Citywide
Facility Condition Assessment

Report of

Facility Condition Assessment

For
City of Novato
Margaret Todd Senior Center, Community Room & Gymnasium
1560 Hill Road, Novato, CA

March 4, 2013

Provided By:

Faithful+Gould, Inc.

Provided For:

City of Novato

TABLE OF CONTENTS

APPENDICES

SECTION 1 - EXECUTIVE SUMMARY

INTRODUCTION

In accordance with the agreement held between City of Novato, dated January 18, 2013 and Faithful+Gould Inc, this completed report provides a comprehensive Facility Condition Assessment of the buildings located at Hill Road, Novato, CA (The Facility). The facility consisted of the following buildings:

- Margaret Todd Senior Center
- Hill Gymnasium (Community Room)

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 20 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 twenty-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-3 provides a summary of the anticipated primary expenditures over the 20 year study period. Further details of these expenditures are included within each respective report section and within the 20 year expenditure forecast, in Appendix A.

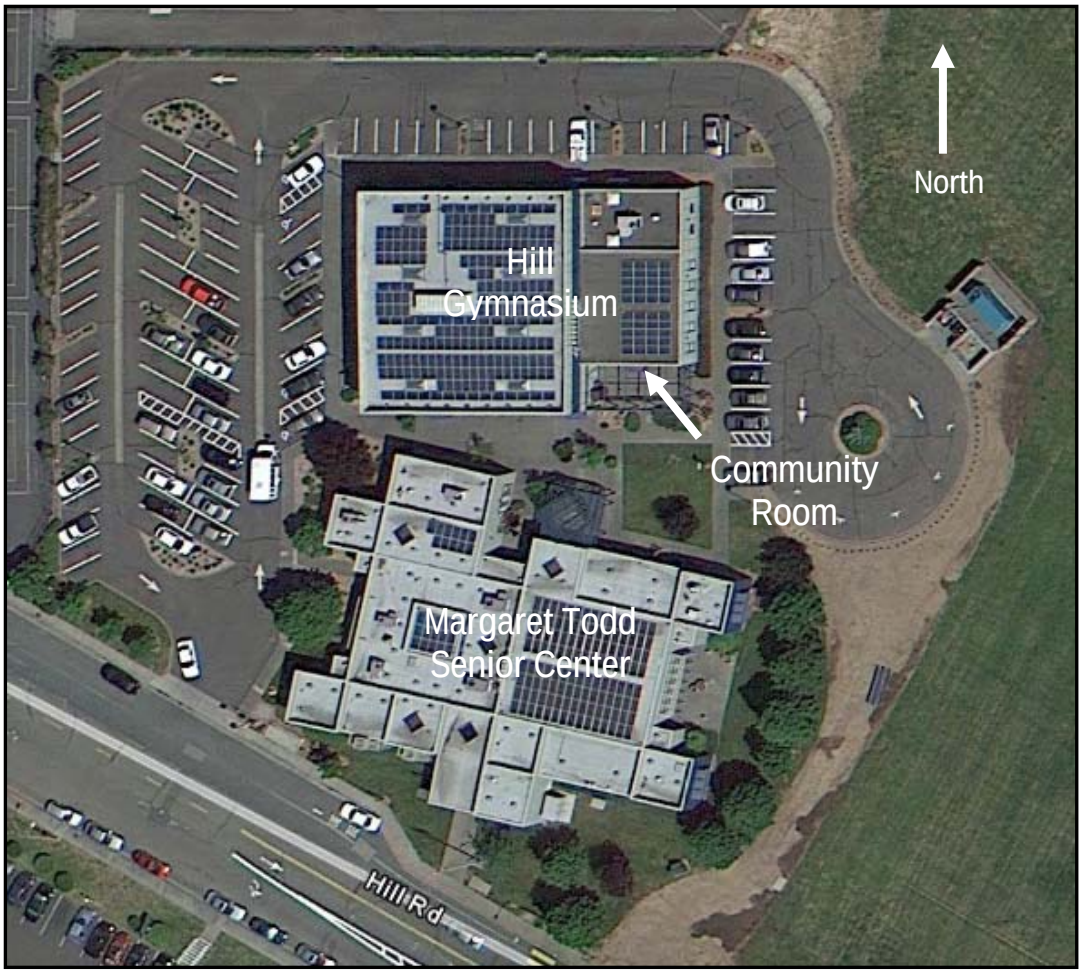
The report also calculates the Facility Condition Index (FCI) of each facility based upon the calculated FCI. Further discussion of the Facility Condition Index is detailed in the sections below. The FCI does not include the site systems, however we have still included repair and replacement costs so 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 January 23, 2013 Mr. Andrew McClintock of Faithful+Gould visited the facility to observe and document the condition of the buildings and the site components. During our site visit, Faithful+Gould was assisted by Nick R. Reposa, Custodial Supervisor for the City of Novato.

Overview of the Buildings at the Facility



BUILDING SUMMARY

Table EX-1 Facility Details

BUILDING NAME:	Margaret Todd Senior Center		LAT/LONG:	38º.05'48.15"N / -122º.34'32.61"W	
ADDRESS:	1560A Hill Road, Novato, CA 94947		OCCUPANCY STATUS: OCCUPIED ☒ VACANT ☐ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	13,412		GROSS SQUARE FOOTAGE OF LAND:	103,600 (estimated) Whole Site	
CURRENT REPLACEMENT VALUE:	$3,917,627 (Taken from the City PEPIP-CA Property Schedule)		YEAR OF CONSTRUCTION:	1993	
BUILDING USE:	Community Building Use		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The Margaret Todd Senior Center is located at 1560A Hill Road, Novato, CA and was originally built in 1993. The building consists of an assembly room that can hold 428 persons (200 dining), activity room that can hold 66 persons, game rooms, a library and a commercial kitchen. We understand that there have been minor improvements to the building since construction that includes the replacement of the HVAC equipment, light fixture upgrades and generator installation.

The building has a wood framed structure supported by concrete footings at the perimeter and steel posts centrally helping support the roof constructions. The exterior walls are load bearing wood stud with R-11 insulation and exterior plywood boarding with wood battens at the exterior. The roof structure consists of a combination of glulam and wood joists with a plywood deck. The roof covering consists of multiple low-sloped built-up roofs with a mineral cap sheet surface. The floor consisted of a cast-in-place reinforced slab-on-grade concrete floor slab at the first floor level. Windows consisted of single pane aluminum fixed and awning type units. Doors consisted of aluminum glazed entrance doors.

The interior finishes of the building contained wood panel, ceramic, vinyl and carpet floor coverings, painted and wall papered walls, acoustical partitions and wall panels, solid painted and suspended ceilings.

Heating and cooling at the building is provided through six rooftop package

units. Domestic hot water is provided by an instant natural gas water heater and also an electric below counter water heater.

The Main Distribution Panel is a Cutler Hammer unit that is rated at 208Y/120 volts at 1,200-amps. The interior lighting is provided by recessed, surface mounted 4' x 2' with T8 32 watt bulbs and electronic ballasts and recessed compact fluorescent fixtures. The building also has a photovoltaic solar system present with modular panels located at roof level.

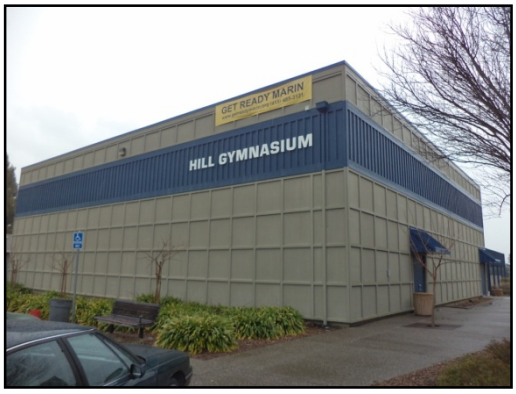
The building contains a wet-pipe and chemical fire suppression systems, fire alarm and security alarm systems, as well as an emergency generator.

Table EX-2 Facility Details

BUILDING NAME:	Hill Gymnasium		LAT/LONG:	38º.05'49.52"N / -122º.34'32.74"W	
ADDRESS:	1560C Hill Road, Novato, CA 94947		OCCUPANCY STATUS: OCCUPIED ☒ VACANT ☐ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☐	NO ☒
GROSS SQUARE FOOTAGE OF BUILDING:	9,280		GROSS SQUARE FOOTAGE OF LAND:	103,600 (estimated) Whole Site	
CURRENT REPLACEMENT VALUE:	$2,219,470 (Taken from the City PEPIP-CA Property Schedule)		YEAR OF CONSTRUCTION:	1978	
BUILDING USE:	Gymnasium and Community Room		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

The gymnasium is located at 1560C Hill Road, Novato, CA and was originally built in 1978 and consisted at that time of only the gymnasium. We understand that there was an expansion at the east side of the building in 1994 which incorporated the addition of a multipurpose room, storage rooms and restroom facilities. The multipurpose room is referred to as the Community Room and holds 201 persons. The gym can hold 430 persons. We understand that there have been minor improvements to the building since construction that include the application of a new roof membrane overlaid over the original roof covering, light fixture upgrades, new bleaches, new lowering winch system for the hoop boards and installing wire casings at sprinkler heads in the gymnasium.



The building has a wood framed structure supported by concrete footings at the perimeter. The exterior walls are load bearing wood stud with R-11 insulation and exterior plywood boarding with wood battens at the exterior. The roof structure consists of a combination of glulam and wood joists with a plywood deck. The roof covering consists of low-sloped roof levels with a TPO membrane. The floor consisted of a cast-in-place reinforced slab-on-grade concrete floor slab at the first floor level. Windows consisted of single pane aluminum fixed and awning units. Doors consisted of aluminum glazed entrance doors.

The interior finishes of the building contained wood panel and ceramic floor coverings, painted and wall papered walls, solid painted and suspended ceilings.

Heating and cooling at the building is provided through one rooftop package unit serving the Community Room and one heat and ventilation rooftop unit serving the gym. Domestic hot water is provided by a 20 gallon electric water heater.

The electrical supply comes from the MDP at the Margaret Todd Senior Center. The interior lighting is provided by recessed, surface mounted and hung 4' x 2' fluorescent fixtures with T8 32 watt bulbs and electronic ballasts. The building also has a photovoltaic solar system present with modular panels located at roof level.

The building contains a wet-pipe fire suppression, fire alarm and security alarm systems. This building is not connected to the emergency generator.

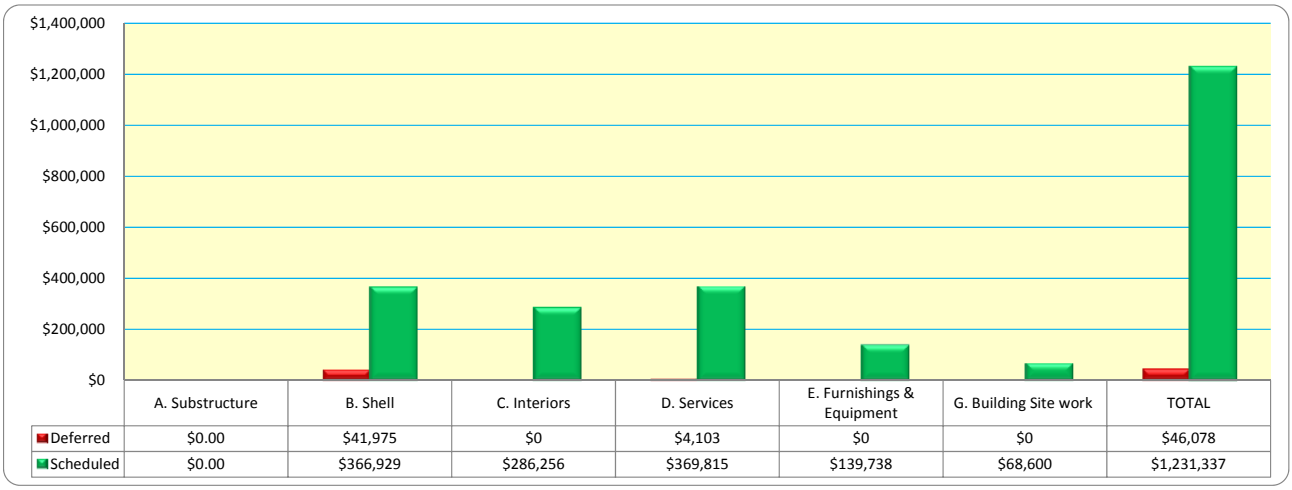
BUILDING EXPENDITURE SUMMARY

The building expenditure summary section provides an executive overview of the findings from the assessments. Charts EX-1 through to EX-2 provides a summary of anticipated expenditures over the study period for each of the buildings at the site. Chart EX-3 provides a cursory review and assessment of the major site assets to further assist the City in understanding the condition of the site over all. We have scheduled key findings highlighting key items of interest and their anticipated failure year. Further details of these expenditures are included within each respective report section and within the expenditure forecast, in Appendix A of this report.

Margaret Todd Senior Center

The results illustrate a total anticipated expenditure over the study period of circa $1,277,415.

Chart EX-1 Building Expenditure Summary [1, 2, 3 & 4]



	A. Substructure	B. Shell	C. Interiors	D. Services	E. Furnishings & Equipment	G. Building Site work	TOTAL
Deferred	$0.00	$41,975	$0	$4,103	$0	$0	$46,078
Scheduled	$0.00	$366,929	$286,256	$369,815	$139,738	$68,600	$1,231,337

KEY FINDINGS

- B Shell: Repaint exterior wall surfaces at an estimated cost of $20,304 in years 2019 and 2027
- B Shell: Replace window units and glazed doors at a combined estimated cost of $132,340 in year 2027
- B Shell: Replace plywood at inner side of parapets with extension of roof covering at an estimated cost of $39,375 in year 2013
- B Shell: Replace BUR roof covering and associated assets at a combined estimated cost of $182,756 in year 2020
- C Interiors: Repaint interior wall and ceiling surfaces at an estimated cost of $27,260 in year 2017 and $31,772 in year 2025
- C Interiors: Replace sheet carpet with carpet tile at an estimated cost of $38,081 in years 2014 and 2024

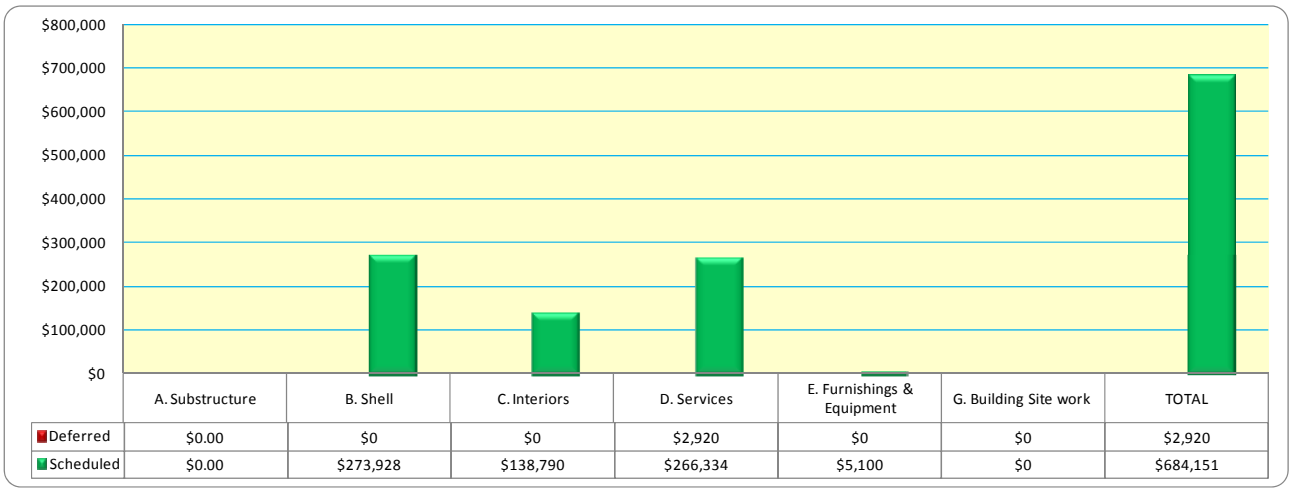
[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 20 year study period
[3] An allowance of 25% has been included for professional fees and general contractor overhead/profit and management costs
[4] ADA Compliance was not examined as part of this project. The costs do not factor in bringing the recommended expenditures into compliance with current ADA rules.

- D Services: Renovate restrooms at a combined estimated cost of $50,000 in year 2020
- D Services: Replace rooftop package units at a combined estimated cost of $90,613 in year 2031
- D Services: Replace sprinkler heads at an estimated cost of $14,083 in year 2022
- D Services: Replace rooftop solar modules at an estimated cost of $54,750 in year 2031
- D Services: Replace telephone, fire alarm, security and data systems at a combined estimated cost of $113,063 in year 2022
- G Building Sitework: Replace emergency generator at an estimated cost of $64,500 in year 2032

Hill Gymnasium

The results illustrate a total anticipated expenditure over the study period of circa $687,071.

Chart EX-2 Building Expenditure Summary [1, 2, 3 & 4]



	A. Substructure	B. Shell	C. Interiors	D. Services	E. Furnishings & Equipment	G. Building Site work	TOTAL
Deferred	$0.00	$0	$0	$2,920	$0	$0	$2,920
Scheduled	$0.00	$273,928	$138,790	$266,334	$5,100	$0	$684,151

KEY FINDINGS

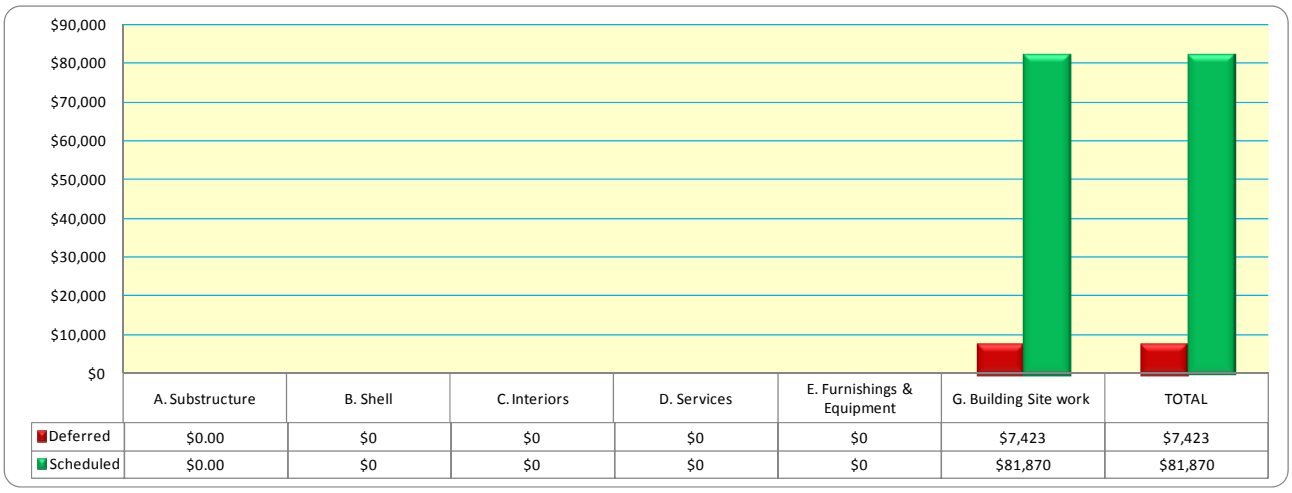
- B Shell: Repaint exterior wall surfaces at an estimated cost of $18,612 in years 2019 and 2027
- B Shell: Replace window units and exterior doors at a combined estimated cost of $42,580 in year 2027
- B Shell: Replace TPO roof membrane and associated assets at a combined estimated cost of $165,000 in year 2031
- C Interiors: Refinish the wood flooring at the gym and community room at a combined estimated cost of $45,504 years 2017 and 2027.
- D Services: Renovate restrooms at a combined estimated cost of $30,000 in year 2020
- D Services: Replace rooftop heat and ventilation unit at an estimated cost of $30,000 in year 2016
- D Services: Replace sprinkler heads at an estimated cost of $9,744 in year 2022
- D Services: Replace rooftop solar modules/panels at an estimated cost of $96,000 in year 2031
- D Services: Replace fire alarm system at an estimated cost of $46,400 in year 2022

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 20 year study period
[3] An allowance of 25% has been included for professional fees and general contractor overhead/profit and management costs
[4] ADA Compliance was not examined as part of this project. The costs do not factor in bringing the recommended expenditures into compliance with current ADA rules.

Site Systems

The results illustrate a total anticipated expenditure over the study period of circa $89,293.

