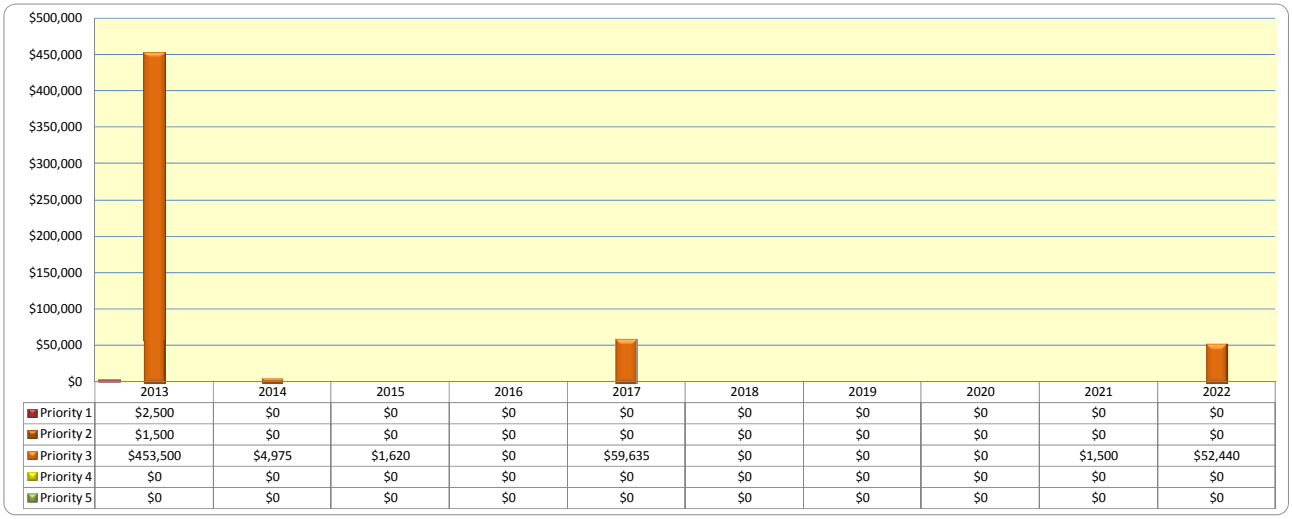
Site Systems

Chart EX-18 Year by Year Cumulative Prioritization of Work



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Priority 1	$2,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$1,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$453,500	$4,975	$1,620	$0	$59,635	$0	$0	$0	$1,500	$52,440
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-18 illustrates that there is one key year for Priority 3 coding, at the start of the study period.

PLAN TYPES

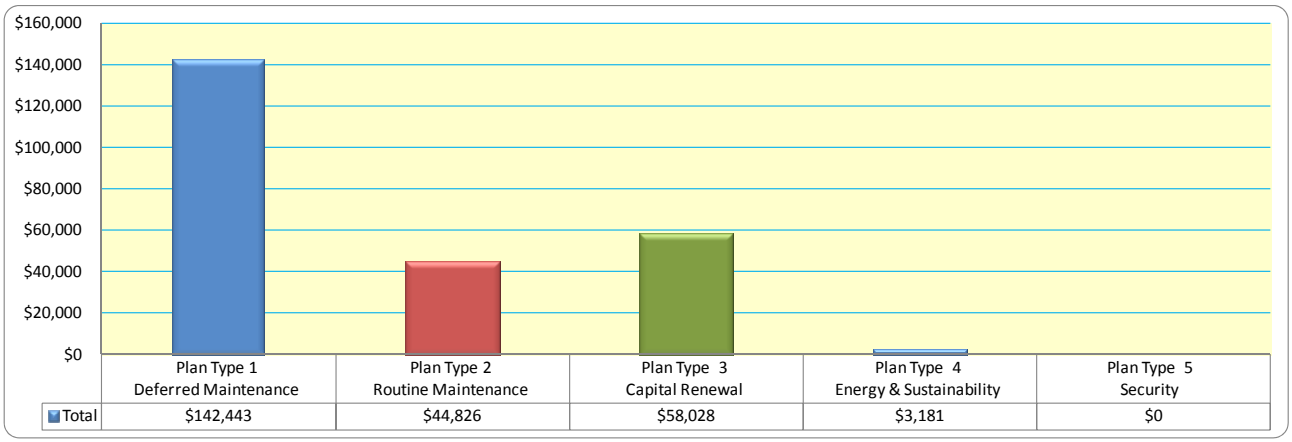
Faithful+Gould has prioritized the identified work according to the Plan Type or deficiency categories in order to assist with analyzing the deficiencies found during the assessments. The following Plan Types are shown below:

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

Chart EX-19 through to EX-23 illustrates the amount of expenditure, per category within the 10 year study period. These figures include each of the buildings and the site systems.

Recreation Hall

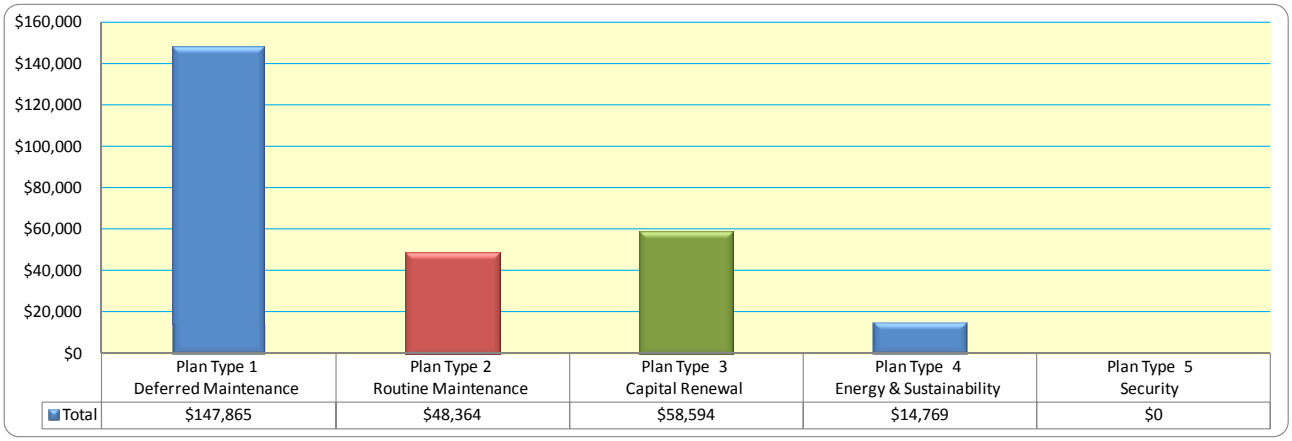
Chart EX-19 Cumulative Expenditure per Category of Works



Plan Type 1 – Deferred Maintenance appears to require the greatest amount of expenditure in this study period.

Recreation Center

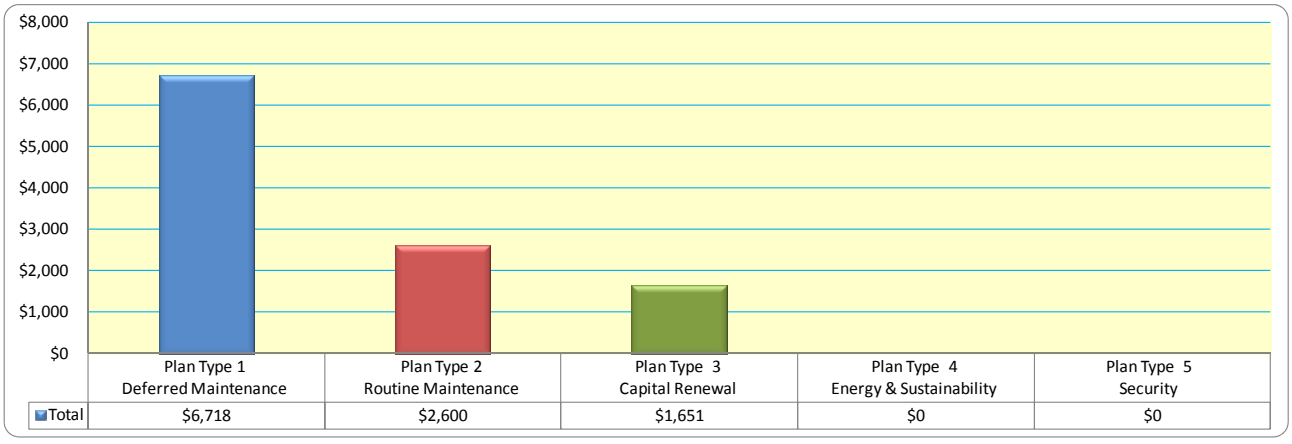
Chart EX-20 Cumulative Expenditure per Category of Works



Plan Type 1 – Deferred Maintenance appears to require the greatest amount of expenditure in this study period.

Storage Shed P&R

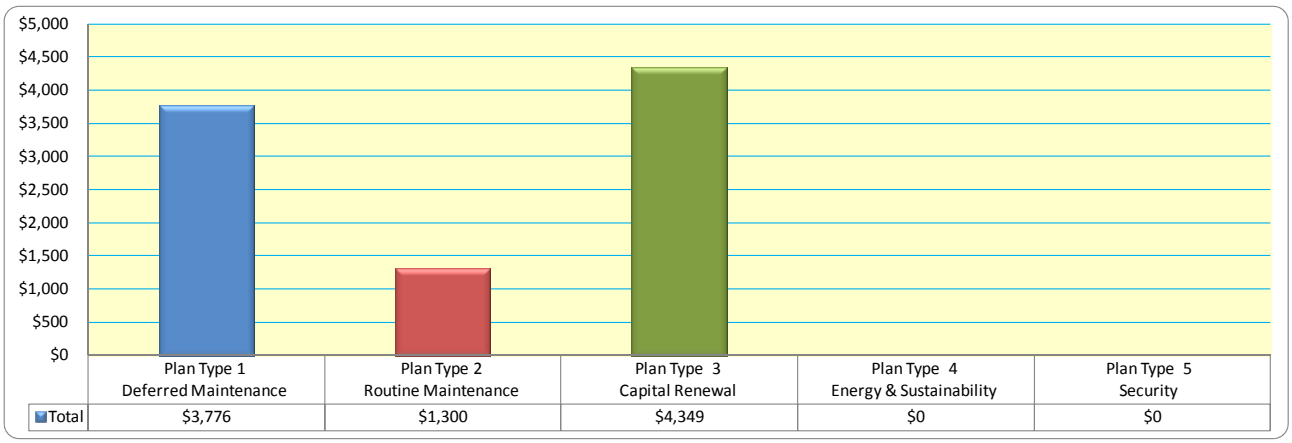
Chart EX-21 Cumulative Expenditure per Category of Works



Plan Type 1 – Deferred Maintenance appears to require the greatest amount of expenditure in this study period.

Kiln

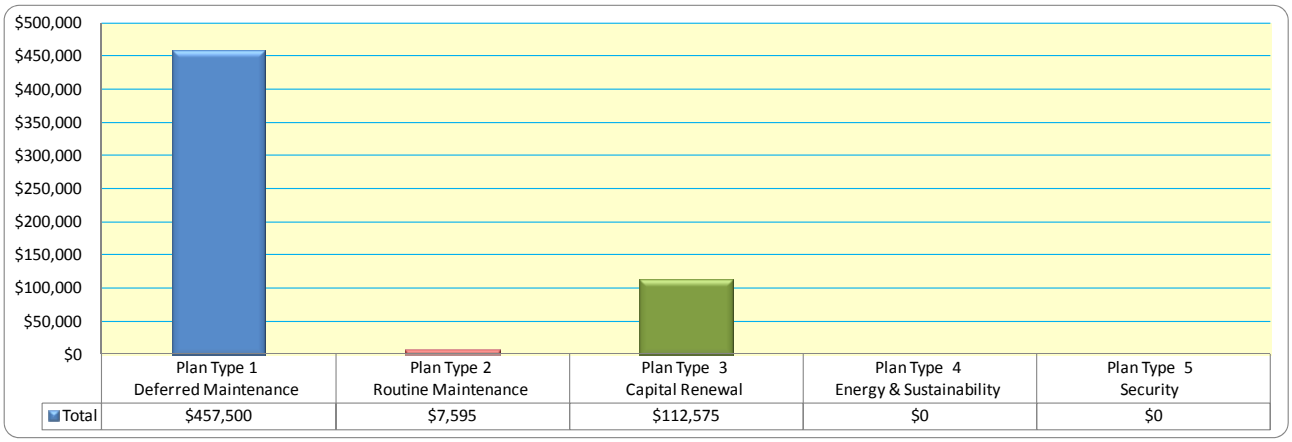
Chart EX-22 Cumulative Expenditure per Category of Works



Plan Type 3 – Capital Renewal appears to require all of the expenditure in this study period.

Site Systems

Chart EX-23 Cumulative Expenditure per Category of Works

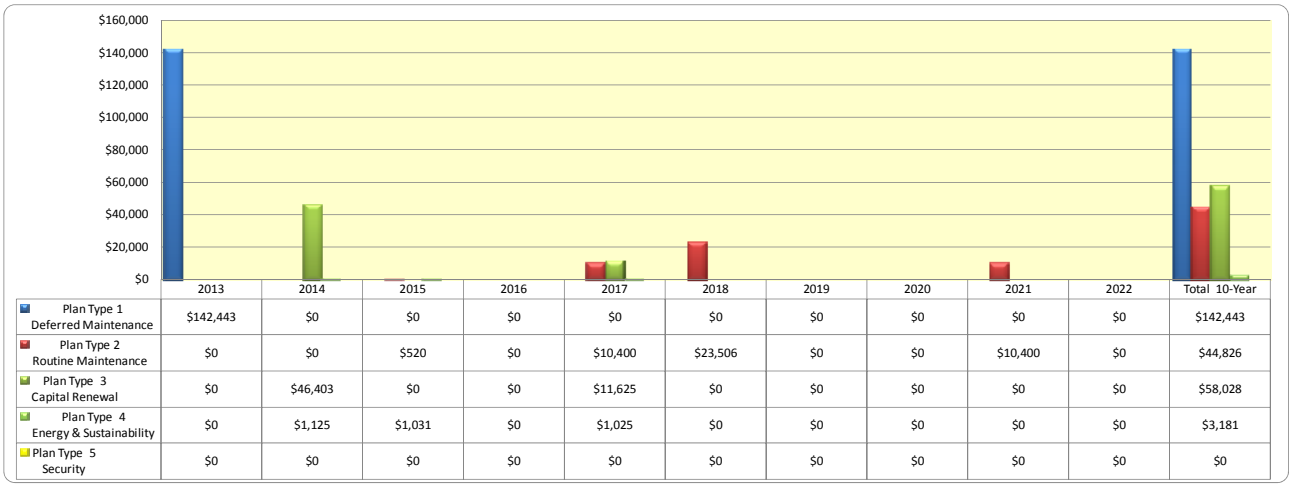


Plan Type 1 – Deferred Maintenance appears to require the greatest amount of expenditure in this study period.

