

Facility Condition Assessment Services
PA #:107-1564-14 / Work Order Contract # 12870

Tier 2 Report of
Facility Condition Assessment

For
State of Oregon
Hillcrest - Generator Room
2450 Strong Rd SE
Salem,
Oregon 97302



Date of Report: May 16, 2014

Provided By:

Faithful+Gould, Inc

Provided For:

State of Oregon
Oregon Youth Authority

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EXECUTIVE SUMMARY

INTRODUCTION

In accordance with the work order contract held between State of Oregon and its Oregon Youth Authority (OYA), Project PA #:107-1564-14 / Work Order Contract # 12870 dated April 1, 2014 and Faithful+Gould Inc, this completed report provides a comprehensive Facility Condition Assessment of the Generator Room located at 2450 Strong Rd SE, Salem, Oregon, 97302 (The Property).

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 together with a capital expenditure forecast of expenditures anticipated over the next 10 years. The expenditure forecast does not account for typical preventative maintenance items such as changing filters to fan coil units.

Our cost rates to produce life cycle and replacement cost estimates are based on our knowledge of the local regional market rates. The data in this report represent an opinion of probable cost of construction and is made on the basis of the experience, qualifications, and best judgment of the professional consultant familiar with the construction industry.

The report provides a summary of the anticipated primary expenditures over the 10-year study period. Further details of these expenditures are included within each respective report section and within the deficiency report, in Appendix A.

In this report we have calculated the Facility Condition Needs Index (FCNI) which is used in Facilities Management to provide a benchmark to compare the relative condition of a group of facilities. The FCNI is primarily used to support asset management initiatives of federal, state, and local government facilities organizations.

LIMITING CONDITIONS

This report has been prepared for the exclusive and sole use of the State of Oregon. The report may not be relied upon by any other person or entity without the express written consent of Faithful+Gould.

Any reliance on this report by a third party, any decisions that a third party makes based on this report, or any use at all of this report by a third party is the responsibility of such third parties. Any reuse without written verification or adaptation by Faithful+Gould for the specific purpose intended will be at user's sole risk and without liability or legal exposure to Faithful+Gould.

The assessment of the building/site components was performed using methods and procedures that are consistent with standard commercial and customary practice as outlined in ASTM Standard E 2018-08 for PCA assessments. As per this ASTM Standard, the assessment of the building/site components was based on a visual walk-through site visit, which captured the overall condition of the site at that specific point in time only.

No legal surveys, soil tests, environmental assessments, geotechnical assessments, detailed barrier-free compliance assessments, seismic assessments, detailed engineering calculations, or quantity surveying compilations have been made. No responsibility, therefore, is assumed concerning these matters. Faithful+Gould did not design or construct the building(s) or related structures and therefore will not be held responsible for the impact of any design or construction defects, whether or not described in this report. No guarantee or warranty, expressed or implied, with respect to the property, building components, building systems, property systems, or any other physical aspect of The property is made.

The recommendations and our opinion of probable costs associated with these recommendations, as presented in this report, are based on walk-through non-invasive observations of the parts of the building which were readily accessible during our visual review. Conditions may exist that are not as per the general condition of the system being observed and reported in this report. Opinions of probable costs presented in this report are also based on information received during interviews with operations and maintenance staff. In certain instances, Faithful+Gould has been required to assume that the information provided is accurate and cannot be held responsible for incorrect information received during the interview process. Should additional information become available with respect to the condition of the building and/or site elements, Faithful+Gould requests that this information be brought to our attention so that we may reassess the conclusions presented herein.

The opinions of probable costs are intended for global budgeting purposes only. Faithful+Gould has no control over the cost of labor and materials, general contractor's or any subcontractor's method of determining prices, or competitive bidding and market conditions. The data in this report represent an opinion of probable cost of construction and is made on the basis of the experience, qualifications, and best judgment of the professional consultant familiar with the construction industry. Faithful+Gould cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from this or subsequent Cost Estimates. The scope of work and the actual costs of the work recommended can only be determined after a detailed examination of the site element in question, understanding of the site restrictions, understanding of the effects on the ongoing operations of the site/building, definition of the construction schedule, and preparation of tender documents.