Chart EX-3 Building Expenditure Summary [1, 2, 3 & 4]



	A. Substructure	B. Shell	C. Interiors	D. Services	E. Furnishings & Equipment	G. Building Site work	TOTAL
Deferred	$0.00	$0	$0	$0	$0	$7,423	$7,423
Scheduled	$0.00	$0	$0	$0	$0	$81,870	$81,870

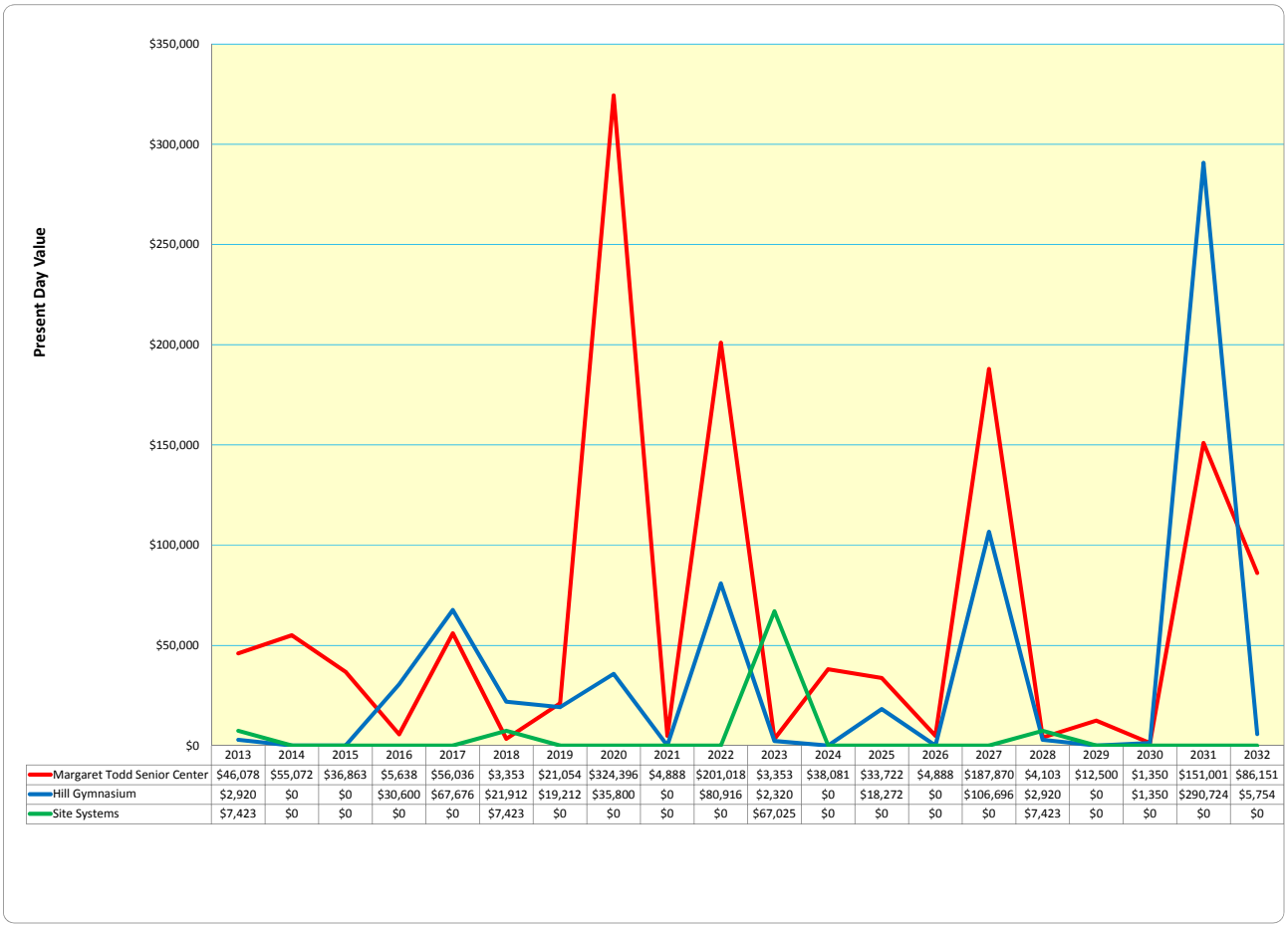
KEY FINDINGS

- G Building Sitework: Undertake seal coating to surface of parking lot and roadway at an estimated cost of $6,623 in years 2013, 2018 and 2028
- G Building Sitework: Undertake asphalt mill and overlay at parking lot and roadway at an estimated cost of $66,225 in year 2023

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 20 year study period
[3] An allowance of 25% has been included for professional fees and general contractor overhead/profit and management costs
[4] ADA Compliance was not examined as part of this project. The costs do not factor in bringing the recommended expenditures into compliance with current ADA rules.

Chart EX-4 illustrates a summary of yearly anticipated expenditures over the cost study period for each of the buildings and the site systems. A detailed breakdown of anticipated expenditures is contained within Appendix A of this report.

Chart EX-4 Expenditure Forecast [1, 2, 3 & 4]



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Margaret Todd Senior Center	$46,078	$55,072	$36,863	$5,638	$56,036	$3,353	$21,054	$324,396	$4,888	$201,018	$3,353	$38,081	$33,722	$4,888	$187,870	$4,103	$12,500	$1,350	$151,001	$86,151
Hill Gymnasium	$2,920	$0	$0	$30,600	$67,676	$21,912	$19,212	$35,800	$0	$80,916	$2,320	$0	$18,272	$0	$106,696	$2,920	$0	$1,350	$290,724	$5,754
Site Systems	$7,423	$0	$0	$0	$0	$7,423	$0	$0	$0	$0	$67,025	$0	$0	$0	$0	$7,423	$0	$0	$0	$0

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 20 year study period
[3] An allowance of 25% has been included for professional fees and general contractor overhead/profit and management costs
[4] ADA Compliance was not examined as part of this project. The costs do not factor in bringing the recommended expenditures into compliance with current ADA rules.

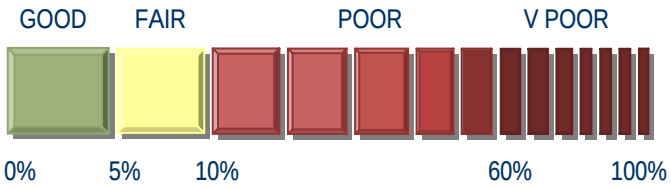
This chart highlights significant expenditure for the buildings mid-term and also towards the end of the study period primarily due to systems which are expected to reach their Estimated Useful Life (EUL) and therefore due for replacement. The lines represent the total expenditure for each year, and are a useful tool to indicate the magnitude of the impeding issues the buildings and site/park systems will face.

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%)), and poor (over 0.10 (over 10%)) based on evaluating data from various clients at the time of the publication. Table EX-3 will help interpret the results:

Table EX-3 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-4 provides calculations of the FCI for each of the buildings (excluding the site/park 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 all in a GOOD condition rating at this time.

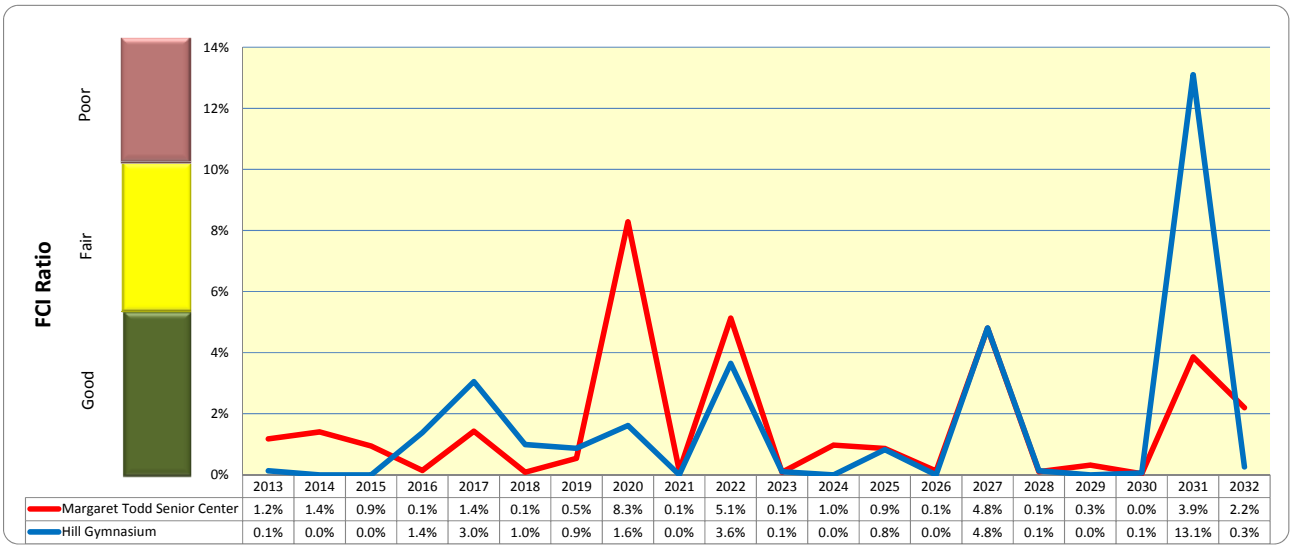
Table EX-4 Facility Condition Index

Building Name	FCI	Gross Square Foot (GSF)	CRV per GSF	Current Replacement Value (CRV)	Deferred Maintenance Value (DM) [1, 2, 3 & 4]	FCI Ratio	Property Condition Rating
Margaret Todd Senior Center	Current FCI Ratio	13,412	$292	$3,917,627	$46,078	1.2%	GOOD
Margaret Todd Senior Center	Year 20 FCI Ratio	13,412	$292	$3,917,627	$1,277,415	32.6%	POOR
Hill Gymnasium	Current FCI Ratio	9,280	$239	$2,219,470	$2,920	0.1%	GOOD
Hill Gymnasium	Year 20 FCI Ratio	9,280	$239	$2,219,470	$687,071	31.0%	POOR

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 20 year study period
[3] An allowance of 25% has been included for professional fees and general contractor overhead/profit and management costs
[4] ADA Compliance was not examined as part of this project. The costs do not factor in bringing the recommended expenditures into compliance with current ADA rules.

Chart EX-5 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 GOOD condition rating however the Margaret Todd Senior Center will fall into the FAIR condition rating in 2020 and the Hill Gymnasium will fall into the POOR condition rating in year 2031.

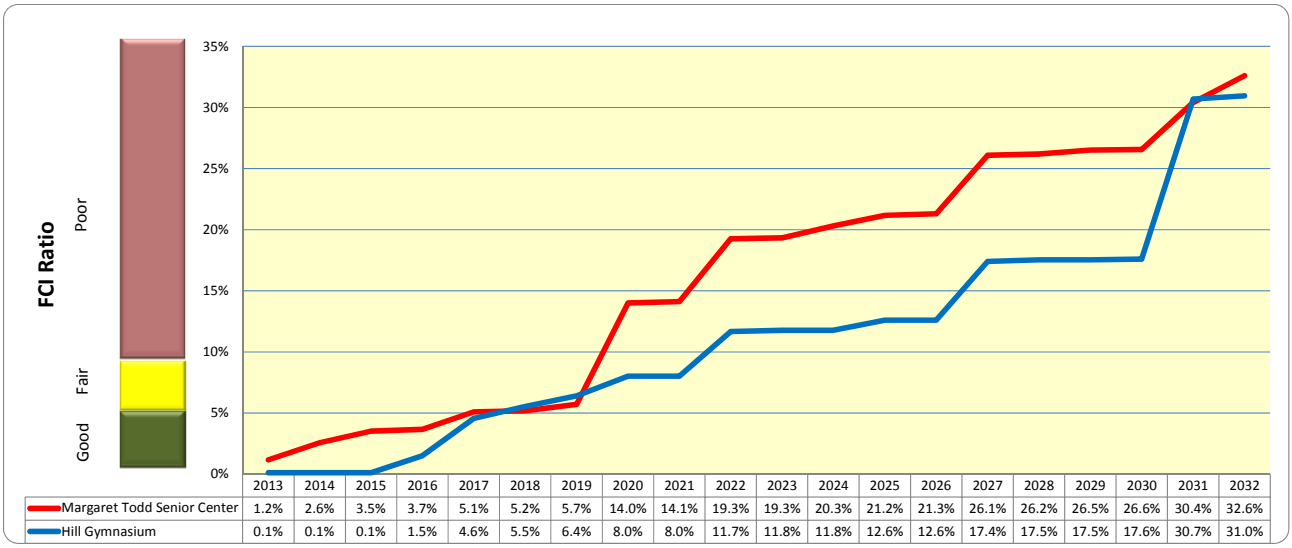
Chart EX-5 Year by Year Effects of FCI over the Study Period



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Margaret Todd Senior Center	1.2%	1.4%	0.9%	0.1%	1.4%	0.1%	0.5%	8.3%	0.1%	5.1%	0.1%	1.0%	0.9%	0.1%	4.8%	0.1%	0.3%	0.0%	3.9%	2.2%
Hill Gymnasium	0.1%	0.0%	0.0%	1.4%	3.0%	1.0%	0.9%	1.6%	0.0%	3.6%	0.1%	0.0%	0.8%	0.0%	4.8%	0.1%	0.0%	0.1%	13.1%	0.3%

Chart EX-6 indicates the cumulative effects of the FCI ratio over the study period assuming the required funds and expenditures are NOT provided to address the identified actions and deferred maintenance each year. The results of the study indicate at this current time the buildings are well maintained, with a facility condition index rating within the GOOD condition; however Margaret Todd Senior Center will fall into the FAIR condition rating in 2018 and the Hill Gymnasium in 2018, and following this the Margaret Todd Senior Center will fall into the POOR condition rating in 2020 and the Hill Gymnasium in 2022, where they will remain for the rest of the study period.

Chart EX-6 Cumulative Effects of FCI over the Study Period



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Margaret Todd Senior Center	1.2%	2.6%	3.5%	3.7%	5.1%	5.2%	5.7%	14.0%	14.1%	19.3%	19.3%	20.3%	21.2%	21.3%	26.1%	26.2%	26.5%	26.6%	30.4%	32.6%
Hill Gymnasium	0.1%	0.1%	0.1%	1.5%	4.6%	5.5%	6.4%	8.0%	8.0%	11.7%	11.8%	11.8%	12.6%	12.6%	17.4%	17.5%	17.5%	17.6%	30.7%	31.0%

PRIORITIZATION OF WORK

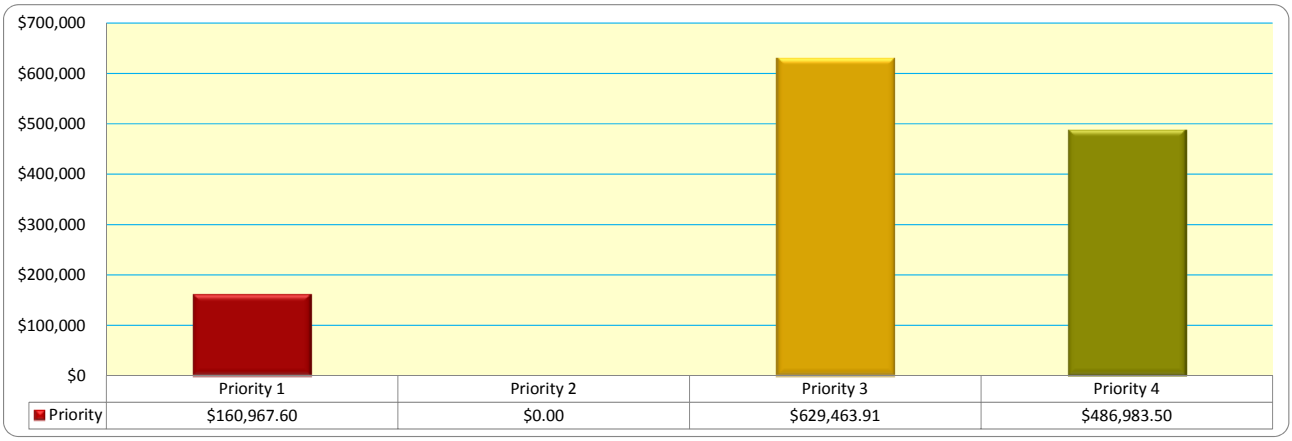
Faithful+Gould has prioritized the identified work in order to assist with analyzing the deficiencies found during the assessments. The following Priorities are shown below:

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 Image/Reputation:	• Used to maintain the appearance of a system due to image/reputation

Chart EX-7 through to EX-9 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/park systems.

Margaret Todd Senior Center

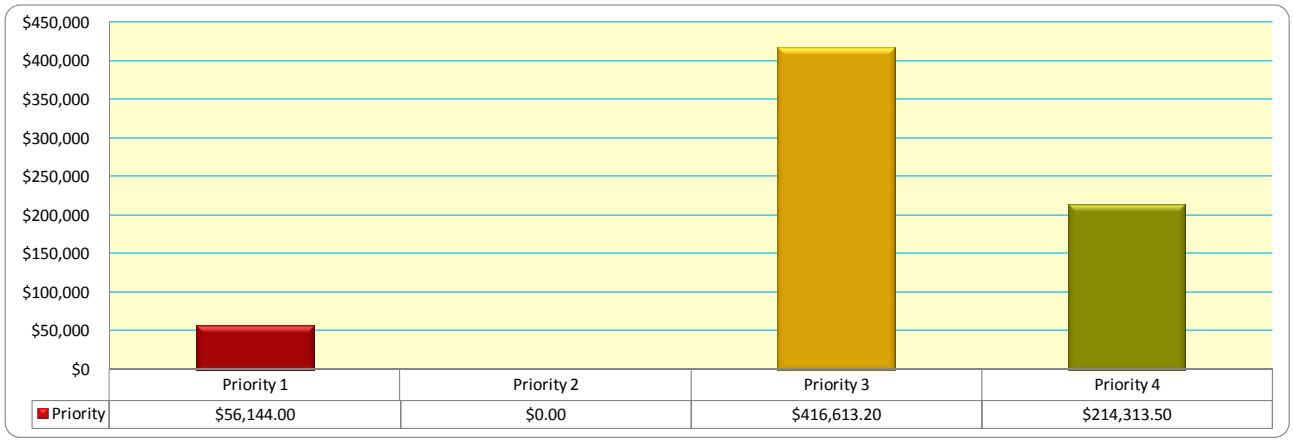
Chart EX-7 Cumulative Prioritization of Work



Priority 3 appears to require the most amount of expenditure in this study. This category illustrates that the work which needs to be undertaken is associated with necessary works to maintain the integrity of the building and replace equipment that has exceeded their EUL.

Hill Gymnasium

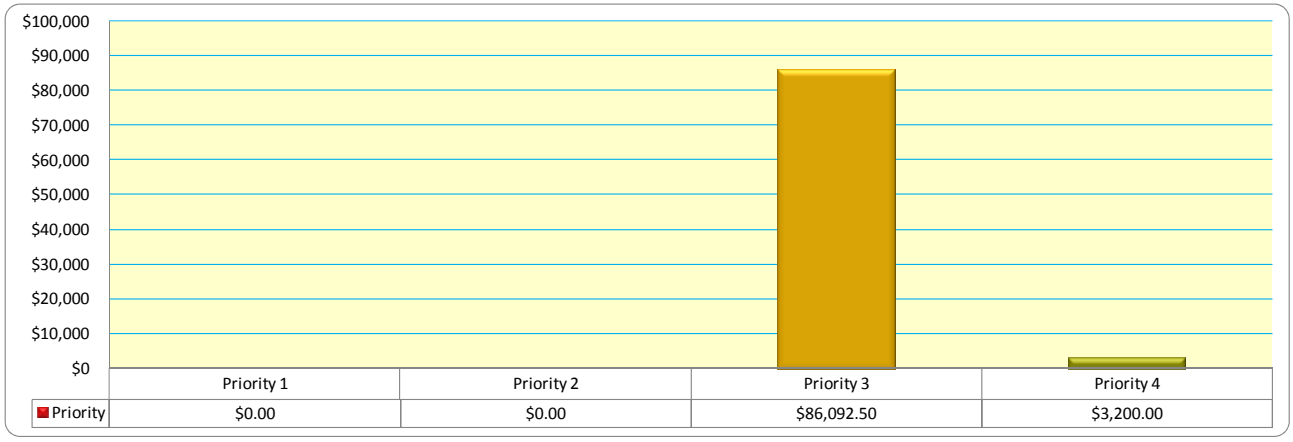
Chart EX-8 Cumulative Prioritization of Work



Priority 3 appears to require the most amount of expenditure in this study. This category illustrates that the work which needs to be undertaken is associated with necessary works to maintain the integrity of the building and replace equipment that has exceeded their EUL.

Site Systems

Chart EX-9 Cumulative Prioritization of Work

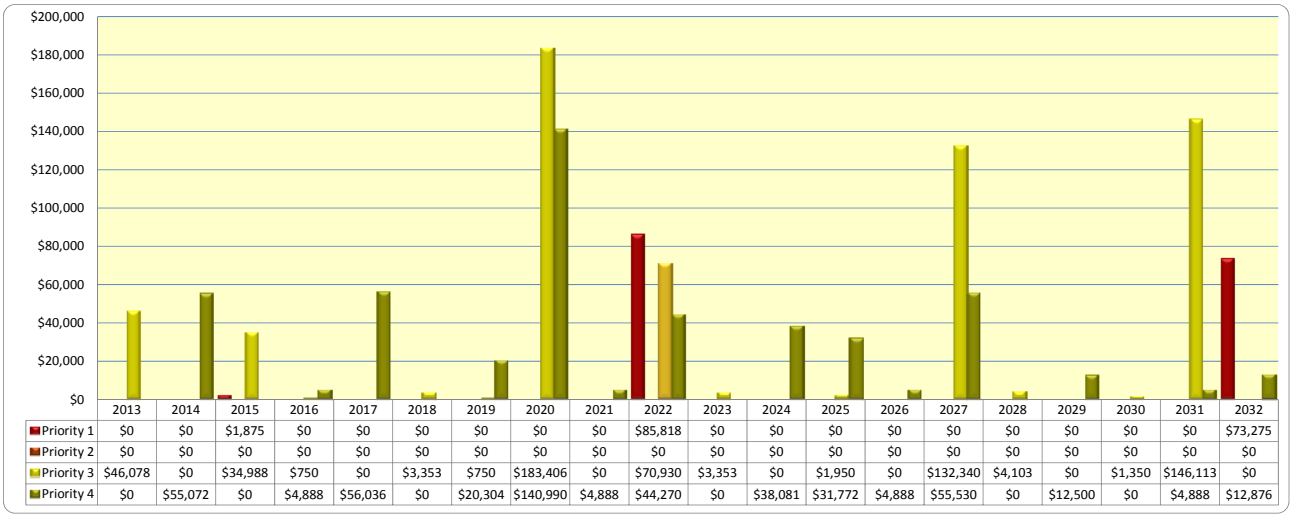


Priority 3 appears to require the most amount of expenditure in this study. This category illustrates that the work which needs to be undertaken is associated with necessary works to maintain the integrity of the assets and replacement of assets that have exceeded their EUL.

Chart EX-10 through to EX-12 illustrates the expenditure per priority code, per each year within the 20 year study period.