Chart EX-24 through to EX-28 illustrates the amount of expenditure, per category, per each year within the 10 year study period.

Recreation Hall

Chart EX-24 Year by Year Cumulative Expenditure per Category of Works

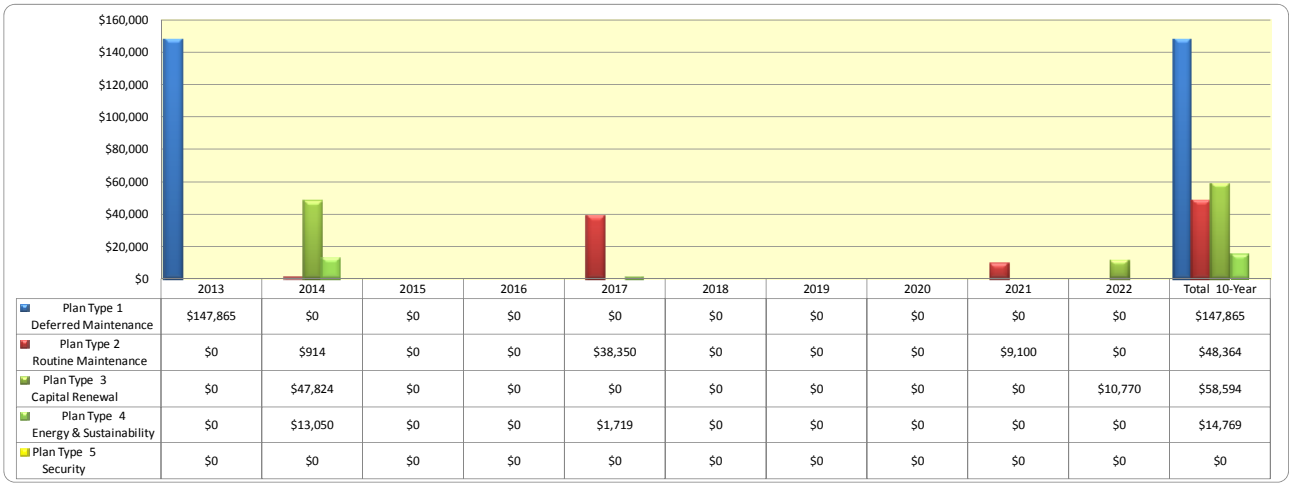


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 10-Year
Plan Type 1 Deferred Maintenance	$142,443	$0	$0	$0	$0	$0	$0	$0	$0	$0	$142,443
Plan Type 2 Routine Maintenance	$0	$0	$520	$0	$10,400	$23,506	$0	$0	$10,400	$0	$44,826
Plan Type 3 Capital Renewal	$0	$46,403	$0	$0	$11,625	$0	$0	$0	$0	$0	$58,028
Plan Type 4 Energy & Sustainability	$0	$1,125	$1,031	$0	$1,025	$0	$0	$0	$0	$0	$3,181
Plan Type 5 Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-24 illustrates that there is one key year for Plan Type 1 – Deferred Maintenance at the start of the study period.

Recreation Center

Chart EX-25 Year by Year Cumulative Expenditure per Category of Works

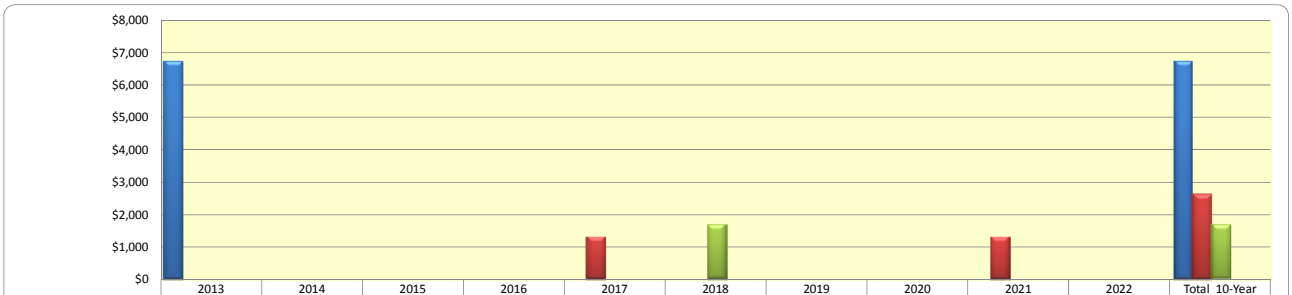


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 10-Year
Plan Type 1 Deferred Maintenance	$147,865	$0	$0	$0	$0	$0	$0	$0	$0	$0	$147,865
Plan Type 2 Routine Maintenance	$0	$914	$0	$0	$38,350	$0	$0	$0	$9,100	$0	$48,364
Plan Type 3 Capital Renewal	$0	$47,824	$0	$0	$0	$0	$0	$0	$0	$10,770	$58,594
Plan Type 4 Energy & Sustainability	$0	$13,050	$0	$0	$1,719	$0	$0	$0	$0	$0	$14,769
Plan Type 5 Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-25 illustrates that there is one key year for Plan Type 1 – Deferred Maintenance at the start of the study period.

Storage Shed P&R

Chart EX-26 Year by Year Cumulative Expenditure per Category of Works

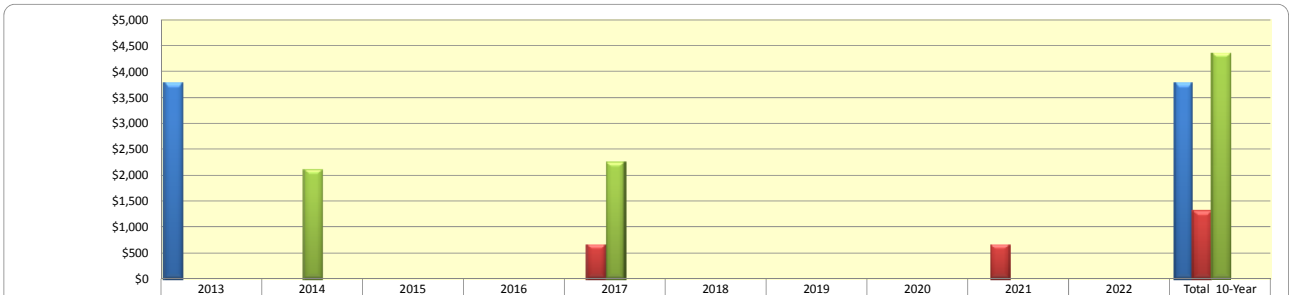


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 10-Year
Plan Type 1 Deferred Maintenance	$6,718	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,718
Plan Type 2 Routine Maintenance	$0	$0	$0	$0	$1,300	$0	$0	$0	$1,300	$0	$2,600
Plan Type 3 Capital Renewal	$0	$0	$0	$0	$0	$1,651	$0	$0	$0	$0	$1,651
Plan Type 4 Energy & Sustainability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 5 Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-26 illustrates that there is one key year for Plan Type 1 – Deferred Maintenance at the start of the study period.

Kiln

Chart EX-27 Year by Year Cumulative Expenditure per Category of Works

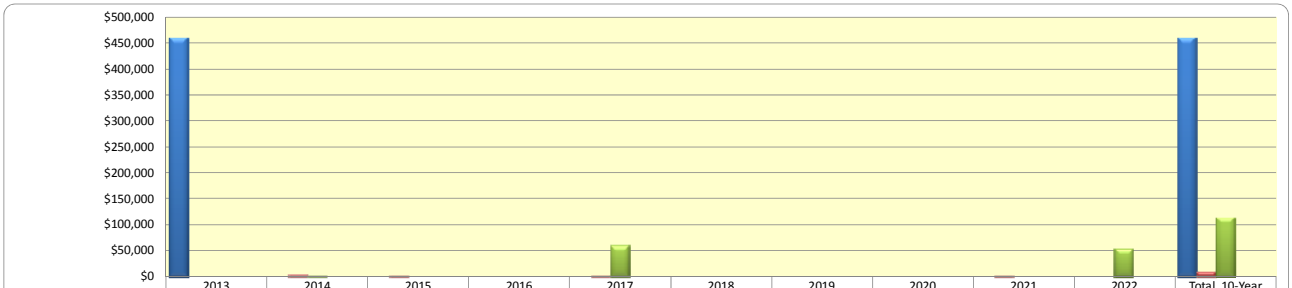


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 10-Year
Plan Type 1 Deferred Maintenance	$3,776	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,776
Plan Type 2 Routine Maintenance	$0	$0	$0	$0	$650	$0	$0	$0	$650	$0	$1,300
Plan Type 3 Capital Renewal	$0	$2,099	$0	$0	$2,250	$0	$0	$0	$0	$0	$4,349
Plan Type 4 Energy & Sustainability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 5 Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-27 illustrates that there is one key year for Plan Type 1 – Deferred Maintenance at the start of the study period.

Site Systems

Chart EX-28 Year by Year Cumulative Expenditure per Category of Works



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total 10-Year
Plan Type 1 Deferred Maintenance	$457,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$457,500
Plan Type 2 Routine Maintenance	$0	$2,975	$1,620	$0	$1,500	$0	$0	$0	$1,500	$0	$7,595
Plan Type 3 Capital Renewal	$0	$2,000	$0	$0	$58,135	$0	$0	$0	$0	$52,440	$112,575
Plan Type 4 Energy & Sustainability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 5 Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-28 illustrates that there is one key year for Plan Type 1 – Deferred Maintenance at the start of the study period.

SECTION 2 - A SUBSTRUCTURE

A10 FOUNDATIONS

DESCRIPTION

The description of the respective structural systems for the building is based upon our observation of exposed portions of the building structure and review of the available drawings.

A1010 STANDARD FOUNDATIONS

Recreation Hall & Recreation Center

A1011 Wall Foundations

The buildings are placed on steel-reinforced concrete footings that were constructed as part of the floor concrete-slabs-grade and by thickened sections of the floor slabs. According to the drawings, tooting dimensions vary at 8" x 8", 12" x 12", 6" x 15" and 14" x 18".

Storage Shed P&R & Kiln

The buildings do not have standard foundations, but are primarily placed directly on site concrete slabs-on-grade, with a portion of the Storage Shed P&R's rear (west) wall placed on a site concrete masonry retaining wall.

A1030 SLABS-ON-GRADE

Recreation Hall & Recreation Center

A1031 Standard Slab on Grade

The floors of each building consist of 4" thick cast-in-place concrete slabs-on-grade, reinforced with welded wire fabric. The drawings indicate the slabs are thickened at the perimeter as part of the exterior wall foundations. We are unaware of the designed compressive strength of the concrete.

Storage Shed P&R

A1031 Standard Slab on Grade

The building has been constructed on a 2" thick concrete pad placed directly on a site concrete slab-on-grade.

Kiln

The building has not been constructed with concrete slabs-on-grade. The floor of the building, steel-reinforced precast concrete panels has been placed directly on site concrete slabs-on-grade.

CONDITION

A1010 STANDARD FOUNDATIONS

Recreation Hall & Recreation Center

A1011 Wall Foundations

The load-bearing wall structures and floors appeared to be in good condition. Therefore we assume that the concrete foundation supports are also in good condition. We do not anticipate that any actions will be necessary during the study period.

Storage Shed P&R & Kiln

The load-bearing wall structures and floors appeared to be in good condition. Therefore we assume that their foundational supports are also in good condition. We do not anticipate that any actions will be necessary during the study period.

A1030 SLABS-ON-GRADE

Recreation Hall, Recreation Center & Storage Shed P&R

A1031 Standard Slab on Grade

The cast-in-place concrete slabs at each of the buildings appeared to be in good condition. We do not anticipate any expenditure during the cost study period, which relates to their replacement.

PROJECTED EXPENDITURE

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.

B1010 FLOOR CONSTRUCTION

Kiln

The building has a floor of precast concrete panels approximately 6" thick, manufactured as part of the building's modular construction system.

B1020 ROOF CONSTRUCTION

B1021 Flat Roof Construction

Recreation Center

The building's primary low-sloped roof sections consist of 2" x 8" or 2" x 10" wood joists supported by perimeter and interior load-bearing wood framed walls, and in turn support the 1" solid wood sheathing. The wood joists are most likely spaced at 16" on center.

Kiln

The building has a low-sloped roof constructed of precast concrete panels approximately 6" thick, manufactured as part of the building's modular construction system, supported by the perimeter precast concrete walls.

B1022 Pitched Roof Construction

Recreation Center

This building has a portion of its roof at the south side that is steeply sloped, most likely framed with 2" x 6" or 2" x 8" wood rafters, supported on the perimeter wood framed walls. The wood rafters are probably of typical 16" on center spacing and support 1" thick solid wood sheathing.

Storage Shed P&R

This building contains a pitched steep-sloped roof with 2" x 4" rafters supported by the perimeter wood-framed walls. The rafters are spaced at 16" on center and the roof sheathing is ½" to 5/8" plywood.

Recreation Hall

This building has a low-sloped roof constructed with 2" x 10" wood rafters supported by perimeter wood framed walls and a central steel ridge beam noted on the drawings to be 18" deep. The wood rafters are spaced at 16" on center and support 1" thick solid diagonal wood sheathing.

B1030 STRUCTURAL FRAME

Recreation Hall, Recreation Center and Storage Shed P&R

B1031 Wood Frame Structure

The buildings have light wood framed construction consisting of vertical load-bearing stud walls with solid wood or plywood sheathing and horizontal or sloped wood rafter roof framing with solid wood or plywood decking.

Kiln

B1032 Concrete Framed Structure

The building has a steel-reinforced precast concrete structural frame, utilizing floor, walls, and roof panels assembled as a manufactured modular system. Each panel section is typically 6" thick, with embedded steel plates or angles and welded or bolted connections.

CONDITION

B1010 FLOOR CONSTRUCTION

Kiln

The building's precast concrete floor did not exhibit evidence of structural distress or instability and appeared to be in good condition. No significant expenditures are anticipated during the study period.

B1020 ROOF CONSTRUCTION

B1021 Flat Roof Construction

Recreation Center

The flat roof structural construction appeared to be in good condition. There was some minor damage to the trim (reference Photograph 6 in Appendix B). We do not anticipate any expenditure during the cost study period which relates to replacement of the roof structure.