PROJECT DETAILS

On April 17 2014, Nathan Monks and Kyle Thompson of Faithful+Gould visited The Property to observe and document the condition of the building and site components. During our site visit, Faithful+Gould was assisted by Dan Dederer (Maintenance & Operations Supervisor) who is associated with State of Oregon.

BUILDING DETAILS

Item	Description
Project Name	Hillcrest - Generator Room
Property Type	Generator Room
Full Address	2450 Strong Rd SE Salem, Oregon 97302
Onsite Date	April 17 2014
Historic District	No
Historic Building	No
Year Built	1970
Occupancy Status	Occupied
Number of Stories	1
Gross Building Area (SF)	240
Current Replacement Value	\$ 14,400
ARV/GSF (\$/Sq Ft)	\$60.00 / Sq Ft

BUILDING DESCRIPTION

PROPERTY EXECUTIVE SUMMARY

The generator room was constructed in 1970 and provides protection from the natural elements to the generator equipment.

ARCHITECTURAL STRUCTURE EXECUTIVE SUMMARY

The generator room is founded on a reinforced concrete slab on grade with concrete masonry unit (CMU) walls with weather board located below the eaves at the gable ends. The roof is constructed of a traditional wood construction with a manufactured corrugated steel roofing system. The building interior has an exposed concrete slab with painted CMU walls.

The structure of the generator room is in fair condition. We noted deterioration of the weather boarding to the gable. The exterior and interior paint is in fair condition and will require re-painting mid-term in the study period.

MECHANICAL EXECUTIVE SUMMARY

The Generator Room has no heating or cooling systems.

ELECTRICAL EXECUTIVE SUMMARY

The generator serves as the primary source of emergency power to the youth corrections campus. Rated at 150 kilowatts, the 1960's vintage diesel generator supplies 120/208 volt power to a Zenith automatic transfer switch and 800 amp distribution panel in Norblatt Hall that serves the campus.

The generator equipment appears to be in fair condition and we anticipate will last beyond the study period.

SITE EXECUTIVE SUMMARY

The building has grassed and gravel surrounds.



SUMMARY OF FINDINGS

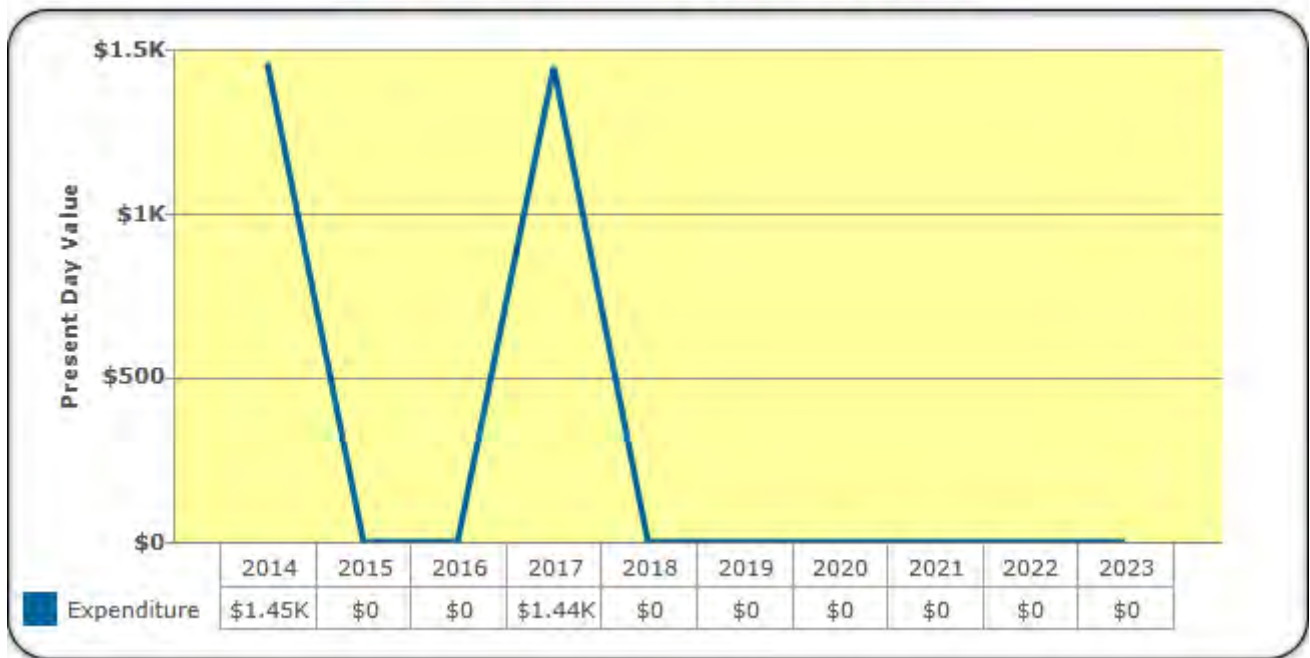
This report represents summary-level findings for the Property Condition Assessment. The deficiencies identified in this assessment can be combined with potential new construction requirements to develop an overall Long Term Capital Needs Plan that can be the basis for a facility wide capital improvement funding strategy. Key findings from the Assessment include:

Key Findings	Metric
Current Year Facility Condition Needs Index	10.10
Immediate Capital Needs (included in FCNI)	\$1,454
Year 2 to Year 10 Capital Needs	\$1,442

BUILDING EXPENDITURE SUMMARY

The building expenditure summary section provides an executive overview of the findings from the assessment. The chart below provides a summary of yearly anticipated expenditures over the study period for the Generator Room building. In addition, we have scheduled key findings highlighting key items of greater than \$5,000 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. The results illustrate a total anticipated expenditure over the study period of circa \$2,897.

Expenditure Forecast Over Study Period





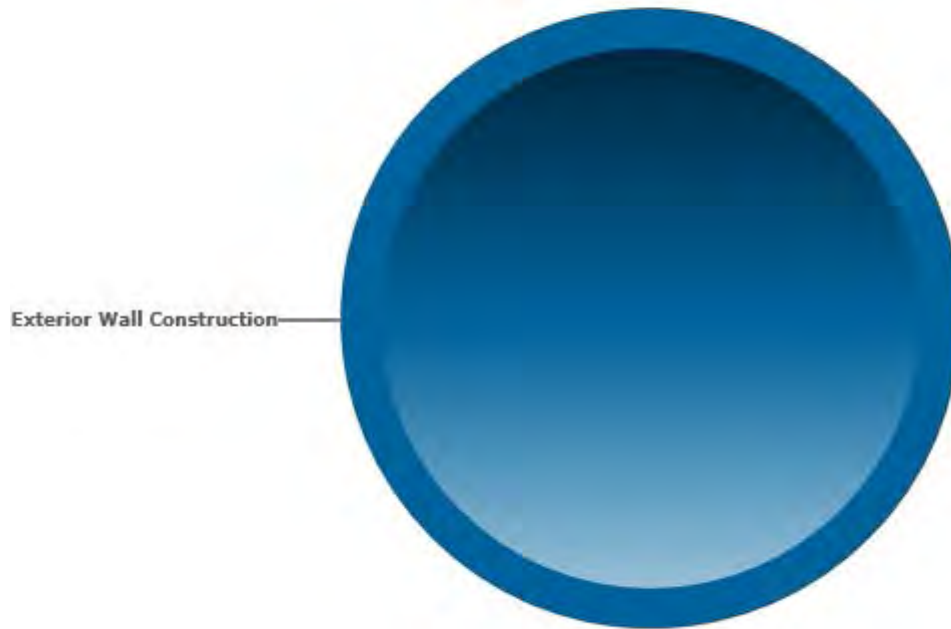
KEY FINDINGS

No key findings above \$5,000 were noted

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

DISTRIBUTION OF IMMEDIATE (YEAR 1) NEEDS BY BUILDING SYSTEM

Distribution of Immediate Needs by Building System



Building System	Estimated Cost	Percentage of Total Cost
Exterior Wall Construction	\$1,454	100.0%
Total	\$1,454	100%

DISTRIBUTION OF YEAR 2-YEAR 10 NEEDS BY BUILDING SYSTEMS

Distribution of Capital Needs by Building System



Building System	Estimated Cost	Percentage of Total Cost
B20 Exterior Enclosure	\$664	46.1%
C30 Interior Finishes	\$778	53.9%
Total	\$1,442	100%

FACILITY CONDITION NEEDS INDEX

In this report we have calculated the Facility Condition Needs Index (FCNI) which is used in Facilities Management to provide a benchmark to compare the relative condition of a group of facilities. The FCNI is primarily used to support asset management initiatives of federal, state, and local government facilities organizations.