Margaret Todd Senior Building

Chart EX-10 Year by Year Cumulative Prioritization of Work

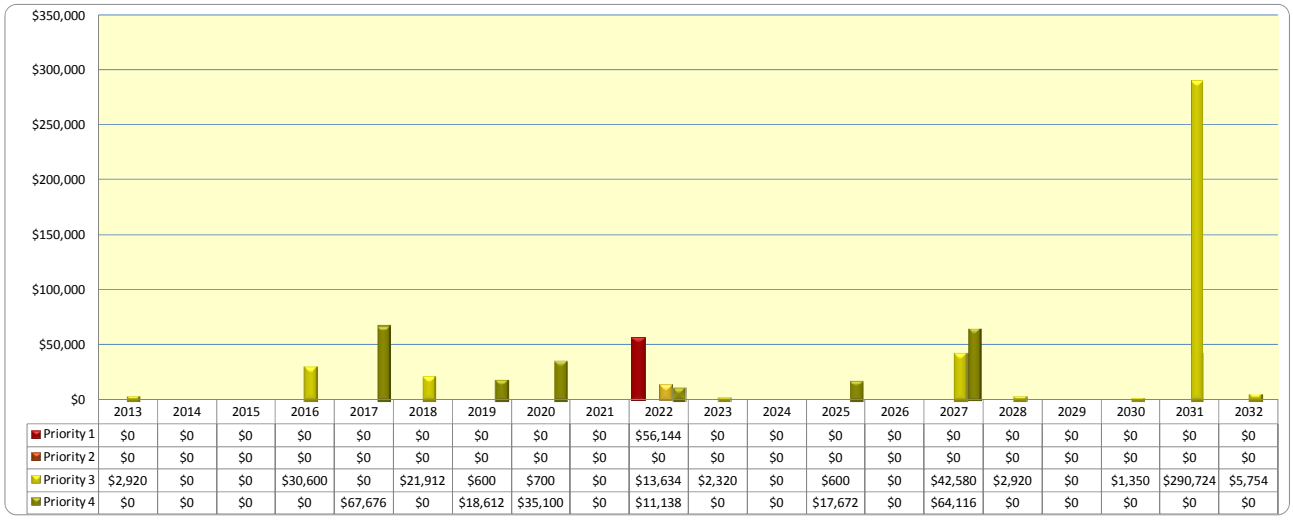


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Priority 1	$0	$0	$1,875	$0	$0	$0	$0	$0	$0	$85,818	$0	$0	$0	$0	$0	$0	$0	$0	$0	$73,275
Priority 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$46,078	$0	$34,988	$750	$0	$3,353	$750	$183,406	$0	$70,930	$3,353	$0	$1,950	$0	$132,340	$4,103	$0	$1,350	$146,113	$0
Priority 4	$0	$55,072	$0	$4,888	$56,036	$0	$20,304	$140,990	$4,888	$44,270	$0	$38,081	$31,772	$4,888	$55,530	$0	$12,500	$0	$4,888	$12,876

Chart EX-10 illustrates that there is are multiple key year for both Priorities 3 and 4 throughout the study period.

Hill Gymnasium

Chart EX-11 Year by Year Cumulative Prioritization of Work

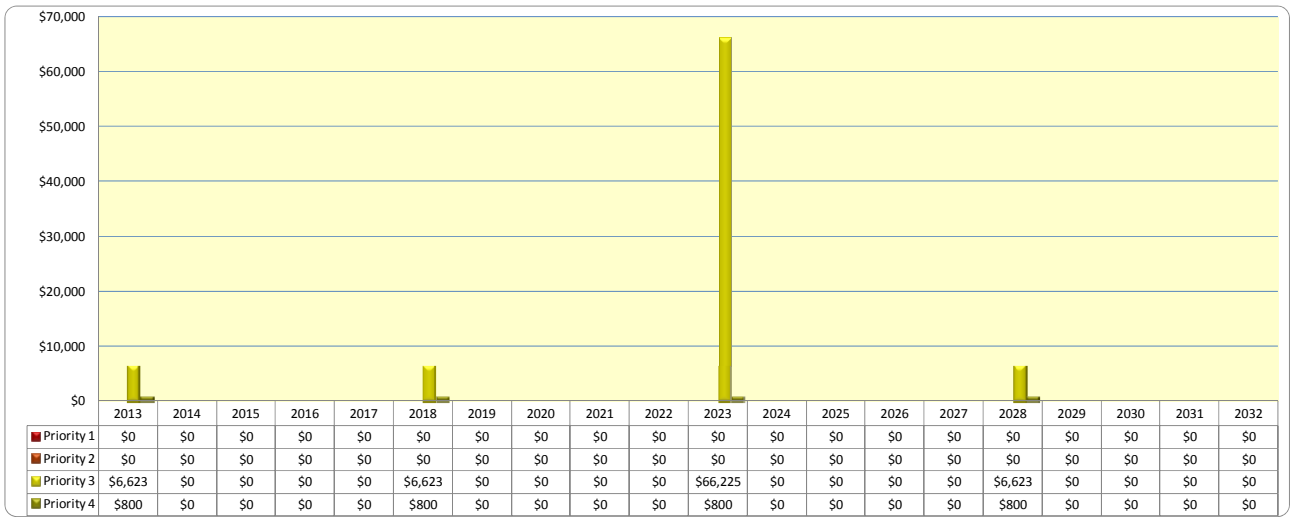


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Priority 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$56,144	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$2,920	$0	$0	$30,600	$0	$21,912	$600	$700	$0	$13,634	$2,320	$0	$600	$0	$42,580	$2,920	$0	$1,350	$290,724	$5,754
Priority 4	$0	$0	$0	$0	$67,676	$0	$18,612	$35,100	$0	$11,138	$0	$0	$17,672	$0	$64,116	$0	$0	$0	$0	$0

Chart EX-11 illustrates that there is one key year for expenditure at the end of the study period.

Site Systems

Chart EX-12 Year by Year Cumulative Prioritization of Work



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Priority 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$6,623	$0	$0	$0	$0	$6,623	$0	$0	$0	$0	$66,225	$0	$0	$0	$0	$6,623	$0	$0	$0	$0
Priority 4	$800	$0	$0	$0	$0	$800	$0	$0	$0	$0	$800	$0	$0	$0	$0	$800	$0	$0	$0	$0

Chart EX-12 illustrates that there is one key year for Priority 3 coding, mid-term in the study period.

PLAN TYPES

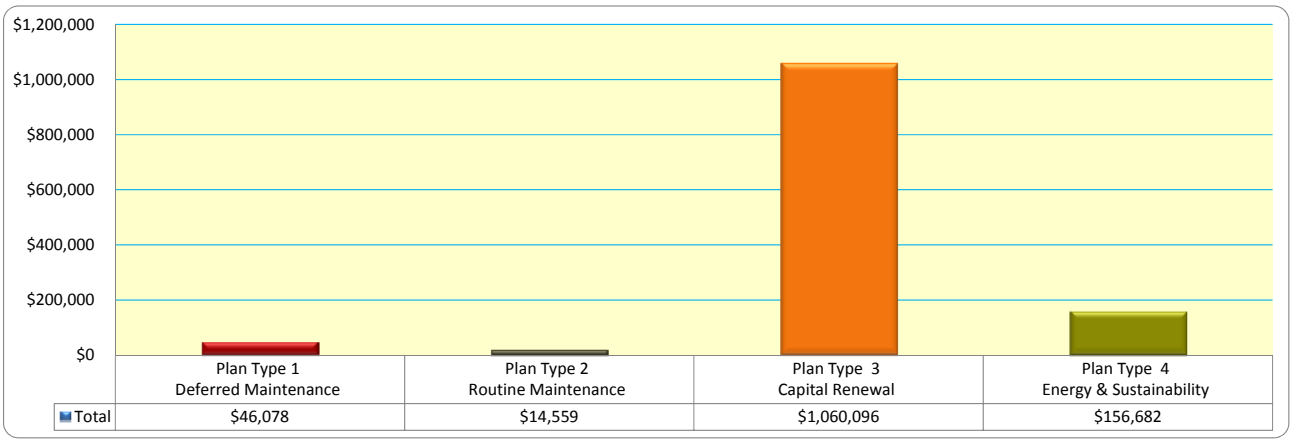
Faithful+Gould has prioritized the identified work according to the Plan Type or deficiency categories in order to assist with analyzing the deficiencies found during the assessments. The following Plan Types are shown below:

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 replacement of equipment or systems are recommended to improve energy and sustainability performance

Chart EX-13 through to EX-15 illustrates the amount of expenditure, per category within the 20 year study period. These figures include each of the buildings and the site/park systems.

Margaret Todd Senior Center

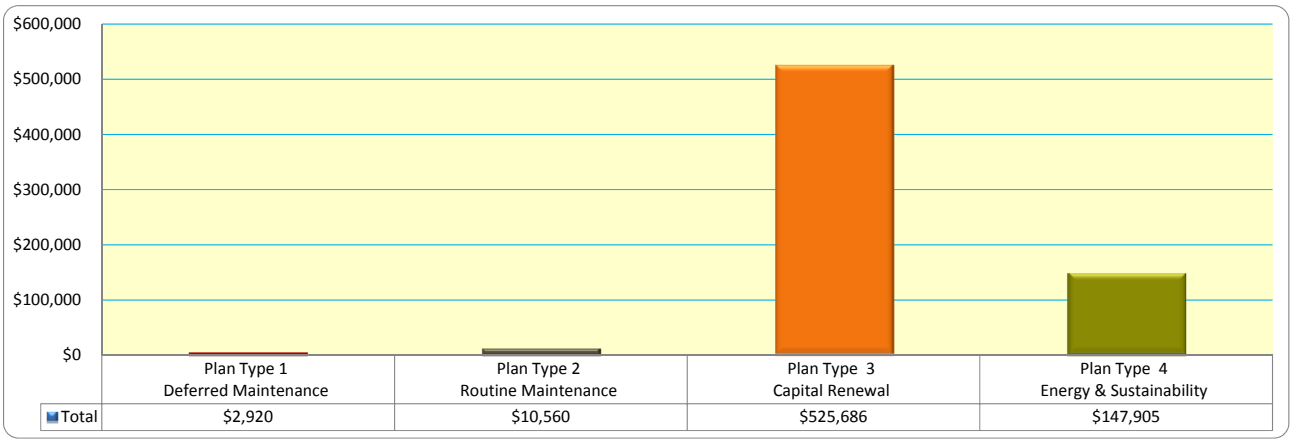
Chart EX-13 Cumulative Expenditure per Category of Works



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

Hill Gymnasium

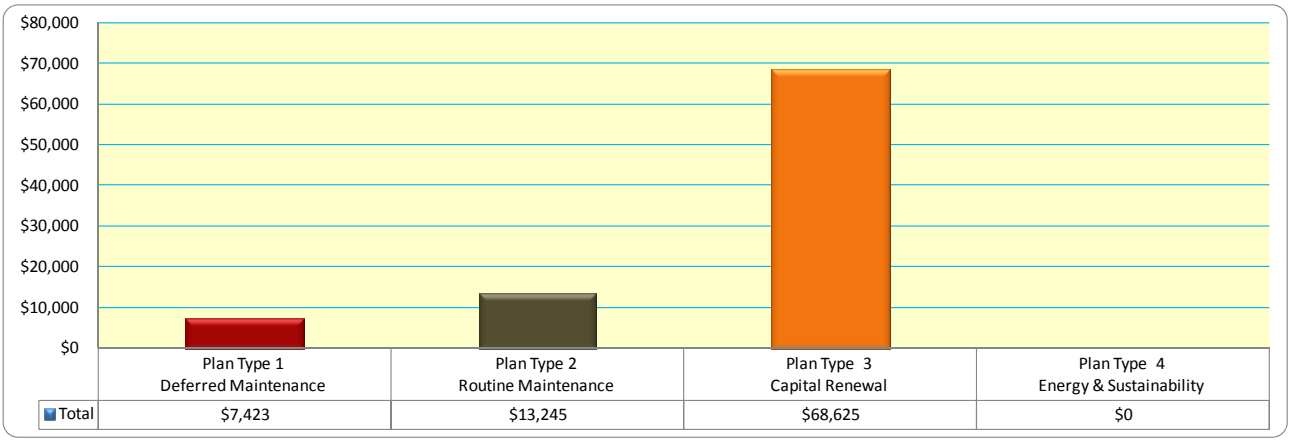
Chart EX-14 Cumulative Expenditure per Category of Works



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

Site Systems

Chart EX-15 Cumulative Expenditure per Category of Works



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

Chart EX-16 through to EX-18 illustrates the amount of expenditure, per category, per each year within the 20 year study period.

Margaret Todd Senior Center

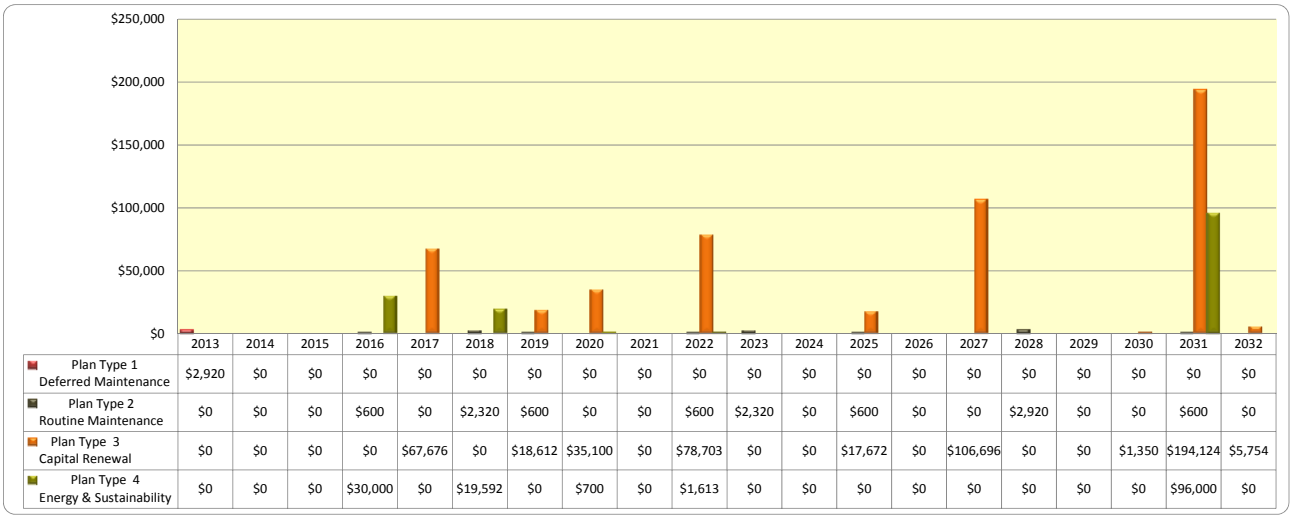
Chart EX-16 Year by Year Cumulative Expenditure per Category of Works

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Plan Type 1 Deferred Maintenance	$46,078	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 2 Routine Maintenance	$0	$0	$0	$750	$0	$3,353	$750	$0	$0	$750	$3,353	$0	$750	$0	$0	$4,103	$0	$0	$750	$0
Plan Type 3 Capital Renewal	$0	$55,072	$36,863	$4,888	$56,036	$0	$20,304	$324,396	$4,888	$188,949	$0	$38,081	$32,972	$4,888	$187,870	$0	$12,500	$1,350	$4,888	$86,151
Plan Type 4 Energy & Sustainability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$11,319	$0	$0	$0	$0	$0	$0	$0	$0	$145,363	$0

Chart EX-16 illustrates that there are multiple expenditure years for Plan Type 3 – Capital Renewal, throughout the study period.

Hill Gymnasium

Chart EX-17 Year by Year Cumulative Expenditure per Category of Works

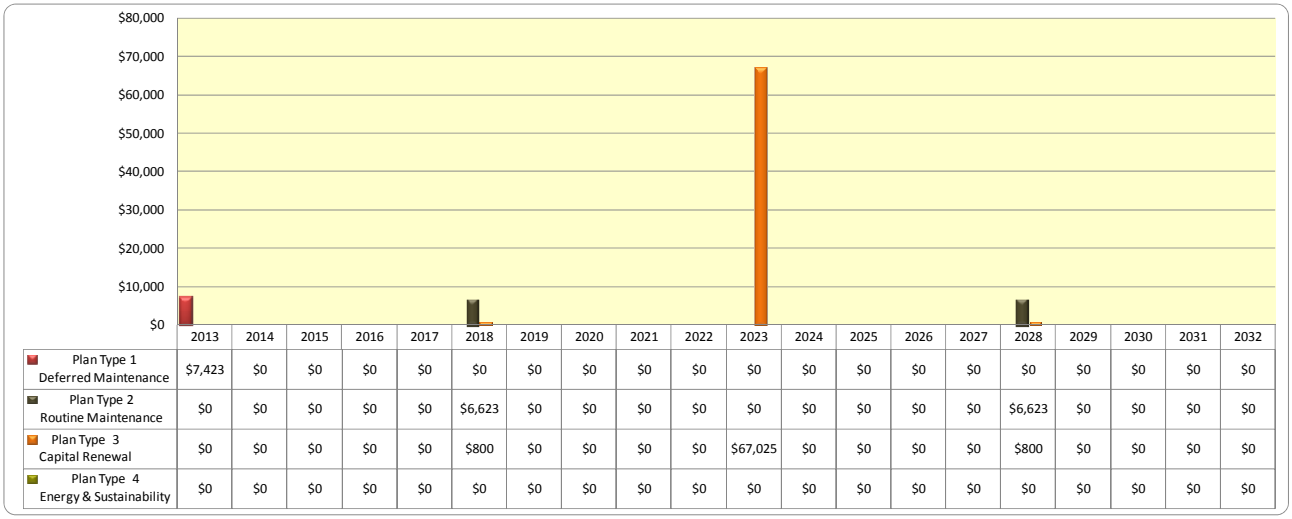


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Plan Type 1 Deferred Maintenance	$2,920	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 2 Routine Maintenance	$0	$0	$0	$600	$0	$2,320	$600	$0	$0	$600	$2,320	$0	$600	$0	$0	$2,920	$0	$0	$600	$0
Plan Type 3 Capital Renewal	$0	$0	$0	$0	$67,676	$0	$18,612	$35,100	$0	$78,703	$0	$0	$17,672	$0	$106,696	$0	$0	$1,350	$194,124	$5,754
Plan Type 4 Energy & Sustainability	$0	$0	$0	$30,000	$0	$19,592	$0	$700	$0	$1,613	$0	$0	$0	$0	$0	$0	$0	$0	$96,000	$0

Chart EX-17 illustrates that there are multiple expenditure years for Plan Type 3 – Capital Renewal, throughout the study period.

Site Systems

Chart EX-18 Year by Year Cumulative Expenditure per Category of Works



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Plan Type 1 Deferred Maintenance	$7,423	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 2 Routine Maintenance	$0	$0	$0	$0	$0	$6,623	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,623	$0	$0	$0	$0
Plan Type 3 Capital Renewal	$0	$0	$0	$0	$0	$800	$0	$0	$0	$0	$67,025	$0	$0	$0	$0	$800	$0	$0	$0	$0
Plan Type 4 Energy & Sustainability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Chart EX-18 illustrates that there is one key year for Plan Type – Capital Renewal, in year 2023.

SECTION 2 - A SUBSTRUCTURE

A10 FOUNDATIONS

DESCRIPTION

The description of the respective structural systems for each building are based upon our review of available drawings, and our observation of exposed portions of the building structures. The drawings reviewed can be found in Appendix D.

A1010 STANDARD FOUNDATIONS

Margaret Todd Senior Center & Hill Gymnasium

A1011 Wall Foundations

The exterior wall constructions are supported by reinforced concrete spread footings. These are likely integral with the concrete slab-on-grade and support the exterior wall constructions. The compressive strength of the concrete is unknown.

Margaret Todd Senior Center

A1012 Column Foundations and Pile Caps

The building contains steel posts that support the roof constructions. These posts rest on concrete column foundations. The compressive strength of the concrete is unknown.

A1030 SLABS-ON-GRADE

Margaret Todd Senior Center & Hill Gymnasium

A1031 Standard Slab on Grade

The first floor at each of the buildings consisted of cast-in-place concrete slab-on-grade, reinforced with welded wire fabric. We assume that the floor slab is 4 1/2" thick over a 2" sand and 4" aggregate base and are likely integral with the concrete slab-on-grade spread footings supporting the exterior wall constructions. The compressive strength of the concrete is unknown.

CONDITION

A1010 STANDARD FOUNDATIONS

Margaret Todd Senior Center & Hill Gymnasium

A1011 Wall Foundations

The footings were not visible yet based on the good condition of the concrete slab and exterior walls we estimate the footings to be in good condition. We do not anticipate that any actions will be generated during the study period.

Margaret Todd Senior Center

A1012 Column Foundations and Pile Caps

The column foundations are assumed to be in good condition, as there are no signs of failure throughout the structure which they support or the surrounding concrete floor slab. We do not anticipate any expenditure during the study period.

A1030 SLABS-ON-GRADE

Margaret Todd Senior Center & Hill Gymnasium

A1031 Standard Slab on Grade

The slab-on-grade was observed to be in good condition. While the majority of the slab was not visible there were no signs of undue settling or major cracks noted.

PROJECTED EXPENDITURES

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

SECTION 3 - B SHELL

B10 SUPERSTRUCTURE

DESCRIPTION

The description of the respective structural systems for each building are based upon our review of available drawings, and our observation of exposed portions of the building structures. The drawings reviewed can be found in Appendix D.

B1020 ROOF CONSTRUCTION

Margaret Todd Senior Center & Hill Gymnasium

B1021 Flat Roof Construction

The low-sloped roof sections consist of glued laminated members (glulam beams) spanning in multiple directions at the Margaret Todd Senior Center and one-way north-south at the Hill Gymnasium (reference Photograph 69 in Appendix B). The beams at the Margaret Todd Senior Center ranged in size from 5 1/8" x 12" to 5 1/8" x 22 ½"; the beams at the Hill Gymnasium are sized at approximately 5" x 36". In both instances these glulam beams appear to be supporting a combination of wood and steel joists which span in the opposite directions supporting the plywood roof deck. The lower level roof at the Hill Gymnasium contains prefabricated, pre-engineered wood joists spanning east to west and spaced at 24" centers. The roof constructions have R-19 bat insulation present. The roof covering can be viewed in the roof covering section of this report.

CONDITION

B1020 ROOF CONSTRUCTION

Margaret Todd Senior Center & Hill Gymnasium

B1021 Flat Roof Construction

The low-sloped roof constructions appeared to be in good condition. There were no visible signs of failure or deterioration noted. We do not anticipate any expenditure during the cost study period.

B20 EXTERIOR ENCLOSURES

DESCRIPTION

The description of the respective exterior enclosure for each building are based upon our review of available drawings, and our observation of exposed portions of the building structures. The drawings reviewed can be found in Appendix D.

B2010 EXTERIOR WALLS

Margaret Todd Senior Center & Hill Gymnasium

B2011 Exterior Wall Construction

The buildings both contained load bearing wood stud exterior wall constructions. The walls consist of 5/8" exterior plywood over building paper with 1 ½" x 4" vertical and horizontal wood battens fixed at the exteriors, backed up by 2" x 6" studs at 16" centers, and 5/8" gypsum board type X at the interiors, in some instances doubled gypsum board. The wall construction has a reported 3 ½" acoustic R-11 bat insulation present (reference Photographs 1 through 4, 70 and 71 in Appendix B).