Kiln

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

B1022 Pitched Roof Construction

Recreation Center

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 Shed P&R

The pitched roof structural construction appeared to be in good to fair condition. There were framing members and sheathing that had been replaced, but there were no current signs of distress or instability noted. We do not anticipate any expenditure during the cost study period which relates to replacement of the structure.

Recreation Hall

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 (reference Photographs 22 and 23 in Appendix B).

B1030 STRUCTURAL FRAME

B1032 Wood Frame Structure

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

Kiln

B1032 Concrete Framed Structure

The building's precast-concrete structural frame appeared to be in good condition. We do not anticipate any expenditure during the cost study period which relates to replacement of the structural frame.

B20 EXTERIOR ENCLOSURES

DESCRIPTION

B2010 EXTERIOR WALLS

B2011 Exterior Wall Construction

Recreation Hall and Recreation Center

The buildings have exterior walls of painted cementitious stucco over plywood or solid wood sheathing, with painted wood trim (reference Photographs 1 through 5, and 17 in Appendix B). The drawings do not indicate insulation within the exterior walls.

Storage Shed P&R

The building has exterior walls of painted fiberboard siding over building paper attached to the wood structural frame (reference Photographs 34 through 36 in Appendix B). The walls are assumed to be uninsulated.

Kiln

The building has exterior walls of unfinished, ribbed precast concrete wall panels (reference Photographs 39 through 41 in Appendix B).

B2013 Exterior Louvers, Screens, and Fencing

Storage Shed P&R

The building has aluminum louvers on the front and rear façade to provide interior ventilation.

Kiln

The building has galvanized metal louvers on each façade to provide interior ventilation and kiln combustion air.

B2020 EXTERIOR WINDOWS

B2021 Windows

Recreation Hall

The windows at the building consist of fixed and hopper-type wood-framed windows with single pane glazing (reference Photographs 1, 2, 6 and 7 in Appendix B).

Recreation Center

The windows at the building consist of fixed aluminum-framed windows with single pane glazing (reference Photographs 16 and 18 in Appendix B).

B2030 EXTERIOR DOORS

B2039 Other Doors & Frames

Recreation Hall

The building contains three swinging single-leaf flush metal doors in steel frames with painted finishes at the east and west facades (reference Photographs 1 and 2 in Appendix B). Door hardware consisted of a combination of knob handles and pulls with thumb latches on the exterior and push-type panic devices on the interior.

Recreation Center

The building has a combination of swinging flush metal doors in steel frames, with single-leaf doors with painted finishes on the south and east facades and pairs of doors on the south, east and north facades (reference Photographs 17 and18 in Appendix B). Door hardware consisted of exterior level handles and interior push-type panic devices.

Storage Shed P&R

The building contains one swinging single-leaf flush metal door in a steel frame with painted finishes at the east facade (reference Photograph 34 in Appendix B). Door hardware consisted of a knob-type handle.

Kiln

The building contains a pair of metal doors inset with galvanized louvers, set in a steel frame with painted finishes, at the east facade (reference Photographs 39 and 43 in Appendix B). Door hardware consisted of a single pull and deadbolt lockset.

CONDITION

B2010 EXTERIOR WALLS

B2011 Exterior Wall Construction

Recreation Hall and Recreation Center

The buildings' painted cementitious stucco cladding and painted wood trim are in fair condition. The painted surfaces appeared to be in fair condition. Locations of cracking and impact damage at the stucco cladding and deterioration of wood trim were noted at the Recreation Hall on its east and west facades. We recommend budgeting for repairs to the stucco surfaces and replacement of deteriorated wood trim in the near-term in the study period. Based on the typical EUL of four-years for exterior paint, we recommend budgeting for re-painting and replacement of sealants near-term in the study period to maintain appearance and protect the wood trim.

Storage Shed P&R

The building's siding is in fair condition, with evidence of siding replacement on upper portion of the west side of the building and an open hole in the siding on the east facade. There is interior evidence of water damage to the siding at the lower portion of the walls. We recommend completion of siding repairs to address the damaged and moisture ingress near-term. Furthermore we also recommend repainting of the exterior wall surfaces during the study period.

Kiln

The precast concrete exterior walls are in fair condition, having locations of horizontal surface cracking, minor spalling and chipping. We recommend completion of repairs/patching of the walls in the near term to prevent escalating deterioration. We also recommend replacement of wall and roof panel joint sealants in the later term of the study period, based on observed condition and a EUL of 10 to 15 years. Furthermore we also recommend repainting of the exterior wall surfaces during the study period.

B2013 Exterior Louvers, Screens, and Fencing

Storage Shed P&R

The aluminum louvers appeared to be in poor to fair condition. Their EUL could be extended by preparatory work and painting, but would be more cost effective to replace them. The estimated cost for these repairs is considered to be below the threshold of $500; therefore they have not been included within the study period. We recommend completion of the repairs as an operational expense.

Kiln

The building's louvers are in poor to fair condition, with several louvers having surface corrosion. We recommend cleaning of all louvers, removing corrosion, and application of galvanized coating in the near-term of the study period.

B2020 EXTERIOR WINDOWS

B2021 Windows

Recreation Hall

The windows are in fair condition, with wood frame deterioration and cracked glazing noted. Based on conditions and a EUL of 30 years (which has been exceeded), we recommend budgeting for replacement of the windows with contemporary, aluminum-framed windows in the near-term in the study period.

The caulking at the perimeter of the window units was generally in fair condition and, with an estimated useful life of 10 to 15 years; we recommend replacement of the sealants at the time of window replacement.

Recreation Center

The windows are in good condition. No significant expenditures are anticipated for the windows during the study period.

The caulking at the perimeter of the window units was generally in good condition but, with an estimated useful life of 10- to 15-years, we recommend replacement of the sealants at the time of exterior repainting.

B2030 EXTERIOR DOORS

B2039 Other Doors & Frames

Recreation Hall, Recreation Center & Storage Shed P&R

The exterior doors at each of the buildings are in poor condition. The frames of the doors have started to corrode with signs of surface rust present, the surface of the doors have started to de-laminate, and we understand that adjustment is no longer possible. We recommend replacement near-term in the study period.

B30 ROOFING

DESCRIPTION

B3010 ROOF COVERINGS

B3011 Roof Finishes

The facility contained three low-sloped roof areas and two pitched steep-sloped roof areas; these roof areas are located at different buildings, and are shown on the following aerial plan:

Overview of Roof Locations & Configurations

Recreation Hall

The low-sloped roof contains a multi-layer modified bitumen built-up roof and a cap sheet with mineral surface granules (reference Photograph 3 in Appendix B). We understand that the roofing was installed in 1991 and that it was installed over older roofing.

Recreation Center

Roof area 1 at the south side of the building is a steeply-sloped roof containing clay tiles, with the remainder of the roofing (roof area 2) multi-layer asphaltic built-up roofing and a smooth surface, aluminum coating (reference Photographs 19 through 21 in Appendix B). Roof area 2 is divided into three sections by a center, recessed section containing mechanical equipment.

Storage Shed P&R

The steeply-sloped roof contains asphalt fiberglass shingles with a mineral granules surface (reference Photograph 35 in Appendix B).

Kiln

The low-slope roof appears to be limited to an applied coating over the precast concrete roof deck (reference Photograph 44 in Appendix B).

B3016 Gutters & Downspouts

Recreation Center

Storm water drainage from roof area 1 is directly over the roof edge, with roof area 2 draining to perimeter gutters and downspouts on the east and west sides of the building, with the downspouts draining to grade. The recessed center section of the roof area drains to a small aluminum gutter and downspouts on the rear (north) of building, draining to grade.

Recreation Hall, Storage Shed P&R & Kiln

Storm water drainage is directly over the roof edge.

Recreation Center

B3021 Glazed Roof Openings

The building contains seven skylights on raised metal curbs, with translucent domed plastic lenses. The age of the skylights in not known, but they appear to be approximately 20 years old.

Table B30-1 provides a summary of the roof coverings:

Table B30-1 Summary of Roof Coverings

Roof Component	Recreation Hall	Recreation Center		Storage Shed P&R	Kiln
		Roof Area 1	Roof Area 2		
Age *	22 Years (1991)	20 Years (1993)	20 Years (1993)	14 Years (1999)	12 Years (2001)
Roof Area (total / approx. square footage)	3,751	676	2,059	200	150
Application / Membrane	Modified Bitumen Built-up	Clay Tile	Multi-layer Asphaltic Built-up	Asphalt-Fiberglass Shingles	Waterproof Coating
Manufacturer / Model	Unknown	Unknown	Unknown	Unknown	Unknown
Surface	Granular Surfaced Cap Sheet	Clay Tile	Smooth Surface / Aluminum Coating	Granular Surfaced	Waterproof Coating
Deck Type	Wood Plank / Plywood	Wood Plank / Plywood	Wood Plank / Plywood	Plywood	Precast Concrete
Insulation	None	None	None	None	None
Cover Board	None	None	None	None	None
Drainage	Over Roof Edge	Over Roof Edge	Aluminum Gutters / Downspouts	Over Roof Edge	Over Roof Edge
Overflow Scuppers	None	None	None	None	None
Base Flashings	None	None	Upturned Membrane	None	None
Cap Flashings	None	None	Aluminum	None	None
Perimeter Enclosure	None	None	Façade Extension	None	None
Warranty (Manufacturer)	Tremco	Unknown	Tremco	Unknown	Unknown
Warranty (Contractor)	Unknown	Unknown	Unknown	Unknown	Unknown

*Actual install date unknown.

CONDITION

B3010 ROOF COVERINGS

B3011 Roof Finishes

Recreation Hall

The BUR covering is in poor to fair condition; we observed instances of weathered, cracked and brittle membrane and flashings, metal edging with open joints and areas of previous patching. Based on present conditions and a EUL of 20 years, we recommend replacement of the roof covering near-term in the study period.

Recreation Center

The clay tile and BUR coverings are generally in fair condition. Roof area 1 of the building has locations of slipped, cracked and missing clay tiles. Roof area 2 has locations of membrane cracking, weathering and bubbled/peeling coating, evidence of ponding water, weathered flashings, loosened copings and numerous previous patching repairs. Based on conditions and a EUL of 20 years, we recommend replacement of the built-up roofing and repairs to the clay tile roofing in the near term of the study period. We understand that the built-up roof covering be replaced with a Tremco style roof finish; we have allowed for the difference in replacement cost in the cost study. The roof replacement has been coincided with the replacement of the rooftop HVAC equipment.

Storage Shed P&R

The asphaltic fiberglass shingle roofing is in fair condition, with the shingles weathering and having slight edge curling. Based on conditions and a EUL of 25 years, we recommend replacement of the shingle roof covering mid-term in the study period.

Kiln

The roof covering and protective coating appeared to be in fair condition. The roof protective coating and the metal flashings at the kiln flues are weathered and repairs as part of operational maintenance are recommended during the term of study.

B3016 Gutters & Downspouts

Recreation Center

It has been reported that there are major flooding issues between the Recreation Center and the Recreation Hall. The ground is formed of concrete in an excessively low area and rainwater runoff from the buildings pools and is known to flood both buildings. This results in a need for sandbagging. Local sump pumps are employed to carry water away over the adjoining Planter wall to the storm drain grate. We recommend that an additional drainage channel is installed within the slab between the two buildings to assist with the removal of the storm water. This installation is recommended immediately to help prevent any future flooding of the buildings. The cost of the work has been included within section G2031.

The gutters and downspouts are in fair condition, with the downspout elbows dented or crushed. We recommend replacement of the downspout elbows as an operational expense, in order to direct roof drainage away from the building.

Recreation Hall, Storage Shed P&R & Kiln

Storm water drainage is adequate at the Storage Shed P&R & Kiln buildings. No anticipated replacement/installation actions have been considered.

However due to the major flooding issues noted above between the Recreation Center and Recreation Hall we recommend that a suitably sized gutter is installed along the south perimeter of the roof level to help in removing storm water that would usually discharge over the edge, therefore moving it away from that side of the building and redirecting it to the east side of the building. This installation is recommended immediately to help prevent any future flooding of the buildings.

Recreation Center

B3021 Glazed Roof Openings

The skylights are in poor to fair condition, with numerous locations of patching at the curb flashing, open aluminum frame joints, and surface crazing in the plastic lenses. Based on the conditions and a EUL of 25- to 30-years, we recommend budgeting for the replacement of the skylights, coordinated with the replacement of the building's roof covering near-term.

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.

Recreation Hall

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Replace deteriorated wood trim	135	LF	$3.85	$520	2015	3
B2011	Exterior Wall Construction	Repaint exterior wall surfaces and soffits	3,200	SF	$3.25	$10,400	2013	5
B2011	Exterior Wall Construction	Repaint exterior wall surfaces and soffits	3,200	SF	$3.25	$10,400	2017	5
B2011	Exterior Wall Construction	Repaint exterior wall surfaces and soffits	3,200	SF	$3.25	$10,400	2021	5
B2020	Exterior Windows	Replace windows with alumnium-framed units	75	SF	$36.71	$2,753	2014	3
B2039	Other Doors & Frames	Replace single exterior doors	3	EACH	$1,500	$4,500	2013	3

B3010	Roof Finishes	Replace BUR covering	3,751	SF	$10	$37,510	2014	3
B3016	Gutters & Downspouts	Install gutter at the south perimeter of the building	1	LS	$500	$500	2013	2
		Total Anticipated Expenditure for B Shell				$76,983		

Recreation Center

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	2,800	SF	$3.25	$9,100	2013	5
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	2,800	SF	$3.25	$9,100	2017	5
B2011	Exterior Wall Construction	Repaint exterior painted surfaces	2,800	SF	$3.25	$9,100	2021	5
B2039	Other Doors & Frames	Replace single exterior doors	3	EACH	$1,500	$4,500	2013	3
B2039	Other Doors & Frames	Replace double exterior doors	5	EACH	$2,870	$14,350	2013	3
B3010	Roof Finishes	Replace the built-up roofing with a tremco style roof covering	2,059	SF	$20.00	$41,180	2014	3
B3010	Roof Finishes	Repair the clay tile roof covering	20	SF	$45.69	$914	2014	3
B3021	Glazed Roof Openings	Replace the skylights	87	SF	$76.37	$6,644	2014	3
		Total Anticipated Expenditure for B Shell				$94,888		

Storage Shed P&R

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repaint the exterior wall surfaces	400	SF	$3.25	$1,300	2013	5
B2011	Exterior Wall Construction	Replace the siding and trim	600	SF	$6.53	$3,918	2013	2
B2011	Exterior Wall Construction	Repaint the exterior wall surfaces	400	SF	$3.25	$1,300	2017	5
B2011	Exterior Wall Construction	Repaint the exterior wall surfaces	400	SF	$3.25	$1,300	2021	5
B2039	Other Doors & Frames	Replace single exterior door	1	EACH	$1,500	$1,500	2013	3
B3010	Roof Finishes	Replace the asphalt shingle roof covering	260	SF	$6.35	$1,651	2018	3
		Total Anticipated Expenditure for B Shell				$10,969		

Kiln

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repaint the exterior wall surfaces	200	SF	$3.25	$650	2013	5
B2011	Exterior Wall Construction	Repaint the exterior wall surfaces	200	SF	$3.25	$650	2017	5
B2011	Exterior Wall Construction	Repaint the exterior wall surfaces	200	SF	$3.25	$650	2021	5
B2011	Exterior Wall Construction	Patch the exterior precast concrete wall surfaces of the Kiln	32	SF	$19.56	$626	2013	3
B2011	Exterior Wall Construction	Replace the exterior wall sealants of the Kiln	200	LF	$11.25	$2,250	2017	3
B2013	Exterior Louvers, Screens, and Fencing	Clean and coat the wall and door louvers of the Kiln	72	SF	$29.15	$2,099	2014	3
B2039	Other Doors & Frames	Replace louvered double exterior doors	1	EACH	$2,500	$2,500	2013	3
		Total Anticipated Expenditure for B Shell				$9,425		

SECTION 4 - C INTERIORS

C10 INTERIOR CONSTRUCTION

DESCRIPTION

C1010 PARTITIONS

Recreation Hall and Recreation Center

C1011 Fixed Partitions

The building contains wood-stud framed partitions with gypsum board or plaster on metal lath covering (reference Photographs 8 through12 in Appendix B). The partitioning separates the primary recreation hall from restrooms, storage rooms, kitchen and concessions area within the building.