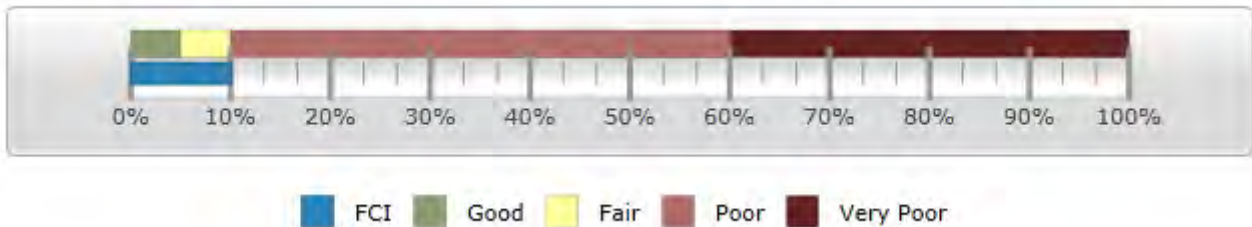
The FCNI is the ratio of accumulated Total Cost (TC) (Deferred Maintenance, Capital Renewal and Plant Adaptation) to the Current Replacement Value (CRV) for a constructed asset calculated by dividing the TC by the CRV. The range is from zero for a newly constructed asset, to one for a constructed asset with a TC value equal to its CRV. Acceptable ranges vary by "Asset Type", but as a general guideline the FCNI scoring system is as follows:

$$FCNI = \frac{\text{Deferred Maintenance + Capital Renewal + Plant Adaptation (TC)}}{\text{Current Replacement Value of the Facility(s) (CRV)}}$$

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

Condition	Definition	Percentage Value
GOOD	In a new or well-maintained condition, with no visual evidence of wear, soiling or other deficiencies	0% to 5%
FAIR	Subject to wear, and soiling but is still in a serviceable and functioning condition	5% to 10%
POOR	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.	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 60%

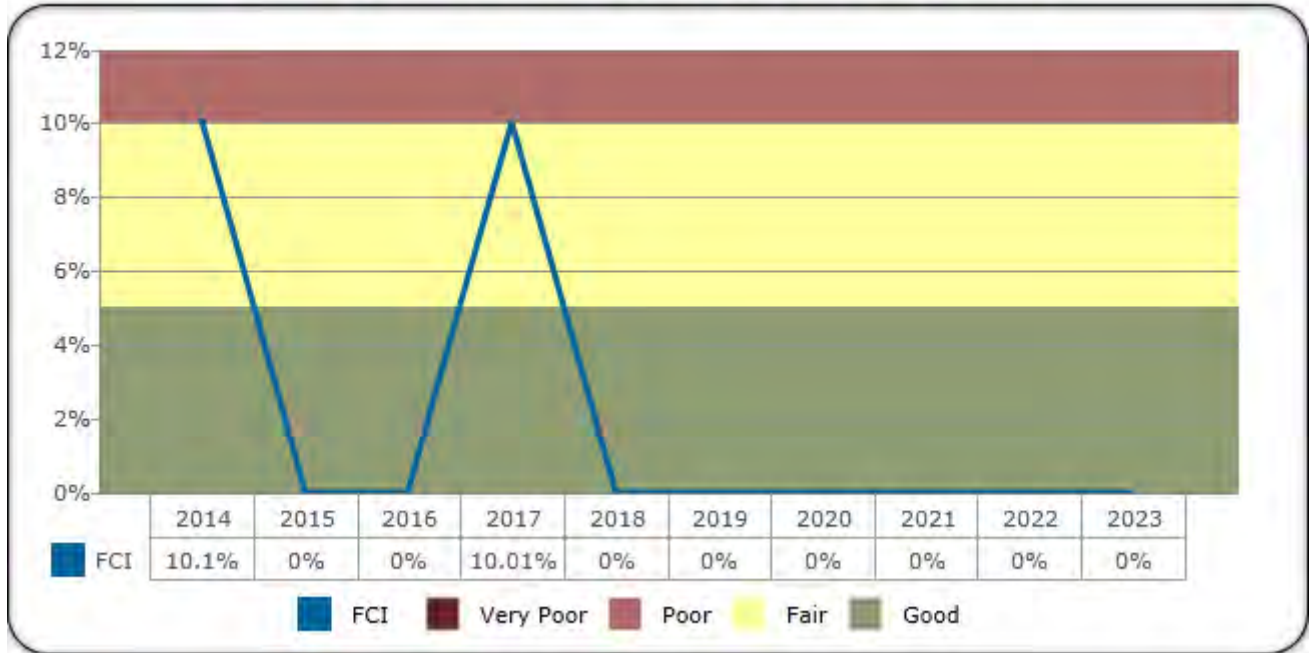
The chart below indicates the current FCNI ratio of the Generator Room building.