Painted wood and metal trellis constructions are present at both buildings around window systems and also entrance doors (reference Photographs 3 and 70 in Appendix B). The Hill Gymnasium also has metal framed canopy structures that protrude out from the exterior wall construction over the exit doors; they contain standing seam metal panel sloped roofs (reference Photographs 70 and 74 in Appendix B).

B2020 EXTERIOR WINDOWS

Margaret Todd Senior Center & Hill Gymnasium

B2021 Windows

The buildings both contained a combination of fixed and awning type aluminum window units with single pane glazing (reference Photographs 6 and 72 in Appendix B).

B2030 EXTERIOR DOORS

Margaret Todd Senior Center & Hill Gymnasium

B2031 Glazed Doors & Entrances

The Margaret Todd Senior Center contained both single and double aluminum glazed doors; the Hill Gymnasium only contained a double glazed door at the entrance to the Community Room (reference Photographs 2 and 74 in Appendix B). Door hardware consisted of lever door handles and pull handles at the exterior and horizontal emergency push bars at the interior. The main entrance doors at the entrance on the south elevation contained automatic opening devices to assist with disabled/elderly persons entering the building.

Hill Gymnasium

B2039 Other Doors & Entrances

The building contained single and double hollow metal doors within metal frames, with a painted surface (reference Photograph 75 in Appendix B). Door hardware consisted of lever door handles at the exterior and horizontal emergency push bars at the interior.

CONDITION

B2010 EXTERIOR WALLS

Margaret Todd Senior Center & Hill Gymnasium

B2011 Exterior Wall Construction

The exterior wall construction appeared to be in fair to good condition with only minor signs of deterioration of the wood battens. It appears that the wood battens have rotted due to exposure to moisture in a number of locations (reference Photographs 4 and 5 in Appendix B). We recommend that these areas are repaired at the start of the study period. It was unclear when the plywood wall surfaces were last painted, therefore based on their current observed condition and the typical EUL of eight-years, repainting of the painted surfaces are recommended between near and mid-term in the study period and then every eight-years after to maintain the exterior appearance of the buildings.

B2020 EXTERIOR WINDOWS

Margaret Todd Senior Center & Hill Gymnasium

B2021 Windows

The exterior window units appeared to be in fair to good condition, although the single-pane design of the majority of the window units offers limited thermal insulation. Not all of the windows were assessed, however overall we did not find any major deficiencies and no areas of water ingress through the systems. We do not anticipate a requirement for their replacement at this time, however based on a typical EUL of thirty-years, replacement is recommended for the single pane window units based on industry standards later in the study period. At the time when the window units are scheduled to be replaced, we recommend they are re-assessed for replacement suitability.

B2030 EXTERIOR DOORS

Margaret Todd Senior Center & Hill Gymnasium

B2031 Glazed Doors & Entrances

The aluminum glazed entrance doors appeared to be in fair to good condition. We do not anticipate a requirement for their replacement at this time, however we recommend that the doors are regularly maintained

and painted along with the exterior wall construction. Based on a typical EUL of thirty-years replacement is recommended based on industry standards later in the study period. At the time when the door units are schedule to be replaced, we recommend they are re-assessed for replacement suitability. The hardware appeared to be in a poor to fair condition, however their surfaces have started to deteriorate and therefore we recommend that they are replaced near-term to maintain the appearance and suitable access at the building.

In addition we also recommend that the automatic door closer also be replaced. They have a typical EUL of ten to fifteen-years therefore replacement is anticipated mid-term in the study period.

Hill Gymnasium

B2039 Other Doors & Entrances

The metal doors appeared to be in fair to good condition with no observed issues noted. There is no anticipated requirement for replacement of the doors at this time. The operation of the swing doors were satisfactory and operated without any difficulty. Repainting along with the exterior elevation repainting works will be necessary. Based on a typical EUL of thirty-years replacement is recommended based on industry standards later in the study period. At the time the doors are schedule to be replaced, we recommend they are re-assessed for replacement suitability.

B30 ROOFING

DESCRIPTION

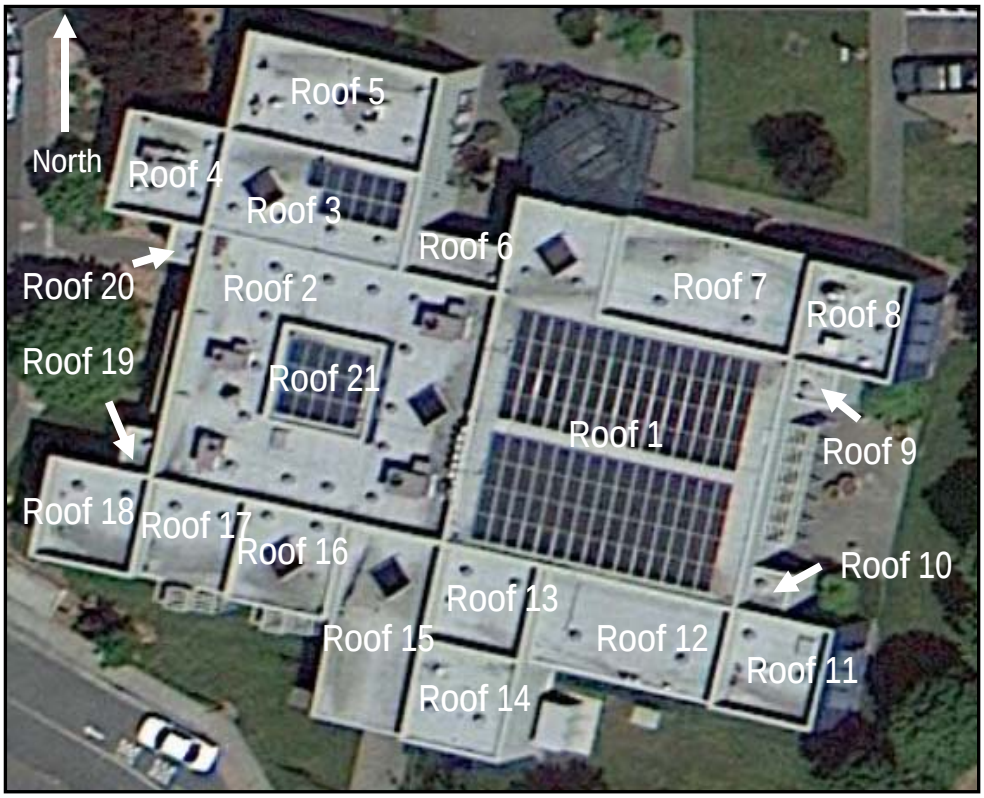
B3010 ROOF COVERINGS

Margaret Todd Senior Center & Hill Gymnasium

B3011 Roof Finishes

The Margaret Todd Senior Center contained twenty-one low-sloped roof levels and the Hill Gymnasium three low-sloped roof levels; these roof areas are located at different levels, and are shown on the following aerial plans:

Overview of Margaret Todd Senior Center Roof Levels



Overview of the Hill Gymnasium Roof Levels

The low-sloped roof areas 1 through 21 at the Margaret Todd Senior Center contained a Built-Up Roofing (BUR) system with a mineral cap sheet surface (reference Photographs 9 through 11 in Appendix B). The perimeter parapet wall constructions are a continuation of the exterior elevations and contain metal capping at the top and plywood boarding at the inner side of the parapet which is combined with a metal counter flashing and mineral cap sheet base flashings. The age of the roof covering system is assumed original to when the building was constructed; and therefore twenty-years old The roof level slopes via a gradient to the roof and overflow outlets connected to interior leaders.

The low-sloped roof areas 1 through 3 at the Hill Gymnasium building contained a single-ply 60 mil Thermoplastic Polyolefin (TPO) roofing membrane in color white with walkway pads in color grey. We understand it was installed as an overlay system that is mechanically attached over the original BUR covering below (reference Photographs 75 and 77 in Appendix B). The roof level slopes via a gradient also to the roof and overflow outlets connected to interior leaders at the lower level roof and scuppers connected to exterior mounted hoppers and downspouts at the higher level roof.

B3020 ROOF OPENINGS

Margaret Todd Senior Center & Hill Gymnasium

B3021 Glazed Roof Openings

The buildings both contained square and rectangle plastic skylight; with combinations of both pyramid and domed configurations (reference Photograph 16 in Appendix B). The skylights provide natural light to penetrate into the areas below.

B3022 Roof Hatches

Roof access was gained through a metal roof access hatch at the upper and lower low-sloped roof levels at the Hill Gymnasium building. A vertical metal ladder provided access at this location, which is located at the interior of the building. The Margaret Todd Senior Center also had a roof access ladder, however this was not used during our assessment access was gained from a ladder placed at the exterior elevation. Access to the roof hatch is present within the center of the storage room at the south-east corner of the building, however this hatch could not be used as the ceiling was high and there is no fixed ladder present.

CONDITION

B3010 ROOF COVERINGS

Margaret Todd Senior Center & Hill Gymnasium

B3011 Roof Finishes

Faithful+Gould walked the entire fields of the roof levels at both buildings and observed the condition of the coverings, seams, parapet membrane and flashing, roof outlets and rooftop mechanical equipment.

The BUR covering at the Margaret Todd Senior Center appeared to be in fair condition at each of the roof levels, with no roof leaks reported. We understand that this roof covering is original to the building. The normal estimated useful life expectancy of this type of roofing system is twenty-years. The BUR system typically shows signs of deterioration accelerating after approximately fifteen-years. The roof covering is at the end of its EUL, however based on observed conditions we have extended the life of the roof covering and recommend replacement mid-term in the study period.

However the mineral cap sheet base flashing at the parapets and rooftop equipment up stands contained alligator cracking (reference Photograph 12 in Appendix B). In addition the plywood boarding at the inner side of the parapets was also experiencing moisture saturation and subsequent damage/deterioration (reference Photographs 14 and 15 in Appendix B). We recommend that these areas are made water tight at the start of the study period with the mineral cap sheet base, metal counter flashing and plywood boarding being removed from all of the parapet wall constructions and new mineral cap sheet installed from the roof level up the entire inner side of the parapet and finished below the metal capping. We recommend this work is undertaken to preserve the integrity of the building structure.

The single-ply TPO membrane appeared to be in good condition, with no observed or reported roof leaks. We understand that it was recently installed in 2012, therefore with a typical EUL of twenty-years and its observed condition, replacement is anticipated later in the study period. We understand that the original BUR covering below was repaired, as bubbling was present prior to works being undertaken. We understand that there is a 20-year NDL manufacturer's warranty and a 2 year contractor warranty with will expire in 2032 and 2014 respectively.

There is leaf debris observed at the roof levels of the Margaret Todd Senior Center (reference Photograph 13 in Appendix B). To prevent any blockages of roof outlets we recommend that these roofs are cleaned at the start of the study period and periodically.

The roof levels appear to drain well with adequate slope at all areas to allow water to run to the gutter and roof perimeters. The gutter also appears to be free from debris and adequately sized.

Replacement of the roof coverings will also include for the removal and reinstallation of the solar array modules. We have included an estimated contingency sum for works associated with this; however we recommend that the City obtains accurate costs from the original installers.

B3020 ROOF OPENINGS

Margaret Todd Senior Center & Hill Gymnasium

B3021 Glazed Roof Openings

The skylights appeared to be in fair to good condition, with installation assumed to have been at the time of the roof installations. Based on a typical EUL of thirty-years replacement is anticipated at the Margaret Todd Senior Center during the cost study period.

B3022 Roof Hatches

The roof hatches appeared to be in fair to good condition. The mechanism of the roof hatches appeared to operate satisfactorily without any issues, furthermore there were no signs of water ingress and no such issues were reported to us at the time of the assessment. Based on a typical EUL of thirty-years replacement is anticipated at the Margaret Todd Senior Center at the time of the roof replacement.

PROJECTED EXPENDITURES

Identified recommended works that are required during the twenty-year study period are detailed below. We have included a 25% allowance for professional fees and general contractor overhead/profit and management costs (where applicable).

Margaret Todd Senior Center

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repair deteriorated wood battens	1	LS	$1,500	$1,500	2013	3
B2011	Exterior Wall Construction	Repaint exterior wall surfaces	10,800	SF	$1.88	$20,304	2019	4
B2011	Exterior Wall Construction	Repaint exterior wall surfaces	10,800	SF	$1.88	$20,304	2027	4
B2021	Windows	Replace window units	1,240	SF	$78.50	$97,340	2027	3
B2031	Glazed Doors & Entrances	Replace glazed single doors	14	EACH	$2,500	$35,000	2027	3
B2031	Glazed Doors &	Replace hardware at main entrance doors	5	EACH	$375	$1,875	2015	3

	Entrances							
B2031	Glazed Doors & Entrances	Replace automatic door opener	1	EACH	$2,800	$2,800	2022	1
B2031	Glazed Doors & Entrances	Replace automatic door opener	1	EACH	$2,800	$2,800	2032	1
B3011	Roof Finishes	Remove parapet wall plywood and install mineral cap sheet	5,250	SF	$7.50	$39,375	2013	3
B3011	Roof Finishes	Replace cracked mineral cap sheet at equipment upstands	200	SF	$5.50	$1,100	2013	3
B3011	Roof Finishes	Replace BUR covering	13,412	SF	$12.00	$160,944	2020	3
B3011	Roof Finishes	Solar panel removal and reinstall at time of roof covering replacements	1	LS	$10,000	$10,000*	2020	3
B3021	Glazed Roof Openings	Replace skylights	180	SF	$50	$9,000	2020	3
B3022	Roof Hatches	Replace roof hatch	1	EACH	$2,812	$2,812	2020	3
		Total Anticipated Expenditure for B Shell				$408,904		

* Assumed/contingency lump sum cost, we recommend this expenditure is obtained from the original installers for removal and reinstate

Hill Gymnasium

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repaint exterior wall surfaces	9,900	SF	$1.88	$18,612	2019	4
B2011	Exterior Wall Construction	Repaint exterior wall surfaces	9,900	SF	$1.88	$18,612	2027	4
B2021	Windows	Replace single pane window units	315	SF	$78.50	$24,728	2027	3
B2031	Glazed Doors & Entrances	Replace glazed double door	1	EACH	$3,500	$3,500	2027	3
B2039	Other Doors & Entrances	Replace double hollow metal doors	4	EACH	$3,588	$14,352	2027	3
B3011	Roof Finishes	Replace TPO roof membrane	11,000*	SF	$15.00	$165,000	2031	3
B3011	Roof Finishes	Solar panel removal and reinstall at time of roof membrane replacements	1	LS	$10,000	$10,000*	2031	3
B3021	Glazed Roof Openings	Replace skylights	270	SF	$50	$13,500	2031	3
B3022	Roof	Replace roof hatch	2	EACH	$2,812	$5,624	2031	3

	Hatches							
		Total Anticipated Expenditure for B Shell				$273,928		

* Quantity includes roof field and parapet up stands

SECTION 4 - C INTERIORS

C10 INTERIOR CONSTRUCTION

DESCRIPTION

C1010 PARTITIONS

Margaret Todd Senior Center & Hill Gymnasium

C1011 Fixed Partitions

The buildings contained wood stud gypsum board partitions throughout forming the interior spaces (reference Photographs 2, 21 and 25 in Appendix B).

Margaret Todd Senior Center

C1013 Retractable Partitions

The building contains a retractable acoustic partition with fabric surfaces separating the assembly rooms (reference Photograph 18 in Appendix B).

C1020 INTERIOR DOORS

Margaret Todd Senior Center & Hill Gymnasium

C1021 Interior Doors

The buildings contained single and double flush wood doors which are housed within metal frames. The doors all appeared to be one directional swing operation (reference Photographs 20 and 21 in Appendix B).

C1023 Interior Door Hardware

The doors contained aluminum hardware consisting of a combination of lever door handles and horizontal emergency push bars (reference Photographs 20 and 21 in Appendix B).

C1030 FITTINGS SPECIALTIES

Margaret Todd Senior Center & Hill Gymnasium

C1031 Fabricated Toilet Partitions

The restrooms at both buildings contained floor and wall mounted fixed partition cubicles (reference Photographs 22 and 79 in Appendix B).

CONDITION

C1010 PARTITIONS

Margaret Todd Senior Center & Hill Gymnasium

C1011 Fixed Partitions

The interior fixed partitions all appeared to be in fair to good condition. There were no deficiencies found in relation to the wall structures. The fixed partitions are suitable for the current use.

Margaret Todd Senior Center

C1013 Retractable Partitions

The retractable acoustic partition appeared to be in poor to fair condition. Although the system appeared to be operating, the fabric surfaces of the acoustic panels are worm and dated (reference Photograph 19 in Appendix B). Based on the typical EUL of fifteen-years for this type of partition we recommend that it is replaced near-term in the study period.

C1020 INTERIOR DOORS

Margaret Todd Senior Center & Hill Gymnasium

C1021 Interior Doors

The interior fixed partitions all appeared to be in fair to good condition. There were no deficiencies found in relation to the wall structures. The fixed partitions are suitable for the current use.

C1023 Interior Door Hardware

The hardware at each of the doors appeared satisfactory with no issues of deterioration or failure noted generally throughout the building. We recommend that these doors are refinished at the same time as the interior wall finishes works.

C1030 FITTINGS SPECIALTIES

Margaret Todd Senior Center & Hill Gymnasium

C1031 Fabricated Toilet Partitions

The fabricated cubicles appeared to be in fair to good condition. There was no evidence of deteriorated panels or doors which will need immediate replacement, however the restrooms in their entirety although functional, are assumed to have their original finishes and therefore have starting to appear dated. We recommend that the restrooms are renovated prior to mid-term in the study period, to maintain the continuity of the finishes throughout the building. The cost for the replacement

of these fabricated cubicle partitions have been included in a total replacement cost per restroom and is shown in the plumbing section of this report.

C30 INTERIOR FINISHES

DESCRIPTION

C3010 WALL FINISHES

Margaret Todd Senior Center & Hill Gymnasium

C3012 Wall Finishes to Interior Walls

Interior walls at the buildings generally contained painted gypsum board surfaces, wall papered surfaces and ceramic tile wall surfaces. In addition the main assembly and activity rooms contained wall mounted acoustical paneling which was fixed to the interior walls and had a fabric finished surface (reference Photographs 20 through 26 and 79 through 82 in Appendix B).

C3020 FLOOR FINISHES

Margaret Todd Senior Center & Hill Gymnasium

C3024 Flooring

The buildings both contained wood plank floor; within the main assembly room at the Margaret Todd Senior Center and also within the gym and community room of the Hill Gymnasium (reference Photographs 23, 80 and 81 in Appendix B).

The Margaret Todd Senior Center contained vinyl tile floor covering in the store room, crafts room and lobby (reference Photograph 63 in Appendix B). The vinyl tile in the lobby was of a 16” x 16” tile and was appropriate for more formal areas.

The buildings both contained ceramic floor tiles generally at restroom locations and also within the commercial kitchen at the Margaret Todd Senior Center. The Margaret Todd Senior Center contained 2” x 2” tiles at the restroom areas and 6” x 6” tiles at the kitchen. The Hill Gymnasium restrooms also contained 6” x 6” tiles in the restroom and restroom lobby (reference Photographs 24, 31, 33 and 79 in Appendix B).

C3025 Carpeting

The building contained sheet carpet floor covering in the main assembly room, activity room, lobby, card room, meeting rooms 1 through 3, admin and office areas and also the restroom lobby (reference Photographs 19, 21, 23, 25 and 28 in Appendix B).

C3030 CEILING FINISHES

Margaret Todd Senior Center & Hill Gymnasium

C3031 Ceiling Finishes

There were painted gypsum board ceilings within each of the buildings (reference Photographs 23, 24 and 26 in Appendix B).

C3032 Suspended Ceilings

The buildings both contained 2' x 2' suspended acoustical tiled ceilings within a white enameled exposed grid (reference Photographs 29, 81 and 82 in Appendix B). The Margaret Todd Senior Center also contained 12" x 12" concealed grid ceiling within the main assembly room. The systems are supported with wires from the underside of the roof construction above. The ceiling panels are generally 5/8" thick mineral board in fissured pattern. The exposed grid suspended ceiling system incorporated lighting components.

CONDITION

C3010 WALL FINISHES

Margaret Todd Senior Center & Hill Gymnasium

C3012 Wall Finishes to Interior Walls

Interior wall finishes appeared to be in fair to good condition generally throughout the buildings, with only minor marks observed. We understand that the wall surfaces are repainted as and when needed at the building, therefore we are unable to say when each space in the building was repainted. Repainting is typically undertaken every eight-years based on its EUL and therefore we have included for repainting of the wall surfaces prior to mid-term in the study period to maintain the interior appearance of the building. In addition we understand that spaces such as meeting room 1 through 3 will require repainting with a reduced EUL due to their more extensive use, therefore we have considered a five-year EUL for these locations.

We assume that the wall papered wall panels are original and therefore based on the typical EUL of twenty-years for wall paper; we recommend that they are refinished prior to mid-term in the study period to maintain the appearances of the interiors of the building. Instead of applying new wall paper at all the current locations where it is present, we recommend only replacing it in the assembly and activity rooms; at the other locations we recommended its removal and then preparing the surfaces as necessary and repainting the walls along with the other wall surfaces repainting works that have been identified.

The ceramic wall tiles appeared to be in fair condition. There were no deficiencies identified which require immediate action at either building. At mid-term in the study period we have included for the renovation of the restrooms and therefore this

will include for replacement of the ceramic wall tiles. The cost for the replacement of these items has been included in a total replacement cost per restroom and is shown in the plumbing section of this report.

The acoustical wall panels at the Margaret Todd Senior Center appeared to be in poor condition with the surface of the fabric dull in appearance as well as torn, frayed and loose (reference Photographs 27 and 28 in Appendix B). After discussions with Nick R. Reposa it was decided that the wall panels should be removed and walls behind repaired and repainted, as it appeared that a number have already been removed and not replaced.

C3020 FLOOR FINISHES

Margaret Todd Senior Center & Hill Gymnasium

C3024 Flooring

The wood plank floor appeared to be in good condition at both buildings. It has a typical EUL of forty-years depending on how it's treated. We recommend that the wood floor is refinished every ten-years to maintain its appearance at each building.