The building contains wood-stud framed partitions with gypsum board or plaster on metal lath covering (reference Photographs 24 through 28 in Appendix B). The partitioning separates the tennis center/office, restrooms, storage rooms, recreation/crafts room and ceramics studio areas within the building.

C1014 Site Built Toilet Partitions

The men's and women's restrooms have steel partitions mounted on steel frames. In addition within the men's restroom the urinals have privacy screens present.

C1020 INTERIOR DOORS

Recreation Hall and Recreation Center

C1021 Interior Doors

The buildings contained a combination of single flush panel wood and metal doors in within wood and metal frames (reference Photographs 9, 25 and 27 in Appendix B).

C1023 Interior Door Hardware

The doors contained steel and aluminum hardware consisting of knob or lever door handles. Door closers were not observed.

CONDITION

C1010 PARTITIONS

Recreation Hall and Recreation Center

C1011 Fixed Partitions

The interior fixed partitions all appeared to be in fair condition, with no significant deficiencies found in relation to the wall structures. However, the layout of the restrooms does not provide sufficient maneuvering space and fixtures are not provided with adequate clearances for the disabled. We recommend that the restrooms be modified in the near-term to make them accessible to the disabled.

C1014 Site Built Toilet Partitions

The toilet partitions appeared to be in fair condition and are suitable for the current use. The privacy screens at the men's urinals are have deteriorated with corrosion present. We have recommended a full upgrade / renovation of the restrooms during the study period which will include full replacement of the toilet partitions and privacy screens.

C1020 INTERIOR DOORS

Recreation Hall and Recreation Center

C1021 Interior Doors

The interior doors appeared to be in fair to good condition with no deficiencies noted in the Recreation Center. Within the Recreation Hall, the doors have damaged and partially removed veneer. We recommend replacement of the Recreation Hall interior doors in early in the study period.

C1023 Interior Door Hardware

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 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

Recreation Hall and Recreation Center

Interior walls at the building typically have painted plaster or gypsum wallboard finishes. Walls in the restrooms have ceramic tiled surfaces (reference Photographs 8 through 12 and 24 through 28 in Appendix B).

Storage Shed P&R

The interior walls of the building are unfinished, with exposed exterior wall wood framing.

Kiln

The interior walls of the building are unfinished exposed precast concrete exterior wall panels.

C3020 FLOOR FINISHES

C3023 Flooring

Recreation Hall

The flooring in the building primarily consists of vinyl tile, with quarry tile used in the restrooms (reference Photographs 8 and 12 in Appendix B).

Recreation Center

The flooring in the building primarily consists of vinyl tile, with ceramic tiles in the restrooms, and exposed concrete slabs in some of the ceramics studio spaces (reference Photographs 24 and 28 in Appendix B).

Storage Shed P&R and Kiln

The buildings do not have floor finishes, with the unfinished concrete slab-on-grade and precast concrete floor panels exposed.

C3030 CEILING FINISHES

C3031 Ceiling Finishes

Recreation Hall and Recreation Center

The ceiling finishes throughout the buildings predominantly consists of painted plaster or gypsum board, with some locations having applied texturing (reference Photographs 8 and 25 in Appendix B).

CONDITION

C3010 WALL FINISHES

C3012 Wall Finishes to Interior Walls

Recreation Hall and Recreation Center

Interior wall finishes appeared to be in a generally fair condition throughout the buildings, with marks, staining and surface damage observed. The typical EUL of interior painted walls is five-years, and based on our observations and the fact that we are unaware of the dates of last painting, we recommend re-painting of all the previously painted walls in the near and late-term in the study period, to maintain the appearance of the buildings and work areas.

C3020 FLOOR FINISHES

C3023 Flooring

Recreation Hall

The vinyl and quarry tiled floors appeared to be in fair to good condition overall. However, with a EUL of 15 years and an estimated age of at least ten years, we recommend replacing the vinyl tile throughout the building during the mid- to late-term of the study period to maintain the appearance of the building.

Recreation Center

The vinyl and ceramic tiled floors appeared to be in fair to good overall condition. However, with a EUL of 15 years and an estimated age of at five to ten years, we recommend replacing the vinyl tile throughout the building during the mid- to late-term of the study period to maintain the appearance of the building.

C3030 CEILING FINISHES

C3031 Ceiling Finishes

Recreation Hall and Recreation Center

The painted plaster and gypsum board ceilings appeared to be in fair condition. Painted surfaces usually have a typical EUL of five years; therefore, we anticipate that the ceilings will require re-painting with 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.

Recreation Hall

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
C1011	Fixed Partitions	Reconfigure the restrooms for disabled accessibility	240	SF	$19.50	$4,680	2013	1
C1021	Interior Doors	Replace deteriorated interior doors	4	EACH	$410	$1,640	2014	3
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	7,000	SF	$3.25	$22,750	2013	5
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	7,000	SF	$3.25	$22,750	2018	5
C3023	Flooring	Replace viny tile flooring	3,100	SF	$3.75	$11,625	2017	5
		Total Anticipated Expenditure for C Interiors				$63,445		

Recreation Center

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	9,000	SF	$3.25	$29,250	2013	5
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	9,000	SF	$3.25	$29,250	2018	5
C3023	Flooring	Replace viny tile flooring	2,872	SF	$3.75	$10,770	2022	5
		Total Anticipated Expenditure for C Interiors				$69,270		

SECTION 5 - D SERVICES

D20 PLUMBING

DESCRIPTION

D2010 PLUMBING FIXTURES

D2011 Water Closets

Recreation Hall

The building contains three wall-mounted vitreous china tank-less water closets with manual flush valves.

Recreation Center

The building contained five wall-mounted stainless steel tank-less water closets with manual flush valves (reference Photograph 28A in Appendix B).

D2012 Urinals

Recreation Hall

The men's restroom contained one vitreous china wall-mounted waterless urinal (reference Photograph 12A in Appendix B).

Recreation Center

There is one interior floor-mounted water fountain within the main recreation hall of the building.

D2013 Lavatories

Recreation Hall

The building contained two wall-mounted vitreous china lavatories (reference Photograph 12B in Appendix B). The lavatories have single-handle lever-type, non-metering faucets. Water is supplied via copper pipe work and drained through cast iron pipe work and fittings.

Recreation Center

The building contained six wall-mounted stainless steel lavatories (reference Photograph 28B in Appendix B). The lavatories have single-handle lever-type, non-metering faucets. Water is supplied via copper pipe work and drained through cast iron pipe work and fittings.

D2014 Sinks

Recreation Center

The ceramic studio in the Recreation Center contains wall-mounted stainless steel sinks with goose-neck faucets and handheld spray attachments (reference Photograph 26 in Appendix B) and the after-school craft space has a single stainless steel sink recessed in the plastic laminate countertop/base cabinets. Water is supplied via copper piping and drained through PVC piping with sediment filtration device.

D2018 Drinking Fountains and Coolers

Recreation Hall

There is one interior floor-mounted water fountain within the main recreation hall of the building.

Recreation Center

There is one exterior stainless steel water fountain mounted on the exterior of the building, on the south façade (reference Photograph 16 in Appendix B).

D2020 DOMESTIC WATER DISTRIBUTION

Recreation Hall

D2021 Cold Water Service

Cold water piping throughout the building consisted of copper tubing. We believe the cold water service for the facility is supplied directly from the street 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.

D2022 Hot Water Service

Domestic hot water is provided in the kitchen area and restrooms of the Recreation Hall. The hot water is generated via a natural-gas-fueled water heater located in a closet in the kitchen area at the west side of the building (reference Photograph 13 in Appendix B).

Table D20-1 Summary of the Domestic Water Heating Equipment at the Recreation Hall

Location	Manufacturer	Model #	Serial #	Fuel/ Rating	Capacity	Year of Installation
Main Hall Kitchen	Reliance	10 30 NAR1961 C	A97568775	Natural Gas / 40,000 BTUH	30 GAL	1997

Recreation Center

D2021 Cold Water Service

Cold water piping throughout the building consisted of copper tubing. We believe the cold water service for the facility is supplied directly from the street 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.

D2022 Hot Water Service

Domestic hot water is provided in the ceramics studios, crafts room, and restrooms of the Recreation Center. The hot water is generated via an electric water heater located in a closet in the tennis center (the south side of the building) (reference Photograph 29 in Appendix B).

Table D20-2 Summary of the Domestic Water Heating Equipment at the Recreation Center

Location	Manufacturer	Model #	Serial #	Fuel/ Rating	Capacity	Year of Installation
Closet	A.O. Smith	PEC 52 914	CF93-1446403-S06	Electric / 4,500 Watts	50 GAL	2006

D2030 SANITARY WASTE

Recreation Hall and Recreation Center

D2031 Waste Piping

Waste piping observed at the buildings consisted primarily of 2" to 4" diameter cast iron material, with some locations having 2" diameter PVC lines (reference Photographs 12B, 26 and 28B in Appendix B).

D2090 OTHER PLUMBING SYSTEMS

Recreation Hall, Recreation Center and Kiln

D2091 Gas Distribution

The buildings are provided with natural gas service, typically 1" diameter steel piping, with the service meters at the east side of the Recreation Hall (assumed to also serve the Kiln) and the west side of the Recreation Center (reference Photograph 30 in Appendix B). The service is provided for HVAC and plumbing equipment, as well as ceramics-firing kilns.

CONDITION

D2010 PLUMBING FIXTURES

D2011 Water Closets

Recreation Hall and Recreation Center

The water closets at each of the buildings appeared to be in fair condition, and appeared to be low-flow-type models. The water closets flushed properly and did not have cracks in the china. However the restrooms at both buildings do not comply with ADA and City standards; major floor plan modifications are required therefore replacement of the fixtures will be necessary near-term in the study period.

D2012 Urinals

Recreation Hall and Recreation Center

The waterless urinals appeared to be in good condition. The urinals flushed properly and did not have cracks in the china. However the restrooms at both buildings do not comply with ADA and City standards; major floor plan modifications are required therefore replacement of the fixtures will be necessary near-term in the study period; however these maybe retained and reused if care is taken during their removal.

D2013 Lavatories

Recreation Hall and Recreation Center

The lavatories and faucets at each of the buildings appeared to be in fair condition. The faucets appeared to be low-flow models and the sinks drained properly and did not have any cracks in the china. However the restrooms at both buildings do not comply with ADA and City standards; major floor plan modifications are required therefore replacement of the fixtures will be necessary near-term in the study period; however these maybe retained and reused if care is taken during their removal.

D2014 Sinks

Recreation Center

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

D2018 Drinking Fountains and Coolers

Recreation Hall and Recreation Center

The Recreation Center's drinking fountain appeared to be in good condition. Based upon observed conditions, we do not anticipate that there will be a requirement for its replacement during the study period. However, the Recreation Center's drinking fountain was not provided with sufficient clearance for access by the disabled because of an adjacent vending machine. We recommend relocating the vending machine to make the drinking fountain fully accessible to the disabled.

D2020 DOMESTIC WATER DISTRIBUTION

D2021 Cold Water Service

Recreation Hall and Recreation Center

The domestic water systems at each of the buildings appeared to be in fair condition. No major problems were observed that could be attributed to age or deferred maintenance. The piping on the backflow preventer is PVC, and shoulder placed with copper.

D2022 Hot Water Service

Recreation Hall and Recreation Center

The domestic water heaters appeared to be in fair condition. They were observed to be functional and operating correctly. However, water heaters generally have a typical EUL of ten years. The water heater in the Recreation Hall, installed in approximately 1997, will require replacement to maintain efficiency early in the study period and the water heater in the Recreation Center, installed in approximately 2006, will need replacement in the late term of the study period.

D2030 SANITARY WASTE

D2031 Waste Piping

Recreation Hall and Recreation Center

No visually apparent problems with the sanitary waste piping were observed. 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 building.

D2090 OTHER PLUMBING SYSTEMS

D2091 Gas Distribution

Recreation Hall, Recreation Center and Kiln

There were no apparent items of concern with the gas distribution systems.

D30 HVAC

DESCRIPTION

D3040 AIR DISTRIBUTION SYSTEMS

D3041 Air Distribution Systems

Recreation Hall

The conditioned air is distributed throughout the primary central recreation hall directly from the building's unit heater, without use of ductwork or diffusers.

Recreation Center

The conditioned air from rooftop package units is distributed throughout the building by interior metal ducts located above the ceilings, within attic space and in walls, through connections to diffusers/grills in the ceilings and walls.

D3042 Exhaust Ventilation Systems

Recreation Hall

Ventilation of the central recreation hall is provided by a side-wall exhaust fan, manufactured by Dayton and rated at 1 ¼-horsepower. Ventilation of the kitchen range is provided by a stainless steel hood with rooftop exhaust fan (reference Photograph 11A in Appendix B). The restrooms are ventilated naturally through operable windows.

Recreation Center

The building contains hooded rooftop vents to allow for natural ventilation of the restrooms.

D3041 Air Distribution Systems

Recreation Center

The ductwork is sheet metal, except for flexible duct connections to ceiling diffusers in suspended ceiling areas.