Generator Room, FCNI: 10.10%

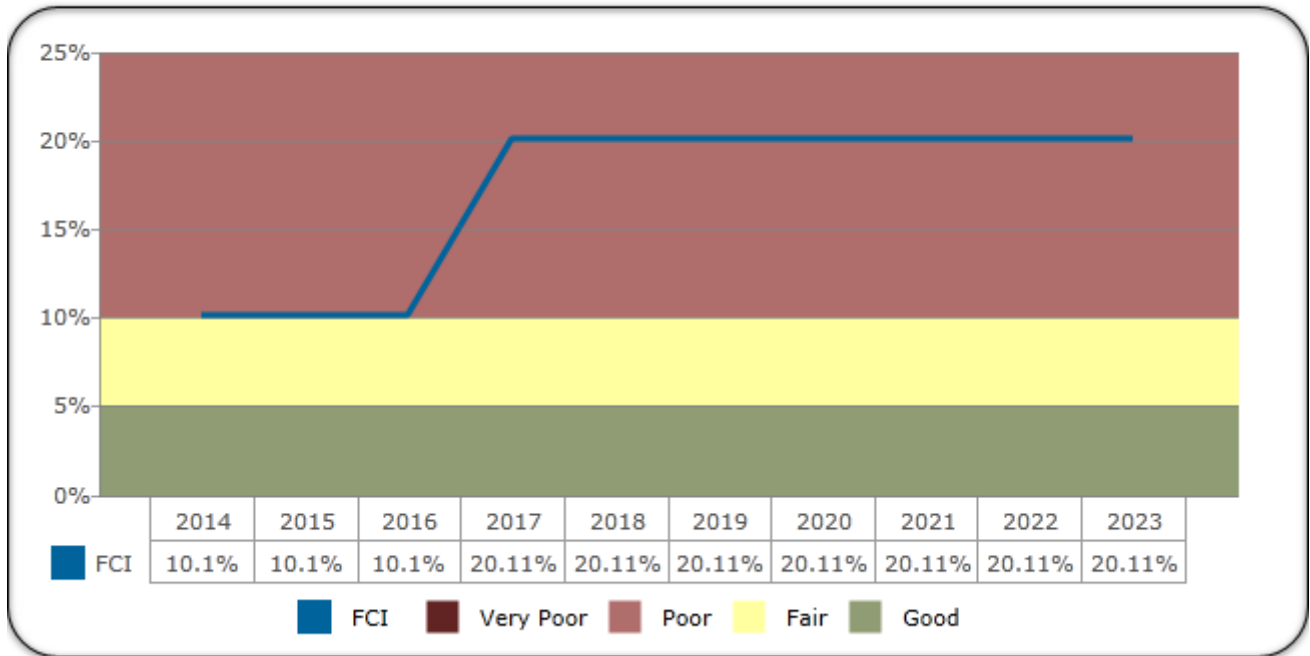
The chart below indicates the effects of the FCNI ratio per year, assuming the required funds and expenditures ARE made to address the identified actions each year.

Year by Year Effects of FCNI Over the Study Period



The Chart below indicates the cumulative effects of the FCNI ratio over the study period assuming the required funds and expenditures are NOT provided to address the identified works and deferred maintenance each year.

Cumulative Effects of FCNI over the Study Period



NEEDS SORTED BY PRIORITIZATION OF WORK

Faithful+Gould has prioritized the identified work in order to assist with analyzing the deficiencies found during the assessment. The baseline prioritization model is not just based on replacement year or criticality but uses four key data attributes to build an overall importance metric for every recommendation: System type, the cause or nature of the issue, timing and building mission incorporated into the model with relative weighting to provide an overall priority score. Priority categories are shown below:

- Priority 1**
Currently Critical