The vinyl tile flooring appeared to be in fair to good condition. We assume that the tile is original to the building and therefore twenty-years old. Vinyl flooring has a typical EUL of eighteen-years and therefore based on the RUL and observed conditions the vinyl tile will require replacement mid-term in the study period. We recommend that the tile within the lobby is replaced at the same time as the sheet carpet.

The ceramic floor tiles appeared to be in fair condition. There were no deficiencies identified which require immediate action at either building. At mid-term in the study period we have included for the renovation of the restrooms and therefore this will include for replacement of the ceramic floor tiles. The cost for the replacement of these items has been included in a total replacement cost per restroom and is shown in the plumbing section of this report.

Margaret Todd Senior Center

C3025 Carpeting

The sheet carpet floor coverings appeared to be in fair condition. We understand that the carpet throughout the building was installed at the time of construction and therefore is more than twenty-years old. We believe the carpet is cleaned every year which assists with its appearance; however it has more than reached its EUL and is due for replacement. Based on a typical EUL of ten-years and the likely traffic it will receive we recommend that the carpet is replaced near-term to maintain the interior appearance of the building. After discussions with Nick Reposa it was decided that instead of replacing again with sheet carpet, that it would be more beneficial to install carpet tiles, as it would be easier to replace stained sections with tiles than sheet.

C3030 CEILING FINISHES

Margaret Todd Senior Center & Hill Gymnasium

C3031 Ceiling Finishes

The painted gypsum ceilings appeared to be in fair to good condition. Painted surfaces usually have a typical EUL of eight-years; therefore we recommend they are painted at the same time as the wall surfaces.

C3032 Suspended Ceilings

The suspended ceiling systems appeared to be in fair to good condition. We assume that the ceiling systems are original and therefore based on a typical EUL of twenty-years we recommend that the systems are replaced between mid-term; however as generally they were free from issues we have extended their replacement. We suggest at that time a review is undertaken to ascertain if there is a need for full replacement or just the replacement of the ceiling tiles. We have included for full replacement.

We observed that one tile within meeting room 2 was stained therefore we recommend that this tile is replaced at the start of the study period (reference Photograph 30 in Appendix B). This suggests that a leak has been present, therefore we recommend that a qualified roofing contractor reviews this and establish if there is a leak at roof level.

PROJECTED EXPENDITURES

Identified recommended works that are required during the twenty-year study period are detailed below. We have included a 25% allowance for professional fees and general contractor overhead/profit and management costs (where applicable).

Margaret Todd Senior Center

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
C1013	Retractable Partitions	Replace acoustical retractable partition	250	SF	$50	$12,500	2014	4
C1013	Retractable Partitions	Replace acoustical retractable partition	250	SF	$50	$12,500	2029	4
C3012	Wall Finishes to Interior Walls	Repair and repaint wall surfaces following removal of the acoustic wall panels	900	SF	$2.35	$2,115	2014*	4
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	14,500	SF	$1.88	$27,260	2017	4
C3012	Wall Finishes to Interior Walls	Remove wall paper and paint interior wall surfaces	1,500	SF	$2.20	$3,300	2017	4
C3012	Wall Finishes to Interior Walls	Replace wall paperd within the assembly and activity rooms	1,400	SF	$7.50	$10,500	2017	4
C3012	Wall Finishes to Interior Walls	Replace wall paperd within the assembly and activity rooms	1,400	SF	$7.50	$10,500	2032	4
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	16,900 **	SF	$1.88	$31,772	2025	4
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces within meeting rooms 1 through 3	2,600	SF	$1.88	$7,426	2016	4
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces within meeting rooms 1 through 3	2,600	SF	$1.88	$7,426	2021	4
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces within meeting rooms 1 through 3	2,600	SF	$1.88	$7,426	2026	4
C3012	Wall	Repaint interior wall and	2,600	SF	$1.88	$7,426	2031	4

	Finishes to Interior Walls	ceiling surfaces within meeting rooms 1 through 3						
C3024	Flooring	Refinish wood plank floor	2,600	SF	$5.76	$14,976	2017	4
C3024	Flooring	Refinish wood plank floor	2,600	SF	$5.76	$14,976	2027	4
C3024	Flooring	Replace vinyl tile floor coverings at lobby	432	SF	$5.50	$2,376	2014	4
C3024	Flooring	Replace vinyl tile floor coverings generally	1,430	SF	$3.25	$4,647	2020	4
C3024	Flooring	Replace vinyl tile floor coverings at lobby	432	SF	$5.50	$2,376	2024	4
C3024	Flooring	Replace ceramic floor tiles within the commercial kitchen	530	SF	$12.50	$6,625	2020	4
C3025	Carpeting	Replace sheet carpet floor covering with carpet tile	677	SY	$56.25	$38,081	2014	4
C3025	Carpeting	Replace sheet carpet floor covering with carpet tile	677	SY	$56.25	$38,081	2024	4
C3032	Suspended Ceilings	Replace the exposed grid suspended ceiling systems	3,180	SF	$6.25	$19,875	2022	4
C3032	Suspended Ceilings	Replace the concealed grid suspended ceiling systems	1,470	SF	$7.50	$11,025	2022	4
		Total Anticipated Expenditure for C Interiors				$286,256		

* Only appears once as included later in the study period with other repainting works
** Contains all painted areas following other identified works

Hill Gymnasium

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
C3012	Wall Finishes to Interior Walls	Repaint interior wall surfaces within the gym	8,200	SF	$1.88	$15,416	2017	4
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces within the community room and restrooms	1,200	SF	$1.88	$2,256	2017	4
C3012	Wall Finishes to Interior Walls	Replace wall paper within the community room	600	SF	$7.50	$4,500	2017	4
C3012	Wall Finishes to Interior Walls	Repaint interior wall surfaces within the gym	8,200	SF	$1.88	$15,416	2025	4
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces within the community room and restrooms	1,200	SF	$1.88	$2,256	2025	4
C3024	Flooring	Refinish wood plank floors within the gym and community room	7,900	SF	$5.76	$45,504	2017	4
C3024	Flooring	Refinish wood plank floors within the gym and community room	7,900	SF	$5.76	$45,504	2027	4
C3032	Suspended Ceilings	Replace the exposed grid suspended ceiling systems	1,270	SF	$6.25	$7,938	2022	4
		Total Anticipated Expenditure for C Interiors				$138,790		

SECTION 5 - D SERVICES

DESCRIPTION

D2010 PLUMBING FIXTURES

Margaret Todd Senior Center & Hill Gymnasium

D2011 Water Closets

The buildings contained wall mounted vitreous china water closets within the Margaret Todd Senior Center and floor mounted vitreous china water closets within the Hill Gymnasium; all with manual flush valves (reference Photographs 31, 32 and 83 in Appendix B).

D2012 Urinals

The buildings contained vitreous china wall hung urinals with manual flush valves, within the men's restrooms (reference Photographs 33 and 84 in Appendix B).

D2013 Lavatories

The buildings contained vanity top vitreous china lavatories (reference Photographs 32, 34 and 85 in Appendix B). The lavatories consisted of non-metering faucets with mixing type single lever handles within the Margaret Todd Senior Center and metering faucets with push levers within the Hill Gymnasium. The vitreous china lavatories are self rimming, single bowl type and are mounted within a vanity that consisted of a plastic laminated faced counter top. Water is supplied via copper pipe and assumed drained through cast iron pipe work and fittings.

D2014 Sinks

The buildings both contained single stainless steel sinks within the meeting rooms and also the Community Room (reference Photographs 38 and 86 in Appendix B). The sinks contain swan neck faucets that contained non-metering double lever handles. The stainless steel sinks are self rimming, single bowl and are mounted within a counter that consisted of a plastic laminated faced counter top.

The commercial kitchen within the Margaret Todd Senior Center contained a stainless steel multi bowl commercial pot sink with wall mounted extended swan neck faucet with non-metering double lever handles. In addition the kitchen also contained a wall mounted hand wash sink with a swan neck faucet and non-metering foot controls (reference Photographs 36 and 37in Appendix B).

Floor mounted vitreous china sinks are present within the janitor rooms of each building (reference Photograph 35 in Appendix B).

D2018 Drinking Fountains and Coolers

The buildings contained wall mounted stainless steel drinking fountains. The water fountains are wall mounted with front-mounted and push-button valves (reference Photographs 39 and 87 in Appendix B).

D2020 DOMESTIC WATER DISTRIBUTION

Margaret Todd Senior Center & Hill Gymnasium

D2021 Cold Water Service

Cold water piping throughout the buildings consisted of copper system. We believe the cold water service for the facility is supplied directly from the street pressure. Taps are made to the water line downstream of the meter and routed to plumbing fixtures and equipment via copper pipe work. The supplies enter the buildings at their south elevations.

D2022 Hot Water Service

Domestic hot water was present at both of the buildings. The hot water is generated via two tank-less water heaters, one natural gas and the other electric at the Margaret Todd Senior Center and a domestic electric water heater with tank at the Hill Gymnasium (reference Photographs 40, 41 and 88 in Appendix B). The below counted tank less instantaneous water heater in the work room at the Margaret Todd Senior Center had no information available for referencing. The water heater at the Hill Gymnasium contains a circulation pump which is manufactured by Grundfos and is ¼-hp.

Tables D20-1 & D20-2 provide a summary of the water heaters at each building:

Table D20-1 Summary of the Domestic Water Heating Equipment at the Margaret Todd Senior Center

Location	Manufacturer	Model #	Serial #	Fuel/ Rating	Capacity	≈ Year of Installation
Custodial Room	Nortiz	N-0931M-ASM	2008.01-000371	Natural Gas	N/A	2011
Work Room	Unknown	Unknown	Unknown	Unknown	N/A	Unknown

Unknown = Access limited or equipment had no name plates present

Table D20-2 Summary of the Domestic Water Heating Equipment at the Hill Gymnasium

Location	Manufacturer	Model #	Serial #	Fuel/ Rating	Capacity	≈ Year of Installation
Custodial Room	Unknown	PCE2010MSA	A05M008618	Electric	20 Gallons	Unknown

Unknown = Access limited or equipment had no name plates present

D2030 SANITARY WASTE

Margaret Todd Senior Center & Hill Gymnasium

D2031 Waste Piping

Waste piping was not directly inspected at each of the buildings, however based on the age of the buildings and typical construction methods available at the time of construction, the piping is suspected to be cast iron pipe.

CONDITION

D2010 PLUMBING FIXTURES

Margaret Todd Senior Center & Hill Gymnasium

D2011 Water Closets

The water closets appeared to be in fair condition. The water closets flushed properly and did not have any cracks in the china, however they are assumed to be from 1993 and 1994 and with a typical EUL of thirty-five-years, and we recommend that they are replaced as part of a restroom renovation prior to mid-term in the study period. At this time they will be approximately twenty-five years old and it will be more appropriate to replace them than reuse them in a newly renovated restroom. The cost for their replacement has been included in a total replacement cost per restroom. As part of this replacement, consideration could be taken to replace the water closets with more water efficient systems.

Following full renovation we recommend that the flush valves are rebuilt late-term during the study period to maintain optimal performance.

D2012 Urinals

The urinal's and flush valves appeared to be in fair condition. The urinals flushed properly and did not have any cracks in the china. We also recommend that they are replaced as explained for the water closets with waterless units.

D2013 Lavatories

The lavatories and faucets appeared to be in fair condition. The sinks drained properly and did not have any cracks in the china. We also recommend that they are replaced as explained for the water closets with more efficient faucets.

Following full renovation we recommend that the faucets are replaced mid to late-term during the study period to maintain optimal performance.

D2014 Sinks

The stainless steel counter top and commercial sinks and janitors floor mounted sinks appeared to be in good condition. Based on typical EUL of thirty-years for the janitors sink we anticipate that it will last beyond the study period without

replacement necessary. The stainless steel sinks have a typical EUL of twenty-years therefore we have included for their replacement mid-term in the study period at the same time as the counter and fixed cabinet replacements.

D2018 Drinking Fountains and Coolers

The drinking fountains appeared to be in fair condition. These units have a typical EUL of twenty-years; therefore we anticipate that there will be a requirement for their replacement mid-term in the cost study period.

D2020 DOMESTIC WATER DISTRIBUTION

Margaret Todd Senior Center & Hill Gymnasium

D2021 Cold Water Service

The domestic water systems at each of the buildings appeared to be in fair to good condition. No major problems were observed that could be attributed to age and deferred maintenance.

D2022 Hot Water Service

The domestic water heaters appeared to be in fair to good condition; they were observed to be functional and operating correctly. The tank less water heater which serves the Margaret Todd Senior Center was installed a few years ago in 2011 and based on a typical fifteen-years replacement is anticipate later in the study period. The below counter instant water heater within the craft room and also the domestic water heater at the Hill gymnasium building both had no indication of when they were installed, therefore we assume they are at least five-years old based on observed conditions and with no reported issues replacement is anticipate prior to mid-term in the study period to maintain efficiency.

The hot water distribution pipes appeared to be in fair to good condition. We do not anticipate any expenditure within the cost study period.

D2030 SANITARY WASTE

Margaret Todd Senior Center & Hill Gymnasium

D2031 Waste Piping

No visually apparent problems with the sanitary waste piping were observed at any of the buildings.

D30 HVAC

DESCRIPTION

D3010 FUEL ENERGY SUPPLY SYSTEMS

Margaret Todd Senior Center & Hill Gymnasium

D3012 Gas Supply System

There is natural gas service to the building. The pressure reducing station and gas meter are located at the south side of the Margaret Todd Senior Center. Gas service is routed to the hot water boiler and rooftop package units.

D3040 HEAT HVAC DISTRIBUTION SYSTEMS

Margaret Todd Senior Center & Hill Gymnasium

D3041 Air Distribution Systems

The conditioned air is distributed throughout the buildings via metal ductwork located above the ceilings and through metal grills recessed in the ceilings.

D3042 Exhaust Ventilation Systems

The buildings both contain roof level down and up blast centrifugal exhaust fans which are designed to remove air from specific areas (reference Photograph 43, 44 and 89 in Appendix B). The units are manufactured by Penn and CentriMaster and vary in capacities.

D3050 HEAT TRANSFER TERMINAL AND PACKAGED UNITS

Margaret Todd Senior Center

D3051 Terminal Self-Contained Units

The building contained one roof level evaporative cooler unit which serves the kitchen area of the building (reference Photograph 45 in Appendix B).

Margaret Todd Senior Center & Hill Gymnasium

D3052 Package Units

Heating and cooling at the Margaret Todd Senior Center is primarily heated and cooled by single packaged rooftop air conditioning units which have direct exchange (DX) cooling and natural gas heating. The units are manufactured by Carrier, with a heating and cooling capacity ranging from 2- to 10-tons of cooling and 14,800- to 93,000-btuh of heating provided by natural gas fired burner sections (reference Photographs 46 and 47 in Appendix B).

The gymnasium section of the Hill Gymnasium building is heated by a rooftop heating and ventilating unit. The unit is a custom air handler consisting of a supply fan, exhaust fan, duct furnace and economizer controls. The section of the building which contains the Community Room is heated and cooled separately by one single package unit which is also manufactured by Carrier and has direct exchange (DX) cooling and natural gas heating. The unit has a capacity of 8-tons of cooling and 98,400- to 147,600-btuh of heating provided by natural gas fired burner section (reference Photographs 90 and 91 in Appendix B).

Tables D30-1 & D30-2 provide a summary of the HVAC equipment at each building:

Table D30-1 Summary of the HVAC Equipment
at the Margaret Todd Senior Center

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year
Roof Level (Serve's Meeting Room 1, 8, Electrical Room & Custodial Room)	Exhaust Fan (EF-1)	Penn	Unknown	Unknown	350 CFM	Electric	Unknown
Roof Level (Serve's Meeting Room 1, 8, Electrical Room & Custodial Room)	Exhaust Fan (EF-2)	Penn	Unknown	Unknown	350 CFM	Electric	Unknown
Roof Level (Serve's Meeting & Storage Room)	Exhaust Fan (EF-3)	Penn	Unknown	Unknown	870 CFM	Electric	Unknown
Roof Level (Serve's Meeting & Storage Room)	Exhaust Fan (EF-4)	Penn	Unknown	Unknown	870 CFM	Electric	Unknown
Roof Level (Serve's Card Room)	Exhaust Fan (EF-5)	Penn	Unknown	Unknown	475 CFM	Electric	Unknown
Roof Level (Serve's Men's & Women's Room)	Exhaust Fan (EF-6)	Penn	Unknown	Unknown	645 CFM	Electric	Unknown

Roof Level (Serve's Toilet)	Exhaust Fan (EF-7)	Penn	Unknown	Unknown	295 CFM	Electric	Unknown
Roof Level (Kitchen Hood)	Exhaust Fan (EF-8)	Penn	Unknown	Unknown	4,000 CFM	Electric	Unknown
Roof Level (Serve's Kitchen)	Evaporative Cooler Unit	Frigiking	FD450A	Unknown	4,500 CFM	Electric	Unknown
Roof Level (Serve's Library & Card Room)	Package Unit (AC-1)	Carrier	48HCEA06 A2A5A0A0 A0	0311G40103	Assumed 5 Ton / 93,000 BTU/HR	Electric / Natural Gas	2011
Roof Level (Serve's Main Lobby & Offices)	Package Unit (AC-2)	Carrier	48HCEA06 A2A5A0A0 A0	0311G40105	Assumed 5 Ton / 93,000 BTU/HR	Electric / Natural Gas	2011
Roof Level (Serve's Crafts Room)	Package Unit (AC-3)	Carrier	48HCEA06 A2A5A0A0 A0	0311G40104	Assumed 5 Ton / 93,000 BTU/HR	Electric / Natural Gas	2011
Roof Level	Package Unit (AC-4)	Carrier	48HCDD12 A2A5A0A0 A0	3310G40552	Assumed 10 Ton / 14,800 BTU/HR	Electric / Natural Gas	2011
Roof Level	Package Unit (AC-5)	Carrier	48HCDD12 A2A5A0A0 A0	3310G40554	Assumed 10 Ton / 14,800 BTU/HR	Electric / Natural Gas	2011
Roof Level (Serve's Small Conference Room)	Package Unit (AC-6)	Carrier	48VLNA24 04030	2710C87350	Assumed 2 Ton / 32,000 BTU/HR	Electric / Natural Gas	2011

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

Table D30-2 Summary of the HVAC Equipment
at the Hill Gymnasium

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year
Low Roof Level	Exhaust Fan (EF-1)	CentriMaster	PRN126E	XSA881201	940 CFM	Electric	Unknown
Low Roof Level	Exhaust Fan	CentriMaster	PRN80	XSA881205	Assumed 350 CFM	Electric	Unknown
Low Roof Level (Serve's Community Room)	Package Unit	Carrier	48HJD012---521--	2194G030140	8 Ton / 98,400/ 147,600 BTU/HR	Electric / Natural Gas	1994
High Roof Level (Serve's Gymnasium)	Heat and Ventilation Unit (HV-1)	Air Dyne	LSG-1500	2922	Unknown	Electric	Unknown

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

D3060 HVAC INSTRUMENTATION AND CONTROLS

Margaret Todd Senior Center & Hill Gymnasium

D3069 Other Controls & Instrumentation

The buildings HVAC systems are controlled by individual wall mounted digital thermostats located in the areas the units serve (reference Photographs 48 and 92 in Appendix B).

CONDITION

D3010 FUEL ENERGY SUPPLY SYSTEMS

Margaret Todd Senior Center & Hill Gymnasium

D3012 Gas Supply System

No visually apparent problems with the gas distribution piping were observed at the buildings. No issues have been reported regarding performance; therefore we believe the supply will be serviceable, through the end of the study period.

D3040 HEAT HVAC DISTRIBUTION SYSTEMS

Margaret Todd Senior Center & Hill Gymnasium

D3041 Air Distribution Systems

Only a small proportion of the ducting in the buildings have been 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 five-years starting at the start of the study period, as it was unclear when they were last cleaned.

D3042 Exhaust Ventilation Systems

The exhaust fans were observed to be in fair condition, with no reported or observed operating issues. Exhaust fans of this type have a EUL of fifteen-years, therefore based on the current observed condition and the future usage, we recommend replacement of the fans and components are undertaken mid-term in the study period.

D3050 HEAT TRANSFER TERMINAL AND PACKAGED UNITS

Margaret Todd Senior Center

D3051 Terminal Self-Contained Units

The evaporative cooler unit appeared to be in fair condition, we are unaware of any current operating issues with the unit and we are unaware of the age of the unit; we assume it is five to ten-years old. Based on current observed conditions and the typical EUL of twenty-years we recommend that the unit is replaced mid-term to maintain efficient operation.

Margaret Todd Senior Center & Hill Gymnasium

D3052 Package Units

The package units appeared to be in fair to good condition, we are unaware of any current operating issues with the units at either of the buildings. The units are approximately one-year old at the Margaret Todd Senior Center and twenty-years old at the Hill Gymnasium. Based on current observed conditions and the typical EUL of twenty-years we recommend that the Hill Gymnasium unit is replaced near-term and the Margaret Todd Senior Center later in the study period to maintain efficient operation.

The rooftop heating and ventilating unit appeared to be in poor to fair condition. We assume it is original to the building and therefore more than thirty-years old. A unit of this type typically has an EUL of twenty-five years, therefore we recommend that it is replaced near-term to maintain efficiency.

D3060 HVAC INSTRUMENTATION AND CONTROLS

Margaret Todd Senior Center & Hill Gymnasium

D3069 Other Controls & Instrumentation

The thermostat controls appear to be in fair condition, they appear to match the age of the HVAC equipment they serve. We recommend that they are replaced along with the units. Until that time we do not anticipate any related issues.

D40 FIRE PROTECTION

DESCRIPTION

D4010 SPRINKLERS

Margaret Todd Senior Center & Hill Gymnasium

D4011 Sprinkler Water Supply

The buildings are protected with an automatic wet-pipe fire suppression system utilizing standard pendent and upright commercial sprinkler heads fixed to fire-line pipes which are supported via the upper structure. The systems are monitored by water flow and tamper switches connected to the fire alarm systems. The sprinkler main enters the buildings at the south side of the Margaret Todd Senior Center with the riser within the janitor room and at the east side of the Hill Gymnasium with the riser within the closet in the Community Room (reference Photographs 49 and 94 in Appendix B). The water main incoming is generally a 6" line at the point of service. The sprinkler heads within the gym have been recently installed in 2012 with wire casings to protect them from being hit by balls.