Storage Shed P&R and Kiln

The buildings are ventilated by gable end and sidewall louvers and do not have mechanical air distribution systems (reference Photographs 37 and 46 in Appendix B).

D3050 HEAT TRANSFER TERMINAL AND PACKAGED UNITS

D3050 Heat Transfer Terminal and Package Units

Storage Shed P&R and Kiln

The buildings do not contain terminal or package heating/cooling units.

D3051 Terminal Self-Contained Units

Recreation Hall

The building contained one gas-fired unit heater suspended from the ceiling within the central recreation hall (reference Photograph 14 in Appendix B). The unit, manufactured by Dayton in approximately 1997, is a heating only unit. Refer to the following table D30-1 for further details of the unit heater.

Table D30-1 Summary of the HVAC Equipment at Recreation hall

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year of Installation
Main Hall Ceiling	Gas-fired Unit Heater	Dayton	3E368E	L97G019409	75,000 BTUH	Natural Gas	1997

D3052 Package Units

Recreation Center

The building contains two rooftop package heat pump heating and cooling units (reference Photograph 31 in Appendix B). The units are located in a rooftop "well" in the center of the building and were manufactured in approximately 1993 by Carrier. The units have cooling capacities of 3- and 4-tons each. Refer to the following table D30-2 for further details of the package units.

Table D30-2 Summary of the HVAC Equipment at Recreation Center

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year of Installation
Rooftop	Package Unit	Carrier	50NQ048310	Unknown	4 Tons Cooling / 51,000 BTUH Heating	Electric	1993
Rooftop	Package Unit	Carrier	50NQ036310	Unknown	3 Tons Cooling / 37,000 BTUH Heating	Electric	1993

D3060 HVAC INSTRUMENTATION AND CONTROLS

D3069 Other Controls & Instrumentation

Recreation Hall and Recreation Center

The building users are able to control the room temperature via wall mounted electronic thermostats.

CONDITION

D3040 AIR DISTRIBUTION SYSTEMS

D3041 Air Distribution Systems

Recreation Center

Although not observable at the time of our assessment, the interior metal ductwork is reportedly distributing the tempered air properly and the diffusers/grills appear to be adequately placed for occupant comfort. Only a small proportion of the ducting in the building was 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

Recreation Hall

The building's side-wall exhaust fan is in fair to good condition, having been installed in approximately 2004. With a EUL of 15- to 20-years, replacement of the fan is not anticipated during the study period.

D3050 HEAT TRANSFER TERMINAL AND PACKAGED UNITS

D3051 Terminal Self-Contained Units

Recreation Hall

The unit heater appeared to be in fair to good condition. The unit was installed in approximately 1997 and therefore is 16 years old. The typical EUL of equipment such as this is 15 to 20 years and, therefore, it is likely to require replacement in the mid- to late-term of the study period.

D3052 Package Units

Recreation Center

The rooftop package heat pump units, manufactured in approximately 1993, they are therefore 20 years old and are in poor to fair condition. Outer housing and component corrosion and internal wiring issues have reportedly necessitated frequent maintenance of the equipment. With a typical EUL of 15 to 20 years for this type of equipment, replacement of the heat pumps should be scheduled for the near-term of the study period. We recommend that they are replaced at the same time as the roofing replacement as detailed in section B3010.

D3060 HVAC INSTRUMENTATION AND CONTROLS

Recreation Hall and Recreation Center

D3069 Other Controls & Instrumentation

The thermostats appeared to be in fair to good condition and functional. We are unaware of any issues with the controls, but anticipate their replacement at the time of replacement of the terminal and package units.

D40 FIRE PROTECTION

DESCRIPTION

D4010 SPRINKLERS

Recreation Center

D4011 Sprinkler Water Supply

The building contains a wet-pipe fire sprinkler system, with ceiling pendant heads supplied from an exterior riser at the west side of the building (reference Photographs 25 and 32 in Appendix B). System water supply is provided by municipal main pressure, without the use of a fire pump, and water flow is monitored by a local alarm system. The service main, with check valve assembly and Siamese hose connections, is located at the south side of the building.

D4030 FIRE PROTECTION SPECIALTIES

Recreation Hall and Recreation Center

D4031 Fire Extinguishers

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

CONDITION

D4010 SPRINKLERS

Recreation Center

D4011 Sprinkler Water Supply

The system appears to be operational. We understand it is maintained by a contracted service provider and was last tested by them in early 2013. There is considerable corrosion present at the sprinkler heads especially in the ceramic studio due to the heat and moisture exposure. This poses concerns regarding the integrity of the system or the event of possible flooding through failure of the sprinkler head. Sprinkler heads have a typical EUL of twenty-years and with time the fire sprinkler heads can decrease in functionality and therefore lessen the efficiency of the entire sprinkler system. We recommend that the sprinkler heads are replaced at the start of the study period.

Recreation Hall & Recreation Center

D4031 Fire Extinguishers

The fire extinguishers appeared to be in good condition. We understand that they are maintained on a yearly basis by DCS Testing & Equipment, a contracted service provider and were last inspected in February of 2013. We do not anticipate a need for significant replacement of fire extinguishers 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, lighting fixtures, and limited fire alarm systems. Limited drawings detailing electrical systems were available for review.

D5010 ELECTRICAL SERVICE & DISTRIBUTION

Recreation Hall, Recreation Center, Storage Shed P&R and Kiln

D5012 Low Tension Service & Dist.

The buildings are served by underground 120/208-Volt, single-phase, 3-wire electrical service to exterior metered panels located on the west side of the Recreation Hall building and on the north side of the Recreation Center. Interior panel boards with multiple breakers provide power to building power, lighting and equipment loads (reference Photographs 15, 33 and 47 in Appendix B), varying from 100- to 200-amp capacities.

D5020 LIGHTING & BRANCH WIRING

Recreation Hall, Recreation Center, Storage Shed P&R and Kiln

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 was observed to typically be distributed in Electric Metallic Tubing (EMT), with some flexible metal conduit likely utilized within walls and ceilings.

D5022 Lighting Equipment

The interior lighting within each building is provided by ceiling-mounted 4' long, two- or four-lamped fluorescent fixtures (reference Photograph 8, 25, 37 and 45 in Appendix B). The florescent fixtures typically contain F32 T8 32W lamps and electronic ballasts. Within the tennis center in the Recreation Center, halogen-lamped spot lighting fixtures are also provided in track systems. The lighting is typically controlled via local switching in the respective rooms.

D5030 COMMUNICATIONS & SECURITY

Recreation Hall and Recreation Center

D5033 Telephone Systems

Telephone systems are present within the various spaces of the buildings.

D5037 Fire Alarm Systems

The building's fire sprinkler system is provided with a flow-monitoring alarm system. The system appears to be locally alarming only, with a water flow monitor on the system riser valve at the building's west façade and a gong at the southeast corner (reference Photograph 32 in Appendix B).

D5038 Security and Detection Systems

No security system was currently observed at any of the buildings.

D5039 Local Area Network

A data system is present containing a wall mounted rack with voice and data patch panels, routers, switches, modems and structured data cabling to the various data plates located throughout the building.

D5090 OTHER ELECTRICAL SYSTEMS

Recreation Hall and Recreation Center

D5092 Emergency Light & Power Systems

Illuminated exit signs, located above exterior doors, are provided in the Recreation Hall and Recreation Center buildings.

CONDITION

D5010 ELECTRICAL SERVICE AND DISTRIBUTION

Recreation Hall, Recreation Center, Storage Shed P&R and Kiln

D5012 Low Tension Service & Dist.

The electrical equipment appeared to be in fair condition, with the interior service panels in the Recreation Hall appearing to be original equipment. The exterior main service panels with meters at the other buildings appeared to be in fair condition. Electrical distribution systems tend to have a typical EUL of 30 years; therefore, we anticipate a need to replace the panel boards within the Recreation Hall during the cost study period and the other buildings only need to be maintained. Furthermore we understand by City maintenance personnel that there is an inadequate power supply for what the Recreation Hall is being used for as there are regular trips on the circuit boards. We recommend that the electrical panels are replaced and addition power outlets are added to meet building and user needs.

D5020 LIGHTING & BRANCH WIRING

Recreation Hall, Recreation Center, Storage Shed P&R and Kiln

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; except for the Recreation Hall which as noted previously requires addition power outlets are added to meet building and user needs.

D5022 Lighting Equipment

The interior lighting was observed to be in fair to good condition and all fixtures were operating properly with no broken lenses or deteriorated housings. We recommend that the local lighting switches in the Recreation Hall and Recreation Center buildings be replaced with motion-sensing occupancy type controls to increase energy efficiency, minimizing the use of lighting in unoccupied spaces. We have included costs for the lighting controls replacement in these buildings in the near term of the study period.

D5030 COMMUNICATIONS & SECURITY

Recreation Hall and Recreation Center

D5033 Telephone Systems

The existing telephone system equipment was observed to be in fair condition. The typical EUL of these systems is 15 years, therefore based on changing and innovating technology we have included for replacement after near-term in the study period. This will allow the system to be consistent with other City buildings. Furthermore we recommend that the overhead feed at roof level is properly installed during the works (reference Photograph 22 in Appendix B).

D5037 Fire Alarm Systems

The limited fire alarm system appeared to be in fair condition at the Recreation Center, we are unaware of any issues with the system and it appears to receive regular testing. We recommend that the system is upgraded with a full detection system including an annunciation panel opposite the main entrance doors. Furthermore we recommend that it is connected/linked to the buildings security system. We also recommend that a fire alarm system is installed at the Recreation Hall at the same time.

D5038 Security and Detection Systems

We understand that there is a need for a security system at the buildings which also consists of a CCTV system, therefore we have included this near-term in the cost study period so that both buildings are secure and to help prevent unauthorized access.

D5039 Local Area Network

A data system is present containing a wall mounted rack with voice and data patch panels, routers, switches, modems and structured data cabling to the various data plates located throughout the building.

D5090 OTHER ELECTRICAL SYSTEMS

Recreation Hall and Recreation Center

D5092 Emergency Light & Power Systems

The exit sign systems appeared to be in fair condition. We do not anticipate the need for significant repairs or replacement during the cost study period. Consideration should be given as a matter of improved operations to upgrading the signs to LED-type models throughout each of the buildings.

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.

Recreation Hall

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
D20	Plumbing	Renovate restrooms	1	LS	$50,000	$50,000	2013	3
D2022	Hot Water Service	Replace domestic water heater	30	GAL	$34.38	$1,031	2015	3
D2031	Waste Piping	Undertake camera inspection of sewer lines	1	LS	$1,000	$1,000	2013	3
D3041	Air Distribution Systems	Clean ductwork	3,025	SF	$0.25	$756	2013	3
D3041	Air Distribution Systems	Clean ductwork	3,025	SF	$0.25	$756	2018	3
D3051	Terminal Self-Contained Units	Replace gas-fired unit heater	1	EACH	$1,025	$1,025	2017	3
D5012	Low Tension Service Dist.	Replace electrical panelboards	3	EACH	$1,500	$4,500	2013	3
D5021	Branch Wiring Devices	Install additional power outlets	1	LS	$2,400	$2,400	2013	3
D5022	Lighting	Install motion sensor	6	EACH	$187.50	$1,125	2014	4

		type switches						
D5033	Telephone Systems	Replace telephone system	3,025	SF	$1.00	$3,025	2013	3
D5037	Fire Alarm System	Replace fire alarm system	3,025	SF	$5.00	$15,125	2013	1
D5037	Fire Alarm System	Install annunciation panel	1	EACH	$1,000	$1,000	2013	1
D5038	Security and Detection System	Replace security system	1	LS	$7,500	$7,500	2013	4
D5039	Local Area Network	Replace LAN system	3,025	SF	$2.25	$6,806	2013	3
		Total Anticipated Expenditure for D Services				$96,050		

Recreation Center

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
D20	Plumbing	Renovate restrooms	1	LS	$40,000	$40,000	2013	3
D2022	Hot Water Service	Replace domestic water heater	50	GAL	$34.38	$1,719	2017	4
D2031	Waste Piping	Undertake camera inspection of sewer lines	1	LS	$1,000	$1,000	2013	3
D3052	Package Units	Replace rooftop package heat pump units	4	TON	$1,650	$6,600	2014	3
D3052	Package Units	Replace rooftop package heat pump units	3	TON	$1,650	$4,950	2014	3
D4011	Sprinkler Water Supply	Replace sprinkler heads	3,136	SF	$1.05	$3,293	2013	1
D5022	Lighting	Install motion sensor type switches	8	EACH	$187.50	$1,500	2014	3
D5033	Telephone Systems	Replace telephone system	3,136	SF	$1.00	$3,136	2013	3
D5037	Fire Alarm System	Replace fire alarm system	3,136	SF	$5.00	$15,680	2013	1
D5037	Fire Alarm System	Install annunciation panel	1	EACH	$1,000	$1,000	2013	1
D5038	Security and Detection System	Replace security system	1	LS	$7,500	$7,500	2013	4
D5039	Local Area Network	Replace LAN system	3,136	SF	$2.25	$7,056	2013	3
		Total Anticipated Expenditure for D Services				$93,434		

SECTION 6 - E EQUIPMENT & FURNISHINGS

E20 FURNISHINGS

DESCRIPTION

E1020 INSTITUTIONAL EQUIPMENT

E1029 Other Institutional Equipment

Recreation Center

The building contains equipment related to ceramics production, including potting wheels and a small gas-fired kiln located in the ceramics studio spaces at the east side of the building.

Kiln

The building contains two gas-fired ovens utilized for firing ceramics work (reference Photograph 45 in Appendix B). The kilns, manufactured by Geil Kilns, are labeled as downdraft units of approximately 10 to 12 cubic feet each and set within steel frames and have overhead hoods venting through the roof.

E2010 FIXED FURNISHINGS

E2012 Fixed Casework

Recreation Hall

The building contains painted wood constructed fixed casework (reference Photographs 9 and 11 in Appendix B). The painted wood cabinets consist of hardwood frames with plywood interior panels and doors, with hinges, pulls and lock hasps, in the central hall and painted wood cabinets with painted wood doors and plastic laminate countertop in the kitchen area.

Recreation Center

The building contains fixed plastic-laminated casework (reference Photographs 24 through 27 in Appendix B). The casework includes a tennis center reception counter/desk with plastic laminated countertops, with plastic-laminate-faced doors and drawers; ceramic studio fixed wall shelving of painted wood and approximately 54 manufactured wall-mounted lockers with molded plastic shells and doors; and after-school craft room base and wall cabinets with plastic laminate countertops and plastic-laminate-faced doors and drawers.