In addition to the standard wet-pipe system the kitchen within the Margaret Todd Senior Center also contained a chemical fire suppression system which is manufactured by Ansul.

D4030 FIRE PROTECTION SPECIALTIES

Margaret Todd Senior Center & Hill Gymnasium

D4031 Fire Extinguishers

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

CONDITION

D4010 SPRINKLERS

Margaret Todd Senior Center & Hill Gymnasium

D4011 Sprinkler Water Supply

The standard and chemical fire suppression systems were observed to be in fair to good condition at both buildings and all inspections up to date. No visible corrosion or leaks were observed however the 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 anticipate that there will be a requirement for their replacement mid-term during the study period. The five-yearly test will be due in 2015.

D4030 FIRE PROTECTION SPECIALTIES

Margaret Todd Senior Center & Hill Gymnasium

D4031 Fire Extinguishers

Fire extinguishers appeared to be in good condition. We understand they are maintained on a yearly basis. The fire extinguishers were last tested in July of 2012. We do not anticipate a requirement to replace any fire extinguishers during the study period, as we expect that they will be replaced on an as-needed basis (reference Photograph 95 in Appendix B).

D50 ELECTRICAL

DESCRIPTION

The following information was obtained through our visual observations of each of the building systems. The electrical systems include the service entrance equipment, panel boards, safety switches, lighting fixtures, and security systems.

D5010 ELECTRICAL SERVICE & DISTRIBUTION

Margaret Todd Senior Center & Hill Gymnasium

D5012 Low Tension Service & Dist.

Electrical power is supplied by the local utility provider to a dedicated, utility owned pad mounted transformer located at the south side of the site. The Main Distribution Panel (MDP) is manufactured by Cutler Hammer and is rated at 208Y/120 volts at 1,200-amps and is located within an exterior enclosure also at the south side of the Margaret Todd Senior Center. We understand that the Hill Gymnasium building is fed from this MDP to a 600-amp panel board within the building. Branch panels are located throughout the building and are rated at varying amps (reference Photographs 50, through 52 in Appendix B). A redundant MDP manufactured by Challenger is located in the janitor's room of the Margaret Todd Senior Center.

The buildings also contained a photovoltaic array consisting of roof mounted multipurpose modules and grid-connected PV inverter control units manufactured by Sharp and Fronius respectively. The systems use Fronius IG Plus control units which are located at roof level of each building (reference Photographs 53 through 56, 96 and 97 in Appendix B). The PV panels convert the suns energy to electricity through the use of light-sensitive, solid state semi-conductor cells.

D5020 LIGHTING & BRANCH WIRING

Margaret Todd Senior Center & Hill Gymnasium

D5021 Branch Wiring Devices

The branch wiring devices at each of the buildings included switches, receptacles and other devices that would be generally associated with these types of buildings. Branch wiring was observed to typically be distributed in Electric Metallic Tubing (EMT) and flexible metal conduit.

D5022 Lighting Equipment

The interior lighting within the buildings is provided by recessed and surface mounted 2' x 4' fluorescent fixtures contained F32 T8 32W lamps and electronic ballasts (reference Photographs 23, 24 26, 29, 59 and 82 in Appendix B). Recessed compact fluorescent fixtures are also present mainly within the Margaret Todd Senior Center within the solid and suspended ceiling systems. All of the in-room lighting is controlled via local switching in the respective rooms as well as a lighting dimming control system manufactured by Elesco within the Margaret Todd Senior Center (reference Photographs 57, 58 and 61 in Appendix B).

D5030 COMMUNICATIONS & SECURITY

Margaret Todd Senior Center

D5033 Telephone Systems

A telephone system is mounted on a plywood board within the janitor's room and provides voice lines to the telephone switch panel and is patched to the structured voice cabling to the various telephone voice plates throughout the building (reference Photograph 56 in Appendix B).

Margaret Todd Senior Center & Hill Gymnasium

D5037 Fire Alarm Systems

The buildings are protected by digital automatic fire detection alarm system. The Fire Alarm Control Panel (FACP) for the Margaret Todd Senior Center is located opposite the restrooms and the FACP at the Hill Gymnasium is located in the separate electrical closet at the south elevation. The Margaret Todd Senior Center panel is manufactured by Edwards, model 6616 and the Hill Gymnasium panel by Thorn and from their Firequest range of systems (reference Photographs 62 and 98 in Appendix B). An annunciation panel is located in the lobby. Addressable devices are located throughout the building such as smoke detectors, pull stations and fire bell.

D5038 Security and Detection Systems

The building contains an intruder alarm system, which consists of a programmable security alarm panel and motion sensors (reference Photograph 20 in Appendix B). The alarm panel is located within the lobby and the motion sensors are located throughout the building.

Margaret Todd Senior Center

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

Margaret Todd Senior Center & Hill Gymnasium

D5092 Emergency Light & Power Systems

Emergency exit signs which we assume are connected to the emergency generator are provided at exit routes from the buildings (reference Photographs 80 through 81 in Appendix B).

CONDITION

D5010 ELECTRICAL SERVICE AND DISTRIBUTION

Margaret Todd Senior Center & Hill Gymnasium

D5012 Low Tension Service & Dist.

The major electrical equipment items appeared to be in fair to good condition, with the MDP recently installed. There was no indication of damage from short circuit or overload conditions. We were not provided preventative maintenance records for the main electrical equipment, and therefore we do recommend further evaluation of the equipment via an infrared electrical inspection which will highlight if high temperatures, excessive electrical resistance, failing components, ground faults and short circuiting issues exist.

We recommend budgeting for a cyclical allowance above and beyond normal annual electrical maintenance expenditures for cleaning the interiors of all enclosures, and infrared scans of connections, fuses, and breakers in switches, panel boards, and motor starters beginning at the start of the study period and repeated no more than every three-years thereafter. Any items identified as abnormal during the infrared scans should be corrected at that time.

Electrical panel boards generally have a EUL of thirty-years and based on the age of the panel boards present and their observed conditions we anticipate that there will be no requirement for replacement during the study period.

The solar array system also appeared to be in good condition with no operational issues reported. Based on a typical EUL of twenty to twenty-five years replacement of the rooftop modules is anticipated later in the study period. Warning signs are present at each of the buildings electrical disconnect switches with red background and white letters indicating that the buildings are supplied with an alternative power source; to comply with Fire Ordinance Code 605.11.2.

When using PV systems it is important not to shade the modules and regular cleaning to remove dust accumulation. Dust accumulation can cause power reduction of up to 10%.

D5020 LIGHTING & BRANCH WIRING

Margaret Todd Senior Center & Hill Gymnasium

D5021 Branch Wiring Devices

The general receptacles and wiring appeared to be in fair to good condition within the buildings. We do not anticipate a requirement for their replacement during the cost study period.

D5022 Lighting Equipment

The interior lighting was observed in good condition and all fixtures were operating properly with no broken lenses or deteriorated housings. We understand that all of the light fixtures were upgraded two-years ago and therefore apart from re-lamping and replacement of fixtures on an individual basis, no actions are anticipated during the study period.

D5030 COMMUNICATIONS & SECURITY

Margaret Todd Senior Center

D5033 Telephone Systems

The existing telephone system equipment was observed to be in good condition. The typical EUL of these systems is fifteen-years, therefore based on changing and innovating technology we have included for replacement after mid-term in the study period. There are no reported operating issues at this time which will require immediate action.

Margaret Todd Senior Center & Hill Gymnasium

D5037 Fire Alarm Systems

The fire alarm systems appeared to be in good condition. We are unaware of any operating issues with the systems and we assume they receive regular testing. Fire alarm systems have a typical EUL of fifteen-years therefore we have included for full system replacement after mid-term in the study period.

D5038 Security and Detection Systems

The intruder alarm systems appeared to be in good condition. We are unaware of any operating issues with the systems; however these types of systems have a typical EUL of ten-years, therefore we have included for their replacement mid-term in the study period.

Margaret Todd Senior Center

D5039 Local Area Network

The existing LAN system equipment was observed to be in good condition. The typical EUL of these systems is fifteen-years, therefore based on changing and innovating technology we have included for replacement after mid-term in the study period. There are no reported operating issues at this time which will require immediate action.

D5090 OTHER ELECTRICAL SYSTEMS

Margaret Todd Senior Center & Hill Gymnasium

D5092 Emergency Light & Power Systems

Emergency exit signs appeared to be in good condition. We do not anticipate their replacement during the cost study period, apart from replacement of the signs on an individual basis, no actions are recommended during the study period.

PROJECTED EXPENDITURES

Identified recommended works that are required during the twenty-year study period are detailed below. We have included a 25% allowance for professional fees and general contractor overhead/profit and management costs (where applicable).

Margaret Todd Senior Center

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
D20	Plumbing	Renovation of the restrooms	2	EACH	$25,000	$50,000	2020	4
D2013	Lavatories	Replace faucets (lavatories)	6	EACH	$225	$1,350	2030	3
D2014	Sinks	Replace single stainless steel counter sinks and faucets	2	EACH	$1,600	$3,200	2022	4
D2014	Sinks	Replace double stainless steel counter sink and faucet	1	EACH	$2,170	$2,170	2022	4
D2014	Sinks	Replace commercial stainless steel pot sink and faucet within kitchen	1	EACH	$4,500	$4,500	2022	3
D2014	Sinks	Replace hand wash sink within kitchen	1	EACH	$1,850	$1,850	2022	3
D2018	Drinking Fountains	Replace drinking fountain	1	EACH	$2,500	$2,500	2022	3
D2022	Hot Water Supply	Replace instant water heater	1	EACH	$1,200	$1,200	2025	3
D2022	Hot Water Supply	Replace below counter instant water heater	1	EACH	$650	$650	2020	3
D3041	Air Distribution Systems	Clean ductwork	13,412	SF	$0.25	$3,353	2013	3
D3041	Air Distribution Systems	Clean ductwork	13,412	SF	$0.25	$3,352	2018	3
D3041	Air Distribution	Clean ductwork	13,412	SF	$0.25	$3,352	2023	3

	Systems							
D3041	Air Distribution Systems	Clean ductwork	13,412	SF	$0.25	$3,352	2028	3
D3042	Exhaust Ventilation Systems	Replace rooftop exhaust fans (8no.)	7,855	CFM	$1.25	$9,819	2022	3
D3051	Terminal Self-Contained Units	Replace evaporative cooler unit	1	EACH	$1,500	$1,500	2022	3
D3052	Package Units	Replace package unit (AC-1)	5	TONS	$2,449	$12,245	2031	3
D3052	Package Units	Replace package unit (AC-2)	5	TONS	$2,449	$12,245	2031	3
D3052	Package Units	Replace package unit (AC-3)	5	TONS	$2,449	$12,245	2031	3
D3052	Package Units	Replace package unit (AC-4)	10	TONS	$2,449	$24,490	2031	3
D3052	Package Units	Replace package unit (AC-5)	10	TONS	$2,449	$24,490	2031	3
D3052	Package Units	Replace package unit (AC-6)	2	TONS	$2,449	$4,898	2031	3
D4011	Sprinkler Water Supply	Replace sprinkler heads	13,412	SF	$1.05	$14,083	2022	1
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$750	$750	2013	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$750	$750	2016	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$750	$750	2019	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$750	$750	2025	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$750	$750	2028	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$750	$750	2031	3
D5012	Branch Wiring Devices	Replace safety swiches at roof level	6	EACH	$668	$4,008	2022	3
D5012	Low Tension Service & Dist.	Replace rooftop solar modules	146	EACH	$375	$54,750	2031	3
D5033	Telephone	Replace telephone	13,412	SF	$1.00	$13,412	2022	3

	System	system						
D5037	Fire Alarm System	Replace fire alarm system	13,412	SF	$5.00	$67,060	2022	1
D5038	Security and Detection System	Replace security system	13,412	SF	$0.62	$8,315	2022	3
D5038	Security and Detection System	Replace security system	13,412	SF	$0.62	$8,315	2032	3
D5039	Local Area Network	Replace LAN system	13,412	SF	$1.81	$24,276	2022	3
		Total Anticipated Expenditure for D Services				$373,918		

Hill Gymnasium

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
D20	Plumbing	Renovation of the restrooms	2	EACH	$15,000	$30,000	2020	4
D2013	Lavatories	Replace faucets (lavatories)	6	EACH	$225	$1,350	2030	3
D2014	Sinks	Replace single stainless steel counter sinks and faucets	2	EACH	$1,600	$3,200	2022	4
D2018	Drinking Fountains	Replace drinking fountains	2	EACH	$2,500	$5,000	2022	3
D2022	Hot Water Supply	Replace water heater	20	GAL	$35	$700	2020	3
D3041	Air Distribution Systems	Clean ductwork	9,280	SF	$0.25	$2,320	2013	3
D3041	Air Distribution Systems	Clean ductwork	9,280	SF	$0.25	$2,320	2018	3
D3041	Air Distribution Systems	Clean ductwork	9,280	SF	$0.25	$2,320	2023	3
D3041	Air Distribution Systems	Clean ductwork	9,280	SF	$0.25	$2,320	2028	3
D3042	Exhaust Ventilation Systems	Replace rooftop exhaust fans (2no.)	1,290	CFM	$1.25	$1,613	2022	3
D3052	Package Units	Replace package unit	8	TONS	$2,449	$19,592	2018	3
D3052	Package Units	Replace heat & ventilation unit	1	LS	$30,000	$30,000	2016	3
D4011	Sprinkler Water	Replace sprinkler heads	9,280	SF	$1.05	$9,744	2022	1

	Supply							
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$600	$600	2013	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$600	$600	2016	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$600	$600	2019	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$600	$600	2022	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$600	$600	2025	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$600	$600	2028	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$600	$600	2031	3
D5021	Branch Wiring Devices	Replace safety switch at roof level	1	EACH	$668	$668	2022	3
D5021	Low Tension Service & Dist.	Replace rooftop solar modules	256	EACH	$375	$96,000	2031	3
D5037	Fire Alarm System	Replace fire alarm system	9,280	SF	$5.00	$46,400	2022	1
D5038	Security and Detection System	Replace security system	9,280	SF	$0.62	$5,754	2022	3
D5038	Security and Detection System	Replace security system	9,280	SF	$0.62	$5,754	2032	3
		Total Anticipated Expenditure for D Services				$269,254		

SECTION 6 - E EQUIPMENT & FURNISHINGS

E10 EQUIPMENT

DESCRIPTION

E1090 OTHER EQUIPMENT

Margaret Todd Senior Center

E1093 Food Service Equipment

The building contains a commercial kitchen consisting of a double deck gas convection oven, griddle with oven, 6 open burner range with oven, high temp booster dishwasher, coffee urn, 1 door freezer and 2 door refrigerator (reference Photographs 25, 37 and 57 in Appendix B). The ovens griddle and burner equipment is manufactured by Vulcan-Hart Corp.

CONDITION

E2010 FIXED FURNISHINGS

Margaret Todd Senior Center

E1093 Food Service Equipment

The kitchen equipment appeared to be in poor to fair condition. As far as we understand there are no operating issues at this time, however they are all original and based on a typical EUL of twenty to twenty-five years we recommend replacement of the major equipment near-term to maintain efficient operation.

E20 FURNISHINGS

DESCRIPTION

E2010 FIXED FURNISHINGS

Margaret Todd Senior Center & Hill Gymnasium

E2012 Fixed Casework

The buildings both contained wood constructed fixed floor and wall mounted casework within the meeting rooms, staff area break room/kitchen, and the crafts room (reference Photographs 38, 82 and 86 in Appendix B). The wood cabinets generally consisted of hardwood frames and plywood panels with wooden door panels. The worktop consisted of a plywood counter. The vanity tops within the restrooms also consisted of plywood counters.

The commercial kitchen within the Margaret Todd Senior Center contained 16 GA stainless steel work tables/benches, counter tops, wall shelves and under counter shelves (reference Photographs 24, 64 and 65 in Appendix B). At the back of the griddle and range there is 1" insulated stainless steel wall lining, and above is an 18 GA stainless steel vapor hood class F exhaust hood.

The main lobby of the Margaret Todd Senior Center contained a wooden reception counter (reference Photograph 63 in Appendix B).

Hill Gymnasium

E2015 Fixed Multiple Seating

The building contained metal and wood constructed pull out bleacher style seating. The bleacher seating generally consisted of hardwood seats and metal treads.

CONDITION

E2010 FIXED FURNISHINGS

Margaret Todd Senior Center & Hill Gymnasium

E2012 Fixed Casework

The fixed cabinets, counters, vanity counter tops and reception counter appeared to be in fair to good condition and functional. Fixed casework usually has a typical EUL of twenty-years; therefore replacement is anticipated mid-term in the study period. The vanity counter tops within the restrooms have been included for replacement with the overall restroom replacement cost.

The stainless steel work areas appeared to be in fair to good condition. We do not anticipate a requirement for their replacement during the study period as no issues were observed.

Hill Gymnasium

E2015 Fixed Multiple Seating

The fixed multiple seating appeared to be in good condition and functioned properly as it was recently installed. Fixed multiple seating usually have a typical EUL of twenty-years. With proper maintenance and care we expect the bleacher seating to last beyond the study period, therefore replacement will not be anticipated during the cost study period.

PROJECTED EXPENDITURES

Identified recommended works that are required during the twenty-year study period are detailed below. We have included a 25% allowance for professional fees and general contractor overhead/profit and management costs (where applicable).

Margaret Todd Senior Center

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
E1093	Food Service Equipment	Replace double deck gas convection oven	1	EACH	$11,172	$11,172	2015	3
E1093	Food Service Equipment	Replace griddle with standard oven	1	EACH	$6,293	$6,293	2015	3
E1093	Food Service Equipment	Replace 6 open burner range with standard oven	1	EACH	$6,023	$6,023	2015	3
E1093	Food Service Equipment	Replace high temp booster dishwasher	1	EACH	$5,000	$5,000	2015	3
E1093	Food Service Equipment	Replace coffee urn	1	EACH	$1,500	$1,500	2015	3
E1093	Food Service Equipment	Replace 1 door freezer	1	EACH	$2,000	$2,000	2015	3
E1093	Food Service Equipment	Replace 2 door refrigerator	1	EACH	$3,000	$3,000	2015	3
E2012	Fixed Casework	Replace floor cabinets (inc countertops)	90	LF	$600	$54,000	2020	4
E2012	Fixed Casework	Replace wall mounted cabinets	90	LF	$250	$22,500	2020	4
E2012	Fixed Casework	Replace floor cabinets within commercial	33	LF	$500	$16,500	2027	4

		kitchen						
E2012	Fixed Casework	Replace wall mounted cabinets commercial kitchen	15	LF	$250	$3,750	2027	4
E2012	Fixed Casework	Replace/modernize reception desk	1	LS	$8,000	$8,000	2022	4
		Total Anticipated Expenditure for E Equipment & Furnishings				$139,738		

Hill Gymnasium

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
E2012	Fixed Casework	Replace floor cabinets (inc countertops) within Community Room	6	LF	$600	$3,600	2020	4
E2012	Fixed Casework	Replace wall mounted cabinets within Community Room	6	LF	$250	$1,500	2020	4
		Total Anticipated Expenditure for E Equipment & Furnishings				$5,100		

SECTION 7 - G BUILDING SITEWORK

G20 SITE IMPROVEMENTS

In addition to the buildings located at the site, we have also undertaken a cursory review and assessment of the major site improvements 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 (besides the emergency generators and exterior wall lights attached to the buildings) as they can't necessary be attached to one particular building.

DESCRIPTION

G2020 PARKING LOTS

G2021 Bases and Sub-Bases

The facility has an asphalt paved parking lot at the east and west sides of the building, as well as parking spaces at the north side off the roadway. The parking lot is accessed from Hill Road and has an asphalt surface with white line striping denoting areas of parking stalls (reference Photographs 99 through 101 in Appendix B). We were not provided with the original specification details of the paving and therefore cannot comment on the specific asphalt mix type, classification or its suitability for its existing use. Table G20-1 provides a summary of the site systems.

Table G20-1 Schedule of Site Systems

System Type	System Surface	Location	Measurement	No. of Parking Spaces	No. of ADA Parking Spaces
Parking Lot	Asphalt	West Parking Lot	2,550 SY	55	4
Parking Lot	Asphalt	Off Road Way	465 SY	31	1
Roadway	Asphalt	Road Way	1,400 SY	N/A	N/A

G2030 PEDESTRIAN PAVING

G2031 Paving & Surfacing

The building contained precast concrete pavers surrounding the buildings (reference Photographs 99 and 101 in Appendix B). We assume the paving is supported via a flexible base of sand setting bed and compacted sub grade.

G2040 SITE DEVELOPMENT

G2041 Fences & Gates

The facility contained a chain link fence and gate surrounding the emergency generator at the east side of the facility (reference Photograph 103 in Appendix B).

G2049 Miscellaneous Structures

The site contained a trash enclosure at the east side opposite the generator. The structure consisted of CMU walls with a painted plywood panel exterior to match the buildings (reference Photograph 103 in Appendix B).

G2050 LANDSCAPING

G2056 Planters

Landscaping consisted of shrubs; succulents and ground cover, with a number of trees (reference Photographs 99 through 101 in Appendix B).

CONDITION

G2020 PARKING LOTS

G2021 Bases and Sub-Bases

The asphalt paved areas throughout the site appeared to be in good condition; there were no major signs of surface deterioration such as alligator cracking. All areas of the asphalt should undergo asphaltic-based seal coat and the re-application of surface markings starting in the near-term and then every five-years to extend the life of the pavements. Furthermore we have also recommended a full asphalt mill overlay and associated restriping, as the typical EUL of this work is twenty-years. However we recommend that the asphalt is re-assessed at the time prior to replacement to ascertain is the work will be necessary.

G2030 PEDESTRIAN PAVING

G2031 Paving & Surfacing

The precast concrete pavers appeared to be in fair to good condition and will not require replacement during the cost study period.

G2040 SITE DEVELOPMENT

G2041 Fences & Gates

The perimeter fences and swinging gates appeared to be in good condition with no issues observed and no reported instances of disrepair. We do not anticipate a requirement for their replacement during the study period.

G2049 Miscellaneous Structures

The trash enclosure was in fair to good generally and will not require replacement during the cost study period. However we do recommend repainting of the exterior surfaces every-five years to maintain the appearance of the site.

G2050 LANDSCAPING

G2056 Planters

The planted beds are in good overall condition. The plant beds will require routine maintenance and replacement and should be addressed on an as-needed basis as part of routine maintenance and funded as an operational expense.

G40 SITE ELECTRICAL UTILITIES

DESCRIPTION

G4020 SITE LIGHTING

Margaret Todd Senior Center, Hill Gymnasium and Site

G4021 Fixtures & Transformers

Exterior lighting at the buildings consisted of a combination of surface mounted wall packs with aluminum housing and also pole mounted sodium fixtures which are located throughout the parking lot (reference Photographs 4, 5, 74, 99 and 102 in Appendix B).

G4090 OTHER SITE ELECTRICAL UTILITIES

Margaret Todd Senior Center

G4092 Site Emergency Power Generation

The building is backed-up by a 250 kW 132.5 KVA diesel generator which is located at the east side of the buildings. The transfer switch is located within the generator (reference Photographs 66 through 68 in Appendix B). The generator has a 600 gallon capacity diesel storage tank which is located below the generator.

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

Table G40-1 Summary of the Generator Equipment

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year
East of Buildings	Diesel Generator	Cummins	DQDA-6308519	B110186463	250 kW / 132.5 KVA	Diesel	2012

CONDITION

G4020 SITE LIGHTING

Margaret Todd Senior Center, Hill Gymnasium and Site

G4021 Fixtures & Transformers

The exterior light fixtures appeared to be in good condition, with no yellowing lenses or visible deterioration. We do not anticipate their replacement during the cost study period, apart from replacement of the fixtures on an individual basis, no actions are recommended during the study period.

G4090 OTHER SITE ELECTRICAL UTILITIES

Margaret Todd Senior Center

G4092 Site Emergency Power Generation

The emergency generator and transfer switch both appeared to be in good condition, as they were recently installed in 2012. Equipment such as this has a typical EUL of twenty-years; therefore based on observed conditions and their RUL we recommend that the generator and transfer switch are replaced late-term in the study period. We also recommend the continuation of regular maintenance and testing as require.

We understand that the generator has been taken off automatic start, and therefore in an emergency it has to be started manually. As far as we are aware there is no electrical equipment within the building that requires an uninterrupted power supply and automatic start.

PROJECTED EXPENDITURES

Identified recommended works that are required during the twenty-year study period are detailed below. We have included a 25% allowance for professional fees and general contractor overhead/profit and management costs (where applicable).

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
G2021	Bases and Sub-Bases	Undertake seal coating including re-striping at the parking lot	4,415	SY	$1.50	$6,623	2013	3
G2021	Bases and Sub-Bases	Undertake seal coating including re-striping at the parking lot*	4,415	SY	$1.50	$6,623	2018	3
G2021	Bases and Sub-Bases	Asphalt mill and overlay to include restriping	4,415	SY	$15.00	$66,245	2023	3
G2021	Bases and Sub-Bases	Undertake seal coating including re-striping at the parking lot	4,415	SY	$1.50	$6,623	2028	3

G2049	Miscellaneous Structures	Repaint trash enclosure	1	LS	$800	$800	2013	4
G2049	Miscellaneous Structures	Repaint trash enclosure	1	LS	$800	$800	2018	4
G2049	Miscellaneous Structures	Repaint trash enclosure	1	LS	$800	$800	2023	4
G2049	Miscellaneous Structures	Repaint trash enclosure	1	LS	$800	$800	2028	4
		Total Anticipated Expenditure for G Building Sitework				$89,293		

* None in year 2023 as mill and overlay taking place

Margaret Todd Senior Center

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
G4092	Site Emergency Power Generation	Replace emergency generator	250	KW	$258	$64,500	2032	1
G4092	Site Emergency Power Generation	Replace emergency transfer switch	1	EACH	$4,100	$4,100	2032	1
		Total Anticipated Expenditure for G Building Sitework				$68,600		

Appendix A

Twenty-Year Expenditure Forecast 2013 - 2032

FAITHFUL+GOULD
CONSTRUCTIVE EXPERTISE

20 YEAR EXPENDITURE FORECAST

Margaret Todd Senior Center
1560A Hill Road
Novato, CA

FAITHFUL+GOULD

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	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total	Total	Combined Total
						$			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
									Deferred	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
B. SHELL																															
B2011	Repair deteriorated wood battens	N/A	0	1.00	LS	$1,500.00	Deferred Maintenance	3	$1,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,500	$0	$1,500
B2011	Repaint exterior wall surfaces	8	6	10,800.00	SF	$1.88	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$20,304	$0	$0	$0	$0	$0	$0	$0	$20,304	$0	$0	$0	$0	$0	$0	$40,608	$40,608
B2021	Replace window units	30	14	1,240.00	SF	$78.50	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$97,340	$0	$0	$0	$0	$0	$0	$97,340	$97,340
B2031	Replace glazed single doors	30	14	14.00	EACH	$2,500.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$35,000	$0	$0	$0	$0	$0	$0	$35,000	$35,000
B2031	Replace hardware at main entrance doors	20	2	5.00	EACH	$375.00	Capital Renewal	1	$0	$0	$1,875	$0	$0	$0	$0	$0	$0	$1,875	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,875	$0	$5,625	$5,625
B2031	Replace automatic door opener	12	7	1.00	EACH	$2,800.00	Capital Renewal	1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,800	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,800	$0	$5,600	$5,600
B3011	Remove parapet wall plywood and install mineral cap sheet	N/A	0	5,250.00	SF	$7.50	Deferred Maintenance	3	$39,375	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$39,375	$0	$39,375
B3011	Replace cracked mineral cap sheet at equipment upstands	N/A	0	200.00	SF	$5.50	Deferred Maintenance	3	$1,100	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,100	$0	$1,100
B3011	Replace BUR covering	20	7	13,412.00	EACH	$12.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$160,944	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$160,944	$160,944
B3011	Solar panel removal and reinstall at time of roof covering replacements	N/A	7	1.00	LS	$10,000.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$10,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,000	$10,000
B3021	Replace skylights	30	7	180.00	SF	$50.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$9,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,000	$9,000
B3022	Replace roof hatch	30	7	1.00	EACH	$2,812.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$2,812	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,812	$2,812
							B. SHELL SUB-TOTALS		$41,975	$0	$1,875	$0	$0	$0	$20,304	$182,756	$0	$4,675	$0	$0	$0	$0	$152,644	$0	$0	$0	$0	$4,675	$41,975	$366,929	$408,904
C. INTERIORS																															
C1013	Replace acoustical retractable partition	15	1	250.00	SF	$50.00	Capital Renewal	4	$0	$12,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$12,500	$0	$0	$0	$0	$25,000	$25,000
C3012	Repair and repaint wall surfaces following removal of the acoustic wall panels	N/A	1	900.00	SF	$2.35	Capital Renewal	4	$0	$2,115	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,115	$2,115
C3012	Repaint interior wall and ceiling surfaces	8	4	14,500.00	SF	$1.88	Capital Renewal	4	$0	$0	$0	$0	$27,260	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$27,260	$27,260
C3012	Remove wall paper and paint interior wall surfaces	N/A	4	1,500.00	SF	$2.20	Capital Renewal	4	$0	$0	$0	$0	$3,300	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,300	$3,300
C3012	Replace wall paper within the assembly and activity rooms	15	4	1,400.00	SF	$7.50	Capital Renewal	4	$0	$0	$0	$0	$10,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,500	$0	$21,000	$21,000
C3012	Repaint interior wall and ceiling surfaces	8	12	16,900.00	SF	$1.88	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$31,772	$0	$0	$0	$0	$0	$0	$0	$31,772	$31,772
C3012	Repaint interior wall and ceiling surfaces within meeting rooms 1 through 3	5	3	2,600.00	SF	$1.88	Capital Renewal	4	$0	$0	$0	$4,888	$0	$0	$0	$0	$4,888	$0	$0	$0	$0	$0	$4,888	$0	$0	$0	$0	$4,888	$0	$0	$19,552	$19,552
C3024	Refinish wood plank floor	10	4	2,600.00	SF	$5.76	Capital Renewal	4	$0	$0	$0	$0	$14,976	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$14,976	$0	$0	$0	$0	$0	$0	$29,952	$29,952
C3024	Replace vinyl tile floor coverings at lobby	18	1	432.00	SF	$5.50	Capital Renewal	4	$0	$2,376	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,376	$0	$4,752	$4,752
C3024	~~Replace vinyl tile floor coverings generally~~	~~18~~	~~7~~	~~1,430.00~~	~~SF~~	~~$5.50~~	~~Capital Renewal~~	~~4~~	~~$0~~	~~$0~~	~~$0~~	~~$0~~	~~$0~~	~~$0~~	~~$0~~	~~$7,865~~	~~$0~~	~~$0~~	~~$0~~	~~$0~~	~~$0~~	~~$0~~	~~$0~~	~~$0~~	~~$0~~	~~$0~~	~~$0~~	~~$0~~	~~$0~~	~~$7,865~~	~~$7,865~~
C3024	Replace ceramic floor tiles within the commercial kitchen	30	7	530.00	SF	$12.50	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$6,625	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,625	$6,625
C3025	Replace sheet carpet floor covering with carpet tiles	10	1	677.00	SY	$56.25	Capital Renewal	4	$0	$38,081	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$38,081	$0	$0	$0	$0	$0	$0	$0	$0	$76,163	$76,163
C3032	Replace the exposed grid suspended ceiling systems	20	9	3,180.00	SF	$6.25	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$19,875	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$19,875	$19,875
C3032	Replace the concealed grid suspended ceiling systems	20	9	1,470.00	SF	$7.50	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$11,025	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$11,025	$11,025
							C. INTERIORS SUB-TOTALS		$0	$55,072	$0	$4,888	$56,036	$0	$0	$14,490	$4,888	$30,900	$0	$38,081	$31,772	$4,888	$14,976	$0	$12,500	$0	$4,888	$12,876	$0	$286,256	$286,256
D. SERVICES																															
D20	Renovation of the restrooms	20	7	2.00	EACH	$25,000.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,000	$50,000
D2013	Replace faucets (lavatories)	10	17	6.00	EACH	$225.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,350	$0	$0	$1,350	$1,350
D2014	Replace single stainless steel counter sinks and faucets	20	9	2.00	EACH	$1,600.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,200	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,200	$3,200
D2014	Replace double stainless steel counter sink and faucet	20	9	1.00	EACH	$2,170.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,170	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,170	$2,170
D2014	Replace commercial stainless steel pot sink and faucet within kitchen	20	9	1.00	EACH	$4,500.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,500	$4,500
D2014	Replace hand wash sink within kitchen	20	9	1.00	EACH	$1,850.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,850	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,850	$1,850
D2018	Replace drinking fountain	20	9	1.00	EACH	$2,500.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,500	$2,500
D2022	Replace instant water heater	15	12	1.00	EACH	$1,200.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,200	$0	$0	$0	$0	$0	$0	$0	$1,200	$1,200
D2022	Replace below counter instant water heater	15	7	1.00	EACH	$650.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$650	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$650	$650
D3041	Clean ductwork	5	0	13,412.00	SF	$0.25	Deferred Maintenance	3	$3,353	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,353	$0	$3,353
D3041	Clean ductwork	5	5	13,412.00	SF	$0.25	Routine Maintenance	3	$0	$0	$0	$0	$0	$3,353	$0	$0	$0	$0	$3,353	$0	$0	$0	$0	$3,353	$0	$0	$0	$0	$0	$0	$10,059	$10,059
D3042	Replace rooftop exhaust fans (8no.)	20	9	7,855.00	CFM	$1.25	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,819	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,819	$9,819
D3051	Replace evaporative cooler unit	20	9	1.00	EACH	$1,500.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,500	$1,500
D3052	Replace package unit (AC-1)	20	18	5.00	TONS	$2,449.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$12,245	$0	$0	$12,245	$12,245
D3052	Replace package unit (AC-2)	20	18	5.00	TONS	$2,449.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$12,245	$0	$0	$12,245	$12,245
D3052	Replace package unit (AC-3)	20	18	5.00	TONS	$2,449.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$12,245	$0	$0	$12,245	$12,245
D3052	Replace package unit (AC-4)	20	18	10.00	TONS	$2,449.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$24,490	$0	$0	$24,490	$24,490
D3052	Replace package unit (AC-5)	20	18	10.00	TONS	$2,449.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$24,490	$0	$0	$24,490	$24,490
D3052	Replace package unit (AC-6)	20	18	2.00	TONS	$2,449.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,898	$0	$0	$4,898	$4,898
D4011	Replace sprinkler heads	20	9	13,412.00	SF	$1.05	Capital Renewal	1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$14,083	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$14,083	$14,083
D5012	Preventative Maintenance of Electrical Equipment	3	0	1.00	EACH	$750.00	Deferred Maintenance	3	$750	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$750	$0	$750
D5012	Preventative Maintenance of Electrical Equipment	3	3	1.00	EACH	$750.00	Routine Maintenance	3	$0	$0	$0	$750	$0	$0	$750	$0	$0	$750	$0	$0	$750	$0	$0	$750	$0	$0	$750	$0	$0	$4,500	$4,500
D5012	Replace safety switches at roof level	30	9	6.00	EACH	$668.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$4,008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,008	$4,008
D5012	Replace rooftop solar modules	20-25	18	146.00	EACH	$375.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$54,750	$0	$0	$54,750	$54,750
D5033	Replace telephone system	20	9	13,412.00	SF	$1.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$13,412	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$13,412	$13,412

D5037	Replace fire alarm system	15	9	13,412.00	SF	$5.00	Capital Renewal	1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$67,060	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$67,060	$67,060
D5038	Replace security system	10	9	13,412.00	SF	$0.62	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,315	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,315	$8,315
D5039	Replace LAN system	15	9	13,412.00	SF	$1.81	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$24,276	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$24,276	$24,276
							D. SERVICES SUB-TOTALS		$4,103	$0	$0	$750	$0	$3,353	$750	$50,650	$0	$157,443	$3,353	$0	$1,950	$0	$0	$4,103	$0	$1,350	$146,113	$0	$4,103	$369,815	$373,918
E. EQUIPMENT & FURNISHING																															
E1093	Replace double deck gas convection oven	20-25	2	1.00	EACH	$11,172.00	Capital Renewal	3	$0	$0	$11,172	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$11,172	$11,172
E1093	Replace griddle with standard oven	20-25	2	1.00	EACH	$6,293.00	Capital Renewal	3	$0	$0	$6,293	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,293	$6,293
E1093	Replace 6 open burner range with standard oven	20-25	2	1.00	EACH	$6,023.00	Capital Renewal	3	$0	$0	$6,023	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,023	$6,023
E1093	Replace high temp booster dishwasher	20-25	2	1.00	EACH	$5,000.00	Capital Renewal	3	$0	$0	$5,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,000	$5,000
E1093	Replace coffee urn	20-25	2	1.00	EACH	$1,500.00	Capital Renewal	3	$0	$0	$1,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,500	$1,500
E1093	Replace 1 door freezer	20-25	2	1.00	EACH	$2,000.00	Capital Renewal	3	$0	$0	$2,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,000	$2,000
E1093	Replace 2 door refrigerator	20-25	2	1.00	EACH	$3,000.00	Capital Renewal	3	$0	$0	$3,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,000	$3,000
E2012	Replace floor cabinets (inc countertops)	20	7	90.00	LF	$600.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$54,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$54,000	$54,000
E2012	Replace wall mounted cabinets	20	7	90.00	LF	$250.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$22,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$22,500	$22,500
E2012	Replace floor cabinets within commercial kitchen	20	14	33.00	LF	$500.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$16,500	$0	$0	$0	$0	$0	$0	$16,500	$16,500
E2012	Replace wall mounted cabinets commercial kitchen	20	14	15.00	LF	$250.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,750	$0	$0	$0	$0	$0	$0	$3,750	$3,750
E2012	Replace/modernize reception desk	20	9	1.00	EACH	$8,000.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,000	$8,000
							E. EQUIPMENT & FURNISHING SUB-TOTALS		$0	$0	$34,988	$0	$0	$0	$0	$76,500	$0	$8,000	$0	$0	$0	$0	$0	$20,250	$0	$0	$0	$0	$0	$0	$139,738	$139,738
F. SPECIAL CONSTRUCTION AND DEMOLITION																															
																															$0
							F. SPECIAL CONSTRUCTION AND DEMOLITION SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
G. BUILDING SITEWORK																															
G4092	Replace emergency generator	20	19	250.00	KW	$258.00	Capital Renewal	1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$64,500	$0	$64,500	$64,500
G4092	Replace emergency transfer switch	20	19	1.00	EACH	$4,100.00	Capital Renewal	1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,100	$0	$4,100	$4,100
							G. BUILDING SITEWORK SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$68,600	$0	$68,600	$68,600
Z. GENERAL																															
																															$0
							Z. GENERAL SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
							Expenditure Totals per Year		$46,078	$55,072	$36,863	$5,638	$56,036	$3,353	$21,054	$324,396	$4,888	$201,018	$3,353	$38,081	$33,722	$4,888	$187,870	$4,103	$12,500	$1,350	$151,001	$86,151	$46,078	$1,231,337	$1,277,415
							Total Cost (Inflated @ 4% per Yr.)		$46,078	$57,275	$39,871	$6,342	$65,554	$4,079	$26,640	$426,883	$6,690	$286,111	$4,963	$58,624	$53,990	$8,139	$325,330	$7,389	$23,412	$2,630	$305,900	$181,507	$46,078	$1,891,330	$1,937,408

20 YEAR EXPENDITURE FORECAST

Hill Gymnasium
1560C Hill Road
Novato, CA

FAITHFUL+GOULD

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	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total	Total	Combined Total
						$			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
									Deferred	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
B. SHELL																															
B2011	Repaint exterior wall surfaces	8	6	9,900.00	SF	$1.88	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$18,612	$0	$0	$0	$0	$0	$0	$0	$0	$18,612	$0	$0	$0	$0	$0	$0	$37,224	$37,224
B2021	Replace window units	30	14	315.00	SF	$78.50	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$24,728	$0	$0	$0	$0	$0	$0	$24,728	$24,728
B2031	Replace glazed double door	30	14	1.00	EACH	$3,500.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,500	$0	$0	$0	$0	$0	$0	$3,500	$3,500
B2039	Replace double hollow metal doors	30	14	4.00	EACH	$3,588.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$14,352	$0	$0	$0	$0	$0	$0	$14,352	$14,352
B3011	Replace TPO roof membrane	20	18	11,000.00	EACH	$15.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$165,000	$0	$0	$165,000	$165,000
B3011	Solar panel removal and reinstall at time of roof membrane replacements	N/A	18	1.00	LS	$10,000.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,000	$0	$0	$10,000	$10,000
B3021	Replace skylights	30	18	270.00	SF	$50.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$13,500	$0	$0	$13,500	$13,500
B3022	Replace roof hatch	30	18	2.00	EACH	$2,812.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,624	$0	$0	$5,624	$5,624
							B. SHELL SUB-TOTALS		$0	$0	$0	$0	$0	$0	$18,612	$0	$0	$0	$0	$0	$0	$0	$61,192	$0	$0	$0	$194,124	$0	$0	$273,928	$273,928
C. INTERIORS																															
C3012	Repaint interior wall surfaces within the gym	8	4	8,200.00	SF	$1.88	Capital Renewal	4	$0	$0	$0	$0	$15,416	$0	$0	$0	$0	$0	$0	$0	$15,416	$0	$0	$0	$0	$0	$0	$0	$0	$30,832	$30,832
C3012	Repaint interior wall and ceiling surfaces within the community room and restrooms	8	4	1,200.00	SF	$1.88	Capital Renewal	4	$0	$0	$0	$0	$2,256	$0	$0	$0	$0	$0	$0	$0	$2,256	$0	$0	$0	$0	$0	$0	$0	$0	$4,512	$4,512
C3012	Replace wall paper within the community room	15	4	600.00	SF	$7.50	Capital Renewal	4	$0	$0	$0	$0	$4,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,500	$4,500
C3024	Refinish wood plank floors within the gym and community room	10	4	7,900.00	SF	$5.76	Capital Renewal	4	$0	$0	$0	$0	$45,504	$0	$0	$0	$0	$0	$0	$0	$0	$0	$45,504	$0	$0	$0	$0	$0	$0	$91,008	$91,008
C3032	Replace the exposed grid suspended ceiling systems	20	9	1,270.00	SF	$6.25	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,938	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,938	$7,938
							C. INTERIORS SUB-TOTALS		$0	$0	$0	$0	$67,676	$0	$0	$0	$0	$7,938	$0	$0	$17,672	$0	$45,504	$0	$0	$0	$0	$0	$0	$138,790	$138,790
D. SERVICES																															
D20	Renovation of the restrooms	20	7	2.00	EACH	$15,000.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$30,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$30,000	$30,000
D2013	Replace faucets (lavatories)	10	17	6.00	EACH	$225.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,350	$0	$0	$0	$1,350	$1,350
D2014	Replace single stainless steel counter sinks and faucets	20	9	2.00	EACH	$1,600.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,200	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,200	$3,200
D2018	Replace drinking fountains	20	9	2.00	EACH	$2,500.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,000	$5,000
D2022	Replace water heater	15	8	20.00	GAL	$35.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$700	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$700	$700
D3041	Clean ductwork	5	0	9,280.00	SF	$0.25	Deferred Maintenance	3	$2,320	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,320	$0	$2,320
D3041	Clean ductwork	5	5	9,280.00	SF	$0.25	Routine Maintenance	3	$0	$0	$0	$0	$0	$2,320	$0	$0	$0	$0	$2,320	$0	$0	$0	$0	$2,320	$0	$0	$0	$0	$0	$6,960	$6,960
D3042	Replace rooftop exhaust fans (2no.)	20	9	1,290.00	CFM	$1.25	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,613	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,613	$1,613
D3052	Replace package unit	20	5	8.00	TONS	$2,449.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$19,592	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$19,592	$19,592
D3052	Replace heat & ventilation unit	25	3	1.00	EACH	$30,000.00	Energy & Sustainability	3	$0	$0	$0	$30,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$30,000	$30,000
D4011	Replace sprinkler heads	20	9	9,280.00	SF	$1.05	Capital Renewal	1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,744	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,744	$9,744
D5012	Preventative Maintenance of Electrical Equipment	3	0	1.00	EACH	$600.00	Deferred Maintenance	3	$600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$600	$0	$600
D5012	Preventative Maintenance of Electrical Equipment	3	3	1.00	EACH	$600.00	Routine Maintenance	3	$0	$0	$0	$600	$0	$0	$600	$0	$0	$600	$0	$0	$600	$0	$0	$600	$0	$0	$600	$0	$0	$3,600	$3,600
D5012	Replace safety switch at roof level	30	9	1.00	EACH	$668.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$668	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$668	$668
D5012	Replace rooftop solar modules	20-25	18	256.00	EACH	$375.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$96,000	$0	$0	$96,000	$96,000
D5037	Replace fire alarm system	15	9	9,280.00	SF	$5.00	Capital Renewal	1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$46,400	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$46,400	$46,400
D5038	Replace security system	10	9	9,280.00	SF	$0.62	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,754	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,754	$0	$11,507	$11,507
							D. SERVICES SUB-TOTALS		$2,920	$0	$0	$30,600	$0	$21,912	$600	$30,700	$0	$72,978	$2,320	$0	$600	$0	$0	$2,920	$0	$1,350	$96,600	$5,754	$2,920	$266,334	$269,254
E. EQUIPMENT & FURNISHING																															
E2012	Replace floor cabinets (inc countertops) within Community Room	20	7	6.00	LF	$600.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$3,600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,600	$3,600
E2012	Replace wall mounted cabinets within Community Room	20	7	6.00	LF	$250.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$1,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,500	$1,500
							E. EQUIPMENT & FURNISHING SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$5,100	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,100	$5,100
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	$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	$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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
							Expenditure Totals per Year		$2,920	$0	$0	$30,600	$67,676	$21,912	$19,212	$35,800	$0	$80,916	$2,320	$0	$18,272	$0	$106,696	$2,920	$0	$1,350	$290,724	$5,754	$2,920	$684,151	$687,071
							Total Cost (Inflated @ 4% per Yr.)		$2,920	$0	$0	$34,421	$79,171	$26,659	$24,309	$47,110	$0	$115,168	$3,434	$0	$29,254	$0	$184,762	$5,259	$0	$2,630	$588,953	$12,122	$2,920	$1,153,253	$1,156,173