CONDITION

E1020 INSTITUTIONAL EQUIPMENT

E1029 Other Institutional Equipment

Recreation Center

The ceramics production equipment appeared to be in good to fair condition. Any significant repairs or replacements related to this equipment is assumed to be the separate responsibility of the Parks and Recreation Department and, therefore, no associated costs have been included in capital expenditure forecast during the study period.

Kiln

The gas-fired kilns where in use at the time of our assessment and appeared to be in fair condition. Any significant repairs or replacements related to this equipment is assumed to be the separate responsibility of the Parks and Recreation Department and, therefore, no associated costs have been included in capital expenditure forecast during the study period.

E2010 FIXED FURNISHINGS

E2012 Fixed Casework

Recreation Hall and Recreation Center

The fixed casework appeared to be in poor to fair condition; however we understand that it is not properly constructed or configured and it does not meet health code for its current uses. We recommend that moderate upgrades are undertaken near-term to remove these issues.

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.

Recreation Hall

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
E2012	Fixed Casework	Undertake modification to fixed casework	1	LS	$12,000	$12,000	2013	5
		Total Anticipated Expenditure for E Equipment & Furnishings				$12,000		

Recreation Center

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
E2012	Fixed Casework	Undertake modification to fixed casework	1	LS	$12,000	$12,000	2013	5
		Total Anticipated Expenditure for E Equipment & Furnishings				$12,000		

SECTION 7 - G SITEWORK

F10 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

G2030 PEDESTRIAN PAVING

G2031 Paving & Surfacing

Variable width concrete walkways and steps are located throughout the park site, at the public roadways, along the on-site buildings, leading to the playgrounds, and along the tennis and basketball courts and playing fields (reference Photograph 57, 59 and 60 in Appendix B). 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.

Additional surfacing, using wood mulch and sand, is provided at the children's playground areas at the park's northeast corner and southwest of the tennis courts, as well as at the dog park at the park's east boundary (reference Photograph 55 in Appendix B). Asphalt surfacing has been applied to a small hillside at the northwest corner of Dorsey Field to prevent erosion (reference Photographs 52 and 53 in Appendix B).

G2033 Exterior Steps

Reinforced concrete ramps and stairs are located at the park perimeter to provide access for the neighboring residential areas (reference Photographs 55 and 64 through 66 in Appendix B). These ramps and stairs are located west of Dorsey Field, the northwest corner of the tennis courts, the northwest corner and along the west side of the basketball courts, and at the southwest corner of Live Oak Field. The steps and ramps typically have galvanized or painted metal handrails at the center of the steps or along each side.

Opposite the Recreation Center there is an exterior ramp along the south elevation providing access to the entrance to the tennis center office for disabled individuals (reference Photograph 18 in Appendix B). The ramp, approximately 16' in length and rising approximately 10" in height, is constructed of reinforced concrete with raised concrete curbs along each edge. Railings are not provided.

G2040 SITE DEVELOPMENT

G2041 Fences & Gates

The site contains chain link fencing at several locations, including at the site's north and west boundaries, around the playing fields and their batting cages, the tennis courts, and the playgrounds (reference Photographs 49 through 52, 54, 57, 58, 61 and 62 in Appendix B). The fencing varies in height from 3' to 4' at the playgrounds, approximately 12' at the tennis courts and 10' to 12' at the playing fields. The fencing at the tennis courts have vinyl privacy screening, as do portions of the fencing around the baseball playing fields.

G2042 Retaining Walls

There are concrete, concrete masonry and stone retaining walls throughout the park, primarily along the western boundary (reference Photographs 62 and 63 in Appendix B). The walls vary in height from 4' to more than 8' and are topped by chain link fencing or metal railings.

G2044 Signage

A concrete park identification sign is located at the northeastern corner of the park, at the intersection of Valley Drive and 20th Place and a painted concrete tot lot identification sign is located along its west boundary (reference Photographs 48 and 69 in Appendix B).

G2045 Site Furnishings

There are numerous site furnishings throughout the park, including precast-concrete picnic tables, benches, barbeque grilles and waste receptacles, a memorial sculpture with concrete markers/seats and bleachers at the baseball playing fields (reference Photographs 16, 56, 68 and 69 in Appendix B). The bleachers at Dorsey Field are terraced concrete with metal railings, and are manufactured metal with metal railings at Live Oak Field. A wood framed waste dumpster enclosure is located along Valley Drive near the playground, enclosed with painted wood siding walls and gates and sloped asphalt shingled roofing. Metal picnic tables with metal umbrella coverings are located to the west of the Recreation Center's tennis office.

G2047 Playing Fields

The park includes the following playing fields, courts and playgrounds (reference Photographs 50, 51, 57 through 60 and 67 in Appendix B):

- Two baseball fields, Dorsey Field at the north end and Live Oak Field at the south end
- A playground at the park's northeast corner and a separate tot lot play area east of the tennis courts
- A dog park along Valley Drive east of Dorsey Field
- Six tennis courts in the center of the park between the baseball fields
- Two basketball courts at the west side of the park near Live Oak Field

The baseball playing fields are chain link fence enclosed, with dirt infields and grass outfields, High-Intensity Discharge (HID) lighting on wood and metal poles of 30' to 40' in height, chain link fencing enclosed batting changes with pitching machines, roofed seating dugouts and illuminated scoreboards.

The northeastern playground is chain link fence enclosed, with metal, timber and plastic play equipment and swings suspended from a steel frame. The tot lot is also chain link fence enclosed, with metal, plastic and wood play equipment.

The dog park is a chain link fence enclosed area with wood mulch surfacing, precast concrete benches and bollard lighting.

The tennis courts are chain link fence enclosed, with two-color coating and white striping, nets, metal benches and HID lighting on 35' metal poles.

The basketball courts are enclosed by the tennis court and baseball field fencing on the east and retaining walls along the north and west boundaries. The courts include one full size court and three half court configurations, with HID lighting on 40' steel poles.

G2039 Miscellaneous Structures

There are several structures located throughout the park that provide protection/shade for park users or serve adjacent field activities. The structures include baseball dugout shelters at Dorsey Field and Live Oak Field, a two-level concession/scorekeepers structure at Live Oak Field and shade shelters at the Tot Lot (reference Photographs 51, 68 and 69 in Appendix B).

The dugout shelters are constructed of steel posts supporting wood-framed roofs with asphalt shingle or metal roofing.

The concessions structure is a wood-framed building, with and exterior of painted wood siding, aluminum-framed windows and flush wood doors; roofing is assumed to be a built-up membrane.

The Tot Lot structure is constructed of steel columns and roof framing, with standing seam metal roofing.

G2050 LANDSCAPING

G2055 Planting

Landscaping was prevalent at the park's perimeter and consisted of shrubs, ground cover, and mature shade trees (reference Photographs 48 to 50 and 69 in Appendix B).

G2057 Irrigation Systems

The landscaped areas throughout the park are irrigated via a below-grade, automatic irrigation system. The irrigation system is reportedly supplied with recycled water through the below-grade PVC piping and controllers. Pop-up-type sprinkler heads are scattered throughout the site.

CONDITION

G2030 PEDESTRIAN PAVING

G2031 Paving & Surfacing

The concrete pedestrian walkways throughout the park appeared to be in fair condition, with minor issues of cracking and surface spalling observed. We recommend that the walkway between the tot lot and the Recreation Center is has a full repair and restoration program undertaken near-term to remove any safety issues. The walkways will 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.

The wood mulch and sand surfacing is adequately supplied, and should be replenished during the term of study as an operational expense. The hillside asphalt surfacing is in poor condition, with large open cracking and material movement/displacement. We recommend replacement of the surfacing material in the near-term to prevent erosion of the hillside.

In order to reduce the amount of storm water flooding we recommend that a drainage channel be installed within the concrete slab between the Recreation Center and Recreation Hall. The reasoning behind these works has been explained within section B3016.

G2033 Exterior Steps

The concrete stairs and ramps appeared to be in good to fair condition, with issues of cracking and slight settlement observed. We recommend localized repairs be completed in the near term at areas of cracking and section displacement to correct tripping hazards. The railings will require routine maintenance, including repainting, and should be addressed on an as-needed basis as part of regular maintenance and funded as an operational expense.

The exterior ramp appeared to be in good condition and provides access to the building's entrance for disabled individuals. However, the ramp lacks railings and the upper landing at the entrance doors does not provide adequate clearance for door opening (reference Photograph 18 in Appendix B). We recommend budgeting for installation of railings on each side of the ramp in the near term to comply with accessibility guidelines.

G2040 SITE DEVELOPMENT

G2041 Fences & Gates

The chain link fencing throughout the park generally appeared to be in good to fair condition, with only a section of fencing and posts above a retaining walls north of the basketball courts damaged and displaced over time by earth and mulch accumulation. We recommend budgeting for replacement of this section of fencing early in the study period, with other repairs needed during the study period completed as an operational expense.

G2042 Retaining Walls

The retaining walls appeared to generally be in fair condition, with locations of vertical cracking in the concrete masonry walls along the west side of the basketball courts. We recommend completion of grouting repairs in the near-term to prevent acceleration of cracking that may be caused by water infiltration. We understand that new walkways are required above the basketball courts, with additional retaining needed at slopes adjacent to the tennis courts. We have included an estimated expenditure cost for this new walkway in the study period.

G2044 Signage

The concrete property identification sign at the northeast corner of the park appeared to be in fair condition, with unrepaired cracking and surface spalling. The tot lot sign was in good condition, although the painted surfaces were faded. We understand that there is a requirement for standardizing all of the monument signage at each of the parks; therefore we have included for new signage at each of the parks to meet these requirements.

G2045 Site Furnishings

The site furnishings appeared to be in good to fair overall condition. Repairs necessary during the study period should be addressed on an as-needed basis, as part of routine maintenance and funded as operational expenses.

G2047 Playing Fields

The baseball playing fields appeared to be in good condition. The HID lighting and illuminated scoreboards will require preventive maintenance during the study period, which should be addressed on an as-needed basis as an operational expense.

The playground, tot lot and dog park are in fair to good condition. Repairs and component replacement that may be required during the study period should be addressed on an as-needed basis as operational expenses.

The tennis courts are in good condition. The court coating, striping and equipment appearing to have been installed in recent years. With a EUL of 12 to 15 years, the need for the reapplication of the court coating and striping is anticipated in the late term of the study period. The HID lighting will require preventive maintenance during the study period, which should be addressed on an as-needed basis as an operational expense.

The basketball courts are in fair to good condition, with locations of court surface cracking. Like the tennis courts' EUL of 12 to 15 years, the need for recoating of the courts will be needed in the mid- to late-term of the study period. We recommend repairs be completed to the locations of cracking at the time of recoating. The HID lighting will require preventive maintenance during the study period, which should be addressed on an as-needed basis as an operational expense.

G2049 Miscellaneous Structures

The various structures appear to be in fair overall condition; each of the structures will require repairs to their structure, roof coverings, and repainting. The Dorsey Field dugout shelters where observed to have the worst roof covering condition at

the time of the assessment. We recommend that exterior repainting is undertaken every 4 years at these structures, and at this time we have also included for roof covering repairs. A fixed expenditure amount for the structures has been included every 4 years in the study period.

G2050 LANDSCAPING

G2055 Planting

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

G2057 Irrigation Systems

The irrigation system appears to be in fair to good condition. There were no operational issues reported and no particular items of disrepair noted. We do not anticipate significant repairs or replacements during the study period.

G40 SITE ELECTRICAL UTILITIES

DESCRIPTION

G4020 SITE LIGHTING

G4021 Fixtures & Transformers

Exterior lighting throughout the site consisted primarily of decorative and utility type pole-mounted fixtures utilizing high-intensity discharge (HID) lamping.

- Lighting at the baseball fields includes wood and steel poles approximately 30' to 40' in height each with four to six HID lamps.
- The tennis court lighting includes steel poles approximately 36' in height with one to two HID lamps each.
- The basketball courts, like the tennis courts, have lighting on steel poles approximately 36' in height with one to two HID lamps each.
- Decorative pole-mounted fixtures, approximately 15' in height, are located in the tot lot area (reference Photographs 50, 57 and 67 in Appendix B).
- Additional site lighting is provided by wall-mounted fixtures at the buildings, many of which utilize LED lamps.

Utility transformers are pad-mounted in a concrete masonry walled enclosure at the west side of the park, near the Recreation Hall.

CONDITION

G4020 SITE LIGHTING

G4021 Fixtures & Transformers

The site pole mounted lighting appeared to be in poor to fair condition, although our assessment was completed during daylight hours. No issues were observed and there were no reported instances of malfunction or disrepair. We understand that the light fixtures and poles at the tennis and basketball courts, Lop Field and Dorsey Field are having continuous failure issues. These failures are to do with ballasts, lenses, rusting and deterioration of hinges and latches, and stiffening/freezing or adjustment knuckles. The marine environment has corroded/degraded the fixtures considerably and therefore reduced their typical EUL. The light poles are in fair condition. We recommend replacing the light fixtures at the start of the study period and then also towards the end of the study period due to their accelerated deterioration. The light poles will last beyond the study period without their replacement necessary.