20 YEAR EXPENDITURE FORECAST

Site Systems
Hill Road
Novato, CA

FAITHFUL+GOULD

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	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total	Total	Combined Total
						$			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
									Deferred	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	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	$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	$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	$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	$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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
F. SPECIAL CONSTRUCTION AND DEMOLITION																														$0	
							F. SPECIAL CONSTRUCTION AND DEMOLITION SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
G. BUILDING SITEWORK																															
G2021	Undertake seal coating including re-striping at the parking lot and roadway	5	0	4,415.00	SY	$1.50	Deferred Maintenance	3	$6,623	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,623	$0	$6,623
G2021	Undertake seal coating including re-striping at the parking lot and roadway (None in year 2023)	5	5	4,415.00	SY	$1.50	Routine Maintenance	3	$0	$0	$0	$0	$0	$6,623	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,623	$0	$0	$0	$0	$0	$13,245	$13,245
G2021	Asphalt mill and overlay to include re-striping at the parking lot and roadway	20	10	4,415.00	SY	$15.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$66,225	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$66,225	$66,225
G2049	Repaint trash enclosure	5	0	1.00	LS	$800.00	Deferred Maintenance	4	$800	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$800	$0	$800
G2049	Repaint trash enclosure	5	5	1.00	LS	$800.00	Capital Renewal	4	$0	$0	$0	$0	$0	$800	$0	$0	$0	$0	$800	$0	$0	$0	$0	$800	$0	$0	$0	$0	$0	$2,400	$2,400
							G. BUILDING SITEWORK SUB-TOTALS		$7,423	$0	$0	$0	$0	$7,423	$0	$0	$0	$0	$67,025	$0	$0	$0	$0	$7,423	$0	$0	$0	$0	$7,423	$81,870	$89,293
Z. GENERAL																														$0	
							Z. GENERAL SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
							Expenditure Totals per Year		$7,423	$0	$0	$0	$0	$7,423	$0	$0	$0	$0	$67,025	$0	$0	$0	$0	$7,423	$0	$0	$0	$0	$7,423	$81,870	$89,293
							Total Cost (Inflated @ 4% per Yr.)		$7,423	$0	$0	$0	$0	$9,031	$0	$0	$0	$0	$99,213	$0	$0	$0	$0	$13,368	$0	$0	$0	$0	$7,423	$121,611	$129,034

Appendix B
Photographs

FAITHFUL+GOULD
CONSTRUCTIVE EXPERTISE

Margaret Todd Senior Center

Photograph No. 1

View of the south elevation and the main entrance.

Photograph No. 2

View of the plywood board with batten detailing at the outside of the elevation wall constructions.

Photograph No. 3

View of the wall finish and the steel post supporting structure.

Photograph No. 4

View of the pylwood and batten wall construction and a section of batten that has deteriorated throuygh moisture penetration (below the light fixture).

Photograph No. 5

A further view of a deteriorated batten.

Photograph No. 6

View of the fixed single pane window units.

Photograph No. 7

View of single pane glazing.

Photograph No. 8

View of the exterior glazed doors with push bar operation.

Photograph No. 9

View of the BUR system at roof level.

Photograph No. 10

View of the BUR covering and plywood parapet walls.

Photograph No. 11

View of multipule roof levels and the skylights. Also shows the metal capping at the top of the parapets.

Photograph No. 12

View of the cracked mineral cap sheet at the up stands of the lower parapets.

Photograph No. 13

View of the debris at the storm water outlets.

Photograph No. 14

View of the plywood boards at the inner side of the parapets that are saturated with moisture.

Photograph No. 15

View of the plywood boards where they have deformed due to moisture penetration. Common issue throughout.

Photograph No. 16

View of the pyramid shaped skylights.

Photograph No. 17

View of the roof hatch.

Photograph No. 18

View of the moveable partition.

Photograph No. 19

View of one of the worn and aged panels belonging to the moveable partition.

Photograph No. 20

View of the single wood interior doors.

Photograph No. 21

View of the double wood interior doors.

Photograph No. 22

View of the stainless steel restroom paritions.

Photograph No. 23

View of the finishes within the assembly room.

Photograph No. 24

View of the finishes within the commercial kitchen area.

Photograph No. 25

View of the finishes within the corridors.

Photograph No. 26

View of the wall and ceiling finishes within one of the game rooms.

Photograph No. 27

View of the acoustical partitions. Surfaces are heavily marked and aged.

Photograph No. 28

View of loose fabric at the acoustical partitions.

Photograph No. 29

View of the suspenmded ceiling system.

Photograph No. 30

View of a stained ceiling tile.

Photograph No. 31

View of the wall mounted water closet within the main restrooms. Also shows the ceramic floor and wall finishes.

Photograph No. 32

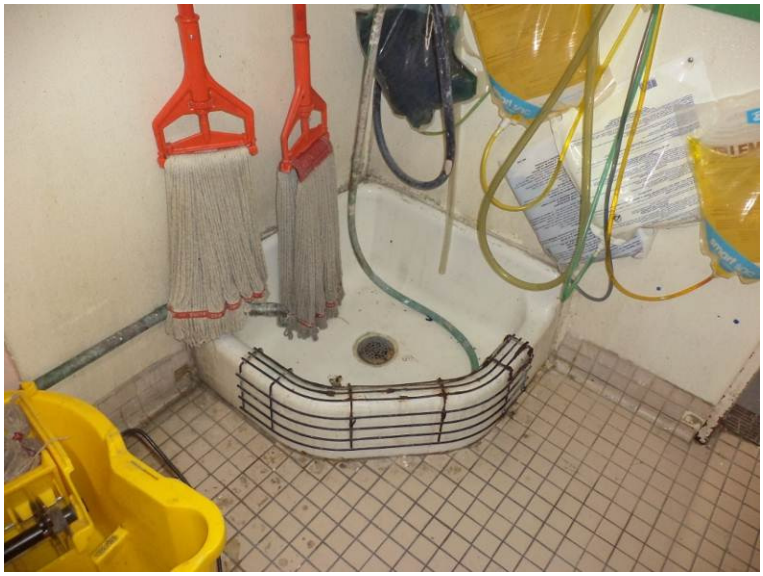
View of floor mounted water closet and wall mounted lavatory within the individual restrooms.

Photograph No. 33

View of the wall mounted urinals.

Photograph No. 34

View of the vanity top lavatories.



Photograph No. 35

View of the janitors floor mounted sink.

Photograph No. 36

View of the commercial kitchen sink.

Photograph No. 37

View of the stainless steel hand wash sink in the kitchen.

Photograph No. 38

View of one of the stainless steel counter sinks in the meeting room.

Photograph No. 39

View of a drinking fountain.

Photograph No. 40

View of the water heater.

Photograph No. 41

View of the below counter water heater.

Photograph No. 42

View of the roof top exhaust fan and evaporative cooler unit.

Photograph No. 43

View of one of the up blast centrifugal exhaust fans.

Photograph No. 44

View of one of the smaller capacity exhaust fans.

Photograph No. 45

View of the evaporative cooler unit for the kitchen area.

Photograph No. 46

View of one of the rooftop package units.

Photograph No. 47

View of one of the rooftop package units. Also shows the corroded safety switch.

Photograph No. 48

View of a wall mounted thermostat.

Photograph No. 49

View of the sprinkler riser.

Photograph No. 50

View of the MDP enclosure.

Photograph No. 51

View of the MDP and meter.

Photograph No. 52

View of interior electrical panel boards.

Photograph No. 53

View of the the roof level solar panels.

Photograph No. 54

View of the solar electrical units.

Photograph No. 55

View of the solar disconnect switch for the gymnasium building.

Photograph No. 56

View of the solar disconnect switch for this building

Photograph No. 57

View of the lighting control panel.

Photograph No. 58

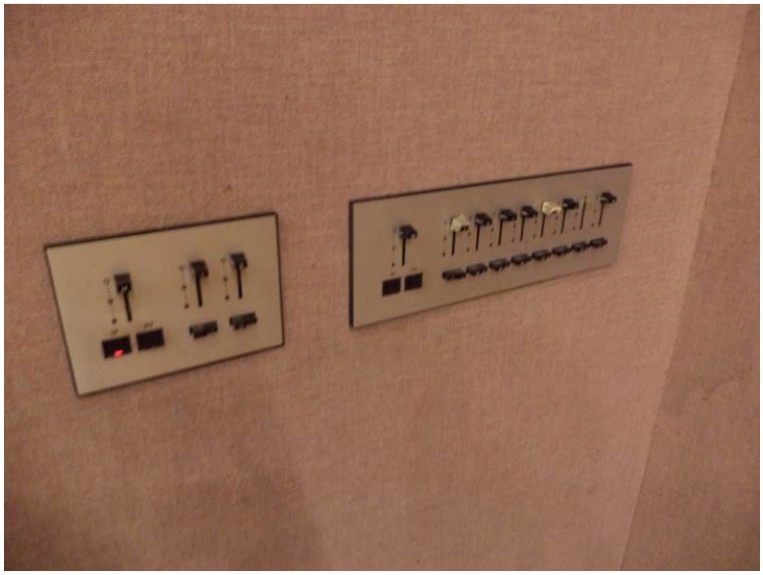
View of the lighting control panel.

Photograph No. 59

View of the surface mounted light fixtures.

Photograph No. 60

View of the recessed light fixtures.



Photograph No. 61

View of the lighting switches/controls.

Photograph No. 62

View of the fire alarm control panel.

Photograph No. 63

View of the reception counter.

Photograph No. 64

View of the commercial ovens and cooktops.

Photograph No. 65

View of the commercial flat top grill.

Photograph No. 66

View of the emergency generator.

Photograph No. 67

View of the emergency generator control unit.

Photograph No. 68

View of the transfer panel which is located at the generator.

Hill Gymnasium

Photograph No. 69

View of roof structure at the gymnasium building and the light fixtures.

Photograph No. 70

View of the exterior wall constructions.

Photograph No. 71

View of the plywood exterior wall systems.

Photograph No. 72

View of the window units.

Photograph No. 73

View of the awning opening window units.

Photograph No. 74

View of the glazed aluminum double doors and fixed window units.

Photograph No. 75

View of the exterior double hollow metal doors.

Photograph No. 76

View of the roof level single-ply membrane.

Photograph No. 77

View of the lower level roof membrane.

Photograph No. 78

View of the roof level outlets.

Photograph No. 79

View of the finishes within the restroom and also the toilet partitions.

Photograph No. 80

View of the gymnasium finishes.

Photograph No. 81

View of the finishes within the community room section of the building.

Photograph No. 82

View of the finishes within the community room section of the building and also the fixed cabinets and interior wood double doors.

Photograph No. 83

View of the floor mounted water closet.

Photograph No. 84

View of the wall munted unrinal.

Photograph No. 85

View of the vanity top lavatories.

Photograph No. 86

View of the stainless steel single sink within the community room fixed cabinets.

Photograph No. 87

View of the wall monted drinking fountain.

Photograph No. 88

View of the domestic water heater.

Photograph No. 89

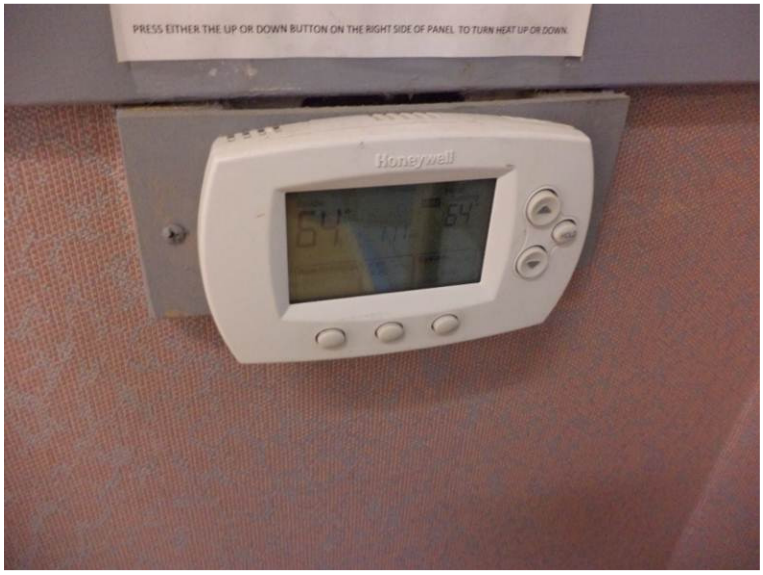
View of the roof level exhaust fan.

Photograph No. 90

View of the roof level heating and ventilation unit.

Photograph No. 91

View of the rooftop package unit serving the community room and restrooms.



Photograph No. 92

View of the wall monted thermostat controls.

Photograph No. 94

View of the sprinkler riser.

Photograph No. 95

View of the fire extinguisher and tag.

Photograph No. 96

View of the electrical panel and disconnect for the solar installation.

Photograph No. 97

View of the solar equipment at roof level.

Photograph No. 98

View of the fire alarm control panel.

Site Systems

Photograph No. 99

View of the parking lot at the west side of the site.

Photograph No. 100

View of the parking lot at the west side of the site.

Photograph No. 101

View of the parking lot at the east side of the site.

Photograph No. 102

View of the pole lighting at the parking lot.

Photograph No. 103

View of the wood and CMU garbish enclosure.

Appendix C

Asset Inventory

Location	Facility	Location of Asset	Life Cycle Code	Type	Equipment Type	Manufacturer	Model No.	Serial No.	Tag	Fuel Type	Capacity / Rating	Speed (FPM)	No. of Landings	Year Manufacture
Hill Road	Margaret Todd Senior Center	Custodial Room	D2022	Hot Water Service	Water Heater	Nortiz	N-0931M-ASM	2008.01-000371		Natural Gas	N/A			2011
Hill Road	Margaret Todd Senior Center	Work Room	D2022	Hot Water Service	Water Heater	Unknown	Unknown	Unknown		Unknown	N/A			Unknown
Hill Road	Margaret Todd Senior Center	Roof Level (Serve's Meeting Room 1, 8, Electrical Room & Custodial Room)	D3042	Exhaust Ventilation Systems	Exhaust Fan	Penn	Unknown	Unknown	EF-1	Electric	350 CFM			Unknown
Hill Road	Margaret Todd Senior Center	Roof Level (Serve's Meeting Room 1, 8, Electrical Room & Custodial Room)	D3042	Exhaust Ventilation Systems	Exhaust Fan	Penn	Unknown	Unknown	EF-2	Electric	350 CFM			Unknown
Hill Road	Margaret Todd Senior Center	Roof Level (Serve's Meeting & Storage Room)	D3042	Exhaust Ventilation Systems	Exhaust Fan	Penn	Unknown	Unknown	EF-3	Electric	870 CFM			Unknown
Hill Road	Margaret Todd Senior Center	Roof Level (Serve's Meeting & Storage Room)	D3042	Exhaust Ventilation Systems	Exhaust Fan	Penn	Unknown	Unknown	EF-4	Electric	870 CFM			Unknown
Hill Road	Margaret Todd Senior Center	Roof Level (Serve's Card Room)	D3042	Exhaust Ventilation Systems	Exhaust Fan	Penn	Unknown	Unknown	EF-5	Electric	475 CFM			Unknown
Hill Road	Margaret Todd Senior Center	Roof Level (Serve's Men's & Women's Room)	D3042	Exhaust Ventilation Systems	Exhaust Fan	Penn	Unknown	Unknown	EF-6	Electric	645 CFM			Unknown
Hill Road	Margaret Todd Senior Center	Roof Level (Serve's Toilet)	D3042	Exhaust Ventilation Systems	Exhaust Fan	Penn	Unknown	Unknown	EF-7	Electric	295 CFM			Unknown

Location	Facility	Location of Asset	Life Cycle Code	Type	Equipment Type	Manufacturer	Model No.	Serial No.	Tag	Fuel Type	Capacity / Rating	Speed (FPM)	No. of Landings	Year Manufacture
Hill Road	Margaret Todd Senior Center	Roof Level (Kitchen Hood)	D3042	Exhaust Ventilation Systems	Exhaust Fan	Penn	Unknown	Unknown	EF-8	Electric	4,000 CFM			Unknown
Hill Road	Margaret Todd Senior Center	Roof Level (Serve's Kitchen)	D3051	Terminal Self-Contained Units	Evaporative Cooler Unit	Frigiking	FD450A	Unknown		Electric	4500 CFM			Unknown
Hill Road	Margaret Todd Senior Center	Roof Level (Serve's Library & Card Room)	D3052	Package Units	Package Unit	Carrier	48HCEA06A2A5A0A0A0	0311G40103	AC-1	Electric / Natural Gas	Assumed 5 Ton / 93,000 BTU / HR			2011
Hill Road	Margaret Todd Senior Center	Roof Level (Serve's Main Lobby & Offices)	D3052	Package Units	Package Unit	Carrier	48HCEA06A2A5A0A0A0	0311G40105	AC-2	Electric / Natural Gas	Assumed 5 Ton / 93,000 BTU / HR			2011
Hill Road	Margaret Todd Senior Center	Roof Level (Serve's Craft Room)	D3052	Package Units	Package Unit	Carrier	48HCEA06A2A5A0A0A0	0311G40104	AC-3	Electric / Natural Gas	Assumed 5 Ton / 93,000 BTU / HR			2011
Hill Road	Margaret Todd Senior Center	Roof Level	D3052	Package Units	Package Unit	Carrier	48HCDD12A2A5A0A0A0	3310G40552	AC-4	Electric / Natural Gas	Assumed 10 Ton / 14,800 BTU / HR			2011
Hill Road	Margaret Todd Senior Center	Roof Level	D3052	Package Units	Package Unit	Carrier	48HCDD12A2A5A0A0A0	3310G40554	AC-5	Electric / Natural Gas	Assumed 10 Ton / 14,800 BTU / HR			2011
Hill Road	Margaret Todd Senior Center	Roof Level (Serve's Small Conference Room)	D3052	Package Units	Package Unit	Carrier	48VLNA2404030	2710C87350	AC-6	Electric / Natural Gas	Assumed 2 Ton / 32,000 BTU / HR			2011
Hill Road	Margaret Todd Senior Center	East of Buildings	G4092	Site Emergency Power Generation	Diesel Generator	Cummins	DQDA-6308519	B110186463		Diesel	250 kW / 132.5 KVA			2012

Location	Facility	Location of Asset	Life Cycle Code	Type	Equipment Type	Manufacturer	Model No.	Serial No.	Tag	Fuel Type	Capacity / Rating	Speed (FPM)	No. of Landings	Year Manufacture
Hill Road	Hill Gymnasium	Custodial Room	D2022	Hot Water Service	Water Heater	Unknown	PCE2010MSA	A05M008618		Electric	20 Gallons			Unknown
Hill Road	Hill Gymnasium	Low Roof Level	D3042	Exhaust Ventilation Systems	Exhaust Fan	CentriMaster	PRN126E	XSA881201	EF-1	Electric	940 CFM			Unknown
Hill Road	Hill Gymnasium	Low Roof Level	D3042	Exhaust Ventilation Systems	Exhaust Fan	CentriMaster	PRN80	XSA881205		Electric	Assumed 350 CFM			Unknown
Hill Road	Hill Gymnasium	Low Roof Level (Serve's Community Room)	D3052	Package Units	Package Unit	Carrier	48HJD012-521-	2194G030140		Electric / Natural Gas	8 Ton / 98,400 / 147,600 BTU / HR			1994
Hill Road	Hill Gymnasium	High Roof Level (Serve's Gymnasium)	D3052	Package Units	Heat and Ventilation Unit (HV-1)	Air Dyne	LSG-1500	2922		Electric	Unknown			Unknown

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 Novato (were possible), and reviewed the following documentation:

Original Construction Drawings Margaret Todd Senior Center:

Architectural Drawings A-1.1 through A-9.3, dated September 1990 by Roland Miller Associates

Structural Drawings S-1 through S-7, dated September 1990 by Dennis Fagent Associates

Mechanical Drawings M-1 through M-3, dated September 1990 by O'Mahony & Myer

Plumbing Drawings P-1 and P-2, dated September 1990 by O'Mahony & Myer

Electrical Drawings E-1 through E-7, dated September 1990 by O'Mahony & Myer

Hill Gymnasium Addition:

Architectural Drawings A1 through A9, dated March 1994 by Wilkinson & Hartman Architects

Structural Drawings S1 through S5, dated March 1994 by R.B. Gould

Mechanical Drawings M1 through M3, dated March 1994 by Hansen & Slaughter, Inc.

Electrical Drawings E1 through E2, dated March 1994 by Hansen & Slaughter, Inc.

Appendix E

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.