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
G2031	Paving & Surfacing	Install a drainage channel within slab	1	LS	$1,500	$1,500	2013	2
G2031	Paving & Surfacing	Repair/Replace concrete walkway between Tot Hut and Recreation Center	1	LS	$20,000	$20,000	2013	3
G2033	Exterior Steps	Install handrails to either side of the exterior ramp	1	LS	$2,500	$2,500	2013	1
G2033	Exterior Steps	Repair cracking in concrete steps and landings	850	SF	$3.50	$2,975	2014	3
G2041	Fences & Gates	Replace chain link fencing	360	SF	$4.50	$1,620	2015	3
G2044	Signage	Replace monument signage	2	EACH	$1,000	$2,000	2014	3
G2047	Playing Fields	Recoat & restripe the tennis courts	6	CRT	$8,740	$52,440	2022	3
G2047	Playing Fields	Repair, recoat and restripe the basketball courts	15,100	SF	$3.85	$58,135	2017	3
G2049	Miscellaneous Structures	Replace roof covering at the dugout shelters	1	LS	$2,000	$2,000	2013	3
G2049	Miscellaneous Structures	Undertake roof and structure repairs and also re-painting at the park structures	1	LS	$1,500	$1,500	2013	3
G2049	Miscellaneous Structures	Undertake roof and structure repairs and also re-painting at the park structures	1	LS	$1,500	$1,500	2017	3
G2049	Miscellaneous Structures	Undertake roof and structure repairs and also re-painting at the park structures	1	LS	$1,500	$1,500	2021	3
G4021	Fixtures & Transformers	Replace light fixtures at the tennis courts	1	LS	$100,000	$100,000	2013	3
G4021	Fixtures & Transformers	Replace light fixtures at the basketball courts	1	LS	$30,000	$30,000	2013	3
G4021	Fixtures &	Replace light fixtures at	1	LS	$150,000	$150,000	2013	3

Element No. Item	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
	Transformers	the Lop Field						
G4021	Fixtures & Transformers	Replace light fixtures at the Dorsey Field	1	LS	$150,000	$150,000	2013	3
		Total Anticipated Expenditure for G Building Sitework				$577,670		

Appendix A

Ten-Year
Expenditure Forecast
2012 - 2021

FAITHFUL+GOULD
CONSTRUCTIVE EXPERTISE

10 YEAR EXPENDITURE FORECAST

Live Oak Park - Recreation Hall
1902 Valley Drive
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	Replace deteriorated wood trim	N/A	2	135.00	LF	$3.85	Routine Maintenance	3	$0	$0	$520	$0	$0	$0	$0	$0	$0	$0	$0	$520	$520
B2011	Repaint exterior wall surfaces and soffits	4	0	3,200.00	SF	$3.25	Deferred Maintenance	5	$10,400	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,400	$0	$10,400
B2011	Repaint exterior wall surfaces and soffits	4	4	3,200.00	SF	$3.25	Routine Maintenance	5	$0	$0	$0	$0	$10,400	$0	$0	$0	$10,400	$0	$0	$20,800	$20,800
B2020	Replace windows with aluminum-framed units	30	1	75.00	SF	$36.71	Capital Renewal	3	$0	$2,753	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,753	$2,753
B2039	Replace single exterior doors	30	1	3.00	EACH	$1,500.00	Capital Renewal	3	$0	$4,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,500	$4,500
B3010	Replace BUR covering	20	1	3,751.00	SF	$10.00	Capital Renewal	3	$0	$37,510	$0	$0	$0	$0	$0	$0	$0	$0	$0	$37,510	$37,510
B3016	Install gutter at the south perimeter of the building	15	0	1.00	LS	$500.00	Deferred Maintenance	2	$500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$500	$0	$500
							B. SHELL SUB-TOTALS		$10,900	$44,763	$520	$0	$10,400	$0	$0	$0	$10,400	$0	$10,900	$66,083	$76,983
C. INTERIORS																					
C1011	Reconfigure restrooms for disabled accessibility	30	0	240.00	SF	$19.50	Deferred Maintenance	1	$4,680	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,680	$0	$4,680
C1021	Replace deteriorated interior doors	30	1	4.00	EACH	$410.00	Capital Renewal	3	$0	$1,640	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,640	$1,640
C3012	Repaint interior wall and ceiling surfaces	5	0	7,000.00	SF	$3.25	Deferred Maintenance	5	$22,750	$0	$0	$0	$0	$0	$0	$0	$0	$0	$22,750	$0	$22,750
C3012	Repaint interior wall and ceiling surfaces	5	5	7,000.00	SF	$3.25	Routine Maintenance	5	$0	$0	$0	$0	$0	$22,750	$0	$0	$0	$0	$0	$22,750	$22,750
C3023	Replace vinyl tile flooring	15	4	3,100.00	SF	$3.75	Capital Renewal	5	$0	$0	$0	$0	$11,625	$0	$0	$0	$0	$0	$0	$11,625	$11,625
							C. INTERIORS SUB-TOTALS		$27,430	$1,640	$0	$0	$11,625	$22,750	$0	$0	$0	$0	$27,430	$36,015	$63,445
D. SERVICES																					
D20	Renovate restrooms	15	0	1	LS	$50,000	Deferred Maintenance	3	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000	$0	$50,000
D2022	Replace domestic water heater	10	2	30.00	GAL	$34.38	Energy & Sustainability	4	$0	$0	$1,031	$0	$0	$0	$0	$0	$0	$0	$0	$1,031	$1,031
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	0	3,025.00	SF	$0.25	Deferred Maintenance	3	$756	$0	$0	$0	$0	$0	$0	$0	$0	$0	$756	$0	$756
D3041	Clean ductwork	5	5	3,025.00	SF	$0.25	Routine Maintenance	3	$0	$0	$0	$0	$0	$756	$0	$0	$0	$0	$0	$756	$756
D3051	Replace gas-fired unit heater	15	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
D5012	Replace electrical panel boards	30	0	3.00	EACH	$1,500.00	Deferred Maintenance	3	$4,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,500	$0	$4,500
D5012	Install additional power outlets	30	0	1.00	LS	$2,400.00	Deferred Maintenance	3	$2,400	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,400	$0	$2,400
D5022	Install motion sensor type switches	20	1	6.00	EACH	$187.50	Energy & Sustainability	4	$0	$1,125	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,125	$1,125
D5033	Replace telephone system	15	0	3,025.00	SF	$1.00	Deferred Maintenance	3	$3,025	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,025	$0	$3,025
D5037	Replace fire alarm system	15	0	3,025.00	SF	$5.00	Deferred Maintenance	1	$15,125	$0	$0	$0	$0	$0	$0	$0	$0	$0	$15,125	$0	$15,125
D5037	Install annunciation panel	15	0	1.00	EACH	$1,000.00	Deferred Maintenance	1	$1,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,000	$0	$1,000
D5037	Replace security system	15	0	1.00	LS	$7,500.00	Deferred Maintenance	4	$7,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,500	$0	$7,500
D5039	Replace LAN system	10	1	3,025.00	SF	$2.25	Deferred Maintenance	3	$6,806	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,806	$0	$6,806
							D. SERVICES SUB-TOTALS		$92,113	$1,125	$1,031	$0	$1,025	$756	$0	$0	$0	$0	$92,113	$3,938	$96,050
E. EQUIPMENT & FURNISHING																					
E2012	Undertake modification to fixed casework	N/A	0	1.00	LS	$12,000.00	Deferred Maintenance	5	$12,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$12,000	$0	$12,000
							E. EQUIPMENT & FURNISHING SUB-TOTALS		$12,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$12,000	$0	$12,000
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		$142,443	$47,528	$1,551	$0	$23,050	$23,506	$0	$0	$10,400	$0	$142,443	$106,036	$248,478

Total Cost (Inflated @ 4% per Yr.)	**$142,443**	**$49,429**	**$1,678**	**$0**	**$26,965**	**$28,599**	**$0**	**$0**	**$14,233**	**$0**	**$142,443**	**$120,904**	**$263,347**

10 YEAR EXPENDITURE FORECAST

Live Oak Park - Recreation Center
1902 Valley Drive
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	0	2,800.00	SF	$3.25	Deferred Maintenance	5	$9,100	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,100	$0	$9,100
B2011	Repaint exterior painted surfaces	4	4	2,800.00	SF	$3.25	Routine Maintenance	5	$0	$0	$0	$0	$9,100	$0	$0	$0	$9,100	$0	$0	$18,200	$18,200
B2039	Replace single exterior doors	30	0	3.00	EACH	$1,500.00	Deferred Maintenance	3	$4,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,500	$0	$4,500
B2039	Replace double exterior doors	30	0	5.00	EACH	$2,870.00	Deferred Maintenance	3	$14,350	$0	$0	$0	$0	$0	$0	$0	$0	$0	$14,350	$0	$14,350
B3010	Replace built-up roofing with a tremco style roof covering	20	1	2,059.00	SF	$20.00	Capital Renewal	3	$0	$41,180	$0	$0	$0	$0	$0	$0	$0	$0	$0	$41,180	$41,180
B3010	Repair the clay tile roof covering	50	1	20.00	SF	$45.69	Routine Maintenance	3	$0	$914	$0	$0	$0	$0	$0	$0	$0	$0	$0	$914	$914
B3021	Replace the skylights	30	1	87.00	SF	$76.37	Capital Renewal	3	$0	$6,644	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,644	$6,644
							B. SHELL SUB-TOTALS		$27,950	$48,738	$0	$0	$9,100	$0	$0	$0	$9,100	$0	$27,950	$66,938	$94,888
C. INTERIORS																					
C3012	Repaint interior wall and ceiling surfaces	5	0	9,000.00	SF	$3.25	Deferred Maintenance	5	$29,250	$0	$0	$0	$0	$0	$0	$0	$0	$0	$29,250	$0	$29,250
C3012	Repaint interior wall and ceiling surfaces	5	5	9,000.00	SF	$3.25	Routine Maintenance	5	$0	$0	$0	$0	$0	$29,250	$0	$0	$0	$0	$0	$29,250	$29,250
C3023	Replace vinyl tile flooring	15	9	2,872.00	SF	$3.75	Capital Renewal	5	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,770	$0	$10,770	$10,770
							C. INTERIORS SUB-TOTALS		$29,250	$0	$0	$0	$0	$29,250	$0	$0	$0	$10,770	$29,250	$40,020	$69,270
D. SERVICES																					
D20	Renovate restrooms	15	0	1.00	LS	$40,000.00	Deferred Maintenance	3	$40,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$40,000	$0	$40,000
D2022	Replace domestic water heater	10	4	50.00	GAL	$34.38	Energy & Sustainability	4	$0	$0	$0	$0	$1,719	$0	$0	$0	$0	$0	$0	$1,719	$1,719
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
D3052	Replace rooftop package heat pump units	20	1	4.00	TON	$1,650.00	Energy & Sustainability	3	$0	$6,600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,600	$6,600
D3052	Replace rooftop package heat pump units	20	1	3.00	TON	$1,650.00	Energy & Sustainability	3	$0	$4,950	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,950	$4,950
D4011	Replace sprinkler heads	10	0	3,136.00	SF	$1.05	Deferred Maintenance	1	$3,293	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,293	$0	$3,293
D5022	Install motion sensor type switches	10	1	8.00	EACH	$187.50	Energy & Sustainability	3	$0	$1,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,500	$1,500
D5033	Replace telephone system	15	0	3,136.00	SF	$1.00	Deferred Maintenance	3	$3,136	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,136	$0	$3,136
D5037	Replace fire alarm system	15	0	3,136.00	SF	$5.00	Deferred Maintenance	1	$15,680	$0	$0	$0	$0	$0	$0	$0	$0	$0	$15,680	$0	$15,680
D5037	Install annunciation panel	15	0	1.00	EACH	$1,000.00	Deferred Maintenance	1	$1,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,000	$0	$1,000
D5038	Replace security system	20	0	1.00	LS	$7,500.00	Deferred Maintenance	4	$7,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,500	$0	$7,500
D5039	Replace LAN system	10	0	3,136.00	SF	$2.25	Deferred Maintenance	3	$7,056	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,056	$0	$7,056
							D. SERVICES SUB-TOTALS		$78,665	$13,050	$0	$0	$1,719	$0	$0	$0	$0	$0	$78,665	$14,769	$93,434
E. EQUIPMENT & FURNISHING																					
E2012	Undertake modification to fixed cabinets	N/A	0	1.00	LS	$12,000.00	Deferred Maintenance	5	$12,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$12,000	$0	$12,000
							E. EQUIPMENT & FURNISHING SUB-TOTALS		$12,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$12,000	$0	$12,000
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		$147,865	$61,788	$0	$0	$10,819	$29,250	$0	$0	$9,100	$10,770	$147,865	$121,727	$269,592
							Total Cost (Inflated @ 4% per Yr.)		$147,865	$64,260	$0	$0	$12,657	$35,587	$0	$0	$12,454	$15,329	$147,865	$140,286	$288,151

10 YEAR EXPENDITURE FORECAST

Live Oak Park - Storage Shed P&R
1902 Valley Drive
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 wall surfaces	4	0	400.00	SF	$3.25	Deferred Maintenance	5	$1,300	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,300	$0	$1,300
B2011	Replace the siding and trim	30	0	600.00	SF	$6.53	Deferred Maintenance	2	$3,918	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,918	$0	$3,918
B2011	Repaint exterior wall surfaces	4	4	400.00	SF	$3.25	Routine Maintenance	5	$0	$0	$0	$0	$1,300	$0	$0	$0	$1,300	$0	$0	$2,600	$2,600
B2039	Replace single exterior door	30	0	1.00	EACH	$1,500.00	Deferred Maintenance	3	$1,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,500	$0	$1,500
B3010	Replace the asphalt shingle roof covering	20	5	260.00	SF	$6.35	Capital Renewal	3	$0	$0	$0	$0	$0	$1,651	$0	$0	$0	$0	$0	$1,651	$1,651
								B. SHELL SUB-TOTALS	$6,718	$0	$0	$0	$1,300	$1,651	$0	$0	$1,300	$0	$6,718	$4,251	$10,969
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		$6,718	$0	$0	$0	$1,300	$1,651	$0	$0	$1,300	$0	$6,718	$4,251	$10,969
							Total Cost (Inflated @ 4% per Yr.)		$6,718	$0	$0	$0	$1,521	$2,009	$0	$0	$1,779	$0	$6,718	$5,309	$12,027

10 YEAR EXPENDITURE FORECAST

Live Oak Park - Kiln
1902 Valley Drive
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 the exterior wall surfaces	4	0	200.00	SF	$3.25	Deferred Maintenance	5	$650	$0	$0	$0	$0	$0	$0	$0	$0	$0	$650	$0	$650
B2011	Repaint the exterior wall surfaces	4	4	200.00	SF	$3.25	Routine Maintenance	5	$0	$0	$0	$0	$650	$0	$0	$0	$650	$0	$0	$1,300	$1,300
B2011	Patch the exterior precast concrete wall surfaces of the Kiln	30	0	32.00	SF	$19.56	Deferred Maintenance	3	$626	$0	$0	$0	$0	$0	$0	$0	$0	$0	$626	$0	$626
B2011	Replace the exterior wall sealants	15	4	200.00	LF	$11.25	Capital Renewal	3	$0	$0	$0	$0	$2,250	$0	$0	$0	$0	$0	$0	$2,250	$2,250
B2013	Clean and coat the wall and door louvers of the Kiln	15	1	72.00	SF	$29.15	Capital Renewal	3	$0	$2,099	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,099	$2,099
B2039	Replace louvered double exterior doors	30	0	1.00	EACH	$2,500.00	Deferred Maintenance	3	$2,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,500	$0	$2,500
							B. SHELL SUB-TOTALS		$3,776	$2,099	$0	$0	$2,900	$0	$0	$0	$650	$0	$3,776	$5,649	$9,425
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		$3,776	$2,099	$0	$0	$2,900	$0	$0	$0	$650	$0	$3,776	$5,649	$9,425
							Total Cost (Inflated @ 4% per Yr.)		$3,776	$2,183	$0	$0	$3,393	$0	$0	$0	$890	$0	$3,776	$6,465	$10,241

10 YEAR EXPENDITURE FORECAST

Live Oak Park - Site Systems
1902 Valley Drive
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																					
G2031	Install a drainage channel within slab	N/A	0	1.00	LS	$1,500.00	Deferred Maintenance	2	$1,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,500	$0	$1,500
G2031	Repair/Replace concrete walkway between Tot Hut and Recreation Center	N/A	0	1.00	LS	$20,000.00	Deferred Maintenance	3	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$20,000	$0	$20,000
G2033	Install handrails to either side of the exterior ramp	15	0	1.00	LS	$2,500.00	Deferred Maintenance	1	$2,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,500	$0	$2,500
G2033	Repair cracking in concrete steps and landings	N/A	1	850.00	SF	$3.50	Routine Maintenance	3	$0	$2,975	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,975	$2,975
G2041	Replace chain link fencing	20	2	360.00	SF	$4.50	Routine Maintenance	3	$0	$0	$1,620	$0	$0	$0	$0	$0	$0	$0	$0	$1,620	$1,620
G2044	Replace monument signage	10	1	2.00	EACH	$1,000.00	Capital Renewal	3	$0	$2,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,000	$2,000
G2047	Recoat and restripe the tennis courts	15	9	6.00	COURT	$8,740.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$52,440	$0	$52,440	$52,440
G2047	Repair, recoat and restripe the basketball courts	15	4	15,100.00	SF	$3.85	Capital Renewal	3	$0	$0	$0	$0	$58,135	$0	$0	$0	$0	$0	$0	$58,135	$58,135
G2049	Replace roof covering at the dugout shelter	30	0	1.00	LS	$2,000.00	Deferred Maintenance	3	$2,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,000	$0	$2,000
G2049	Undertake roof and structure repairs and also repainting the park structures	4	0	1.00	LS	$1,500.00	Deferred Maintenance	3	$1,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,500	$0	$1,500
G2049	Undertake roof and structure repairs and also repainting the park structures	4	4	1.00	LS	$1,500.00	Routine Maintenance	3	$0	$0	$0	$0	$1,500	$0	$0	$0	$1,500	$0	$0	$3,000	$3,000
G4021	Replace light fixtures at the tennis courts	15	0	1.00	LS	$100,000.00	Deferred Maintenance	3	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$100,000	$0	$100,000
G4021	Replace light fixtures at the basketball courts	15	0	1.00	LS	$30,000.00	Deferred Maintenance	3	$30,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$30,000	$0	$30,000
G4021	Replace light fixtures at the Lop Field	15	0	1.00	LS	$150,000.00	Deferred Maintenance	3	$150,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$150,000	$0	$150,000
G4021	Replace light fixtures at the Dorsey Field	15	0	1.00	LS	$150,000.00	Deferred Maintenance	3	$150,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$150,000	$0	$150,000
							G. BUILDING SITEWORK SUB-TOTALS		$457,500	$4,975	$1,620	$0	$59,635	$0	$0	$0	$1,500	$52,440	$457,500	$120,170	$577,670
Z. GENERAL																					
							Z. GENERAL SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
							Expenditure Totals per Year		$457,500	$4,975	$1,620	$0	$59,635	$0	$0	$0	$1,500	$52,440	$457,500	$120,170	$577,670
							Total Cost (Inflated @ 4% per Yr.)		$457,500	$5,174	$1,752	$0	$69,765	$0	$0	$0	$2,053	$74,638	$457,500	$153,382	$610,882

Appendix B
Photographs

FAITHFUL+GOULD
CONSTRUCTIVE EXPERTISE

Recreation Hall

Photograph No. 1

View of the east and north façades.

Photograph No. 2

View of the west and south façades.

Photograph No. 3

View of the roof.

Photograph No. 4

View of an area of damaged stucco on the west facade.

Photograph No. 5

View of peeling paint and deteriorated stucco on the west facade.

Photograph No. 6

View of deteriorated wood trim on the east façade.

Photograph No. 7

Interior view of the windows and trim.

Photograph No. 8

View of the central recreation hall interior.

Photograph No. 9

View of the central recreation hall interior.

Photograph Nos. 10

Detail view of a deteriorated interior door.

Photograph Nos. 11A & 11B

Views of the kitchen area.

Photograph Nos. 12A & 12B

Views of the restrooms.

Photograph No. 13

View of the domestic water heater.

Photograph No. 14

View of the gas-fired unit heater.

Photograph Nos. 15A & 15B

Views of the electrical service panel and meter and an interior panelboard.

Recreation Center

Photograph No. 16

View of the south façade and entrance arbor of the tennis center.

Photograph No. 17

View of the north (rear) façade.

Photograph No. 18

View of the entrance ramp of the tennis center that lacks railings.

Photograph No. 19

View of the roof.

Photograph No. 20

Detail view of the built-up roofing.

Photograph No. 21

View of a typical skylight.

Photograph No. 22

View of the clay tiled roof over the tennis center.

Photograph No. 23

Detail view damaged clay tiles.

Photograph No. 24

View of the tennis center interior.

Photograph No. 25

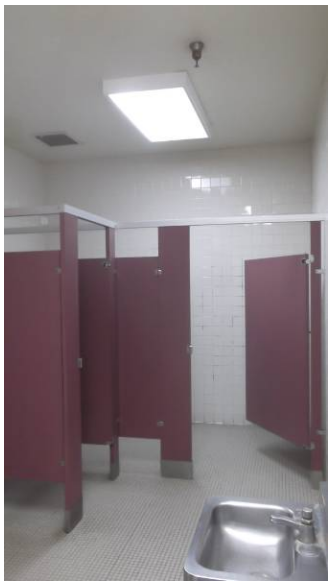
View of the ceramics studio interior.

Photograph No. 26

View of the ceramics studio area interior.

Photograph No. 27

View of the after-school craft area interior.



Photograph Nos. 28A & 28B

Views of the restroom.

Photograph No. 29

View of the domestic water heater.

Photograph No. 30

View of the natural gas service meter.

Photograph No. 31

View of the rooftop package heat pump units.

Photograph No. 32

View of the fire sprinkler riser with water flow alarm monitor.

Photograph No. 33

View of the electrical service panels and meter on the rear wall of the building.

Storage Shed P&R

Photograph No. 34

View of the building's east façade.

Photograph No. 35

View of the building's south and west facades.

Photograph No. 36

Detail view exterior wall siding damage on the east façade of the building.

Photograph No. 37

Interior view of the building.

Photograph No. 38

Interior view of the building.

<u>Kiln</u>

Photograph No. 39

View of the east and north facades of the building.

Photograph No. 40

View of the east and south facades of the building.

Photograph No. 41

Detail view of cracking and spalling in the precast concrete facade.

Photograph No. 42

View of the ventilation louver with surface corrosion.

Photograph No. 43

View of the louvered entrance doors with surface corrosion.

Photograph No. 44

View of the roof.

Photograph Nos. 45A & 45B

Interior views of the building and of the kilns.

Photograph No. 46

Interior view of a ventilation louver.

Photograph No. 47

View of the electrical panel board.

Site

Photograph No. 48

View of the precast concrete identification sign at the northeast corner of the park.

Photograph No. 49

View of the playground at the north end of the park.

Photograph No. 50

View of Dorsey Field.

Photograph No. 51

View of one of the Dorsey Field dugouts.

Photograph No. 52

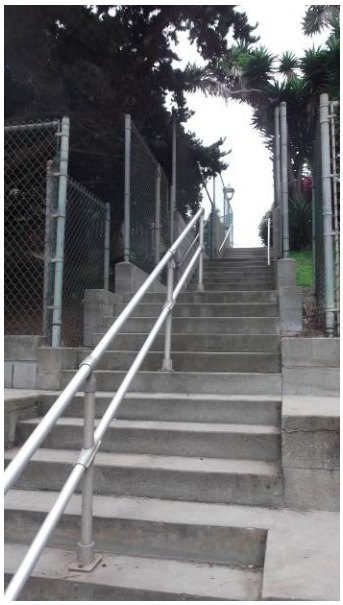
View of the terraced seating area behind the Dorsey Field home plate area.

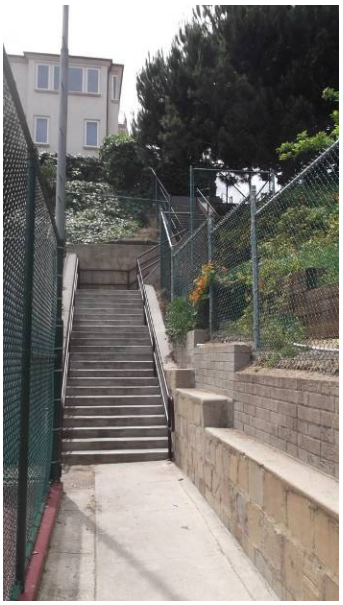
Photograph No. 53

View of the asphalt hillside surfacing behind the Dorsey Field home plate area.

Photograph Nos. 54

View of the Dorsey Field batting cage.





Photograph Nos. 55A & 55B

View of the 20th Street stairs at the west side of Dorsey Field (left) and the 19th Street stairs at the west side of the tennis courts (right) .

Photograph No. 56

View of the memorial sculpture at the east side of the park.

Photograph Nos. 57

Overview of the tennis courts.

Photograph No. 58

View of the dog park at the east side of the park.

Photograph No. 59

View of the basketball courts.

Photograph No. 60

View of the cracking in the surface of the basketball courts.

Photograph No. 61

View of the walkway along the west side of the basketball courts.

Photograph No. 62

View of the damaged fencing along the west side of the park.

Photograph No. 63

View of the retaining walls with vertical cracking.

Photograph No. 64

View of the cracking in the concrete steps and walkway at the west side of the park.

Photograph No. 65

View of the spalling concrete in the walkway at the west side of the park.

Photograph No. 66

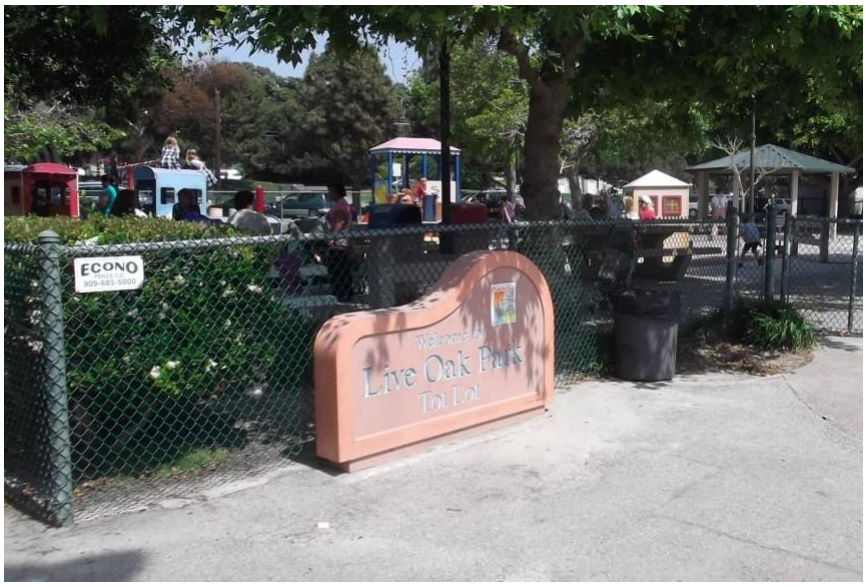
View of cracking in the concrete steps at the west side of the park.

Photograph No. 67

View of Live Oak Field.

Photograph No. 68

View of the bleachers and concession/scorer's building at Live Oak Field.



Photograph No. 69

View of the tot lot play area.

Appendix C

Asset Inventory

ASSET INVENTORY

Recreation Center

D20 PLUMBING

Location	Manufacturer	Model #	Serial #	Fuel / Rating	Capacity	Year of Installation
Tennis Center	AO Smith	PEC 52 914	CF93-1446403-S06	Electric / 4,500 Watts	50 Gal	2006

D30 HVAC

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year of Installation
Rooftop	Package Unit	Carrier	50NQ048310	Unknown	4 Tons Cooing / 51,000 BTUH Heating	Electric	1993
Rooftop	Package Unit	Carrier	50NQ036310	Unknown	3 Tons Cooling / 37,000 BTUH Heating	Electric	1993

Recreation Hall

D20 PLUMBING

Location	Manufacturer	Model #	Serial #	Fuel / Rating	Capacity	Year of Installation
Main Hall Kitchen	Reliance	10 30 NAR1961 C	A97568775	Natural Gas / 40,000 BTUH	30 Gal	1997

D30 HVAC

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year of Installation
Main Hall Ceiling	Gas-fired Unit Heater	Dayton	3E368E	L97G019409	75,000 BTUH	Natural Gas	1997

Appendix D

Document Review and
Warranty Information

FAITHFUL+GOULD

DOCUMENT REVIEW & WARRANTY INFORMATION

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:

Alteration of Field House & Live Oak Park Recreation Center; Quigley & Clark; dated September and October 1957

Recreation Building; Quigley & Clark; dated March 25, 1959

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
5261 W. Imperial Highway, Los Angeles, CA 90045
Toll Free: (888) 705-6300 Tel: (310) 854-6300 Fax: (310) 854-0199

LIMITED ASBESTOS & LEAD–BASED PAINT ASSESSMENT REPORT

Presented To:

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

Assessment Location:
Live Oak Park, Recreation Hall
1902 Valley Dr.
Manhattan Beach, CA 90266

Andersen Environmental Project No. 1304-584

Report Date: June 5, 2013

TABLE OF CONTENTS

DESCRIPTION **PAGE NO.**

APPENDICES

1.0 INTRODUCTION

This report presents the results of Andersen Environmental's Limited Asbestos & Lead-Based Paint Assessment of the Recreation Hall located at 1902 Valley Dr., 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 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.

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 a single story wood framed building. Currently, the property is utilized as a recreation hall. The exterior finishes of the building consist of exterior stucco with wood framed windows and a built up roof. The interior finishes include plaster walls and ceilings, acoustic ceiling spray and ceramic or vinyl composite floor tiles.

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 twenty one (21) 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:

Material Description	Material Locations	Condition	Asbestos Percentage	Estimated Quantity*
Plaster	Throughout	Good	<1% Chrysotile	3,000
12" White VCT & Black Mastic	W. Hall	Good	2% Chrysotile	2,000
Spray Acoustic	Throughout	Good	4% Chrysotile	3,000

Material Description	Material Locations	Condition	Asbestos Percentage	Estimated Quantity*
9" Tan VCT & Black Mastic	Storage Room	Good	5-6% Chrysotile	1,000
Roofing Materials	Roof	Good	Presumed	3,000

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

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.

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

Lead-Based Paint

Paint Sampling: All interior and exterior painted surfaces sampled during the inspection tested negative for lead lead-based paint.

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.

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.

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.

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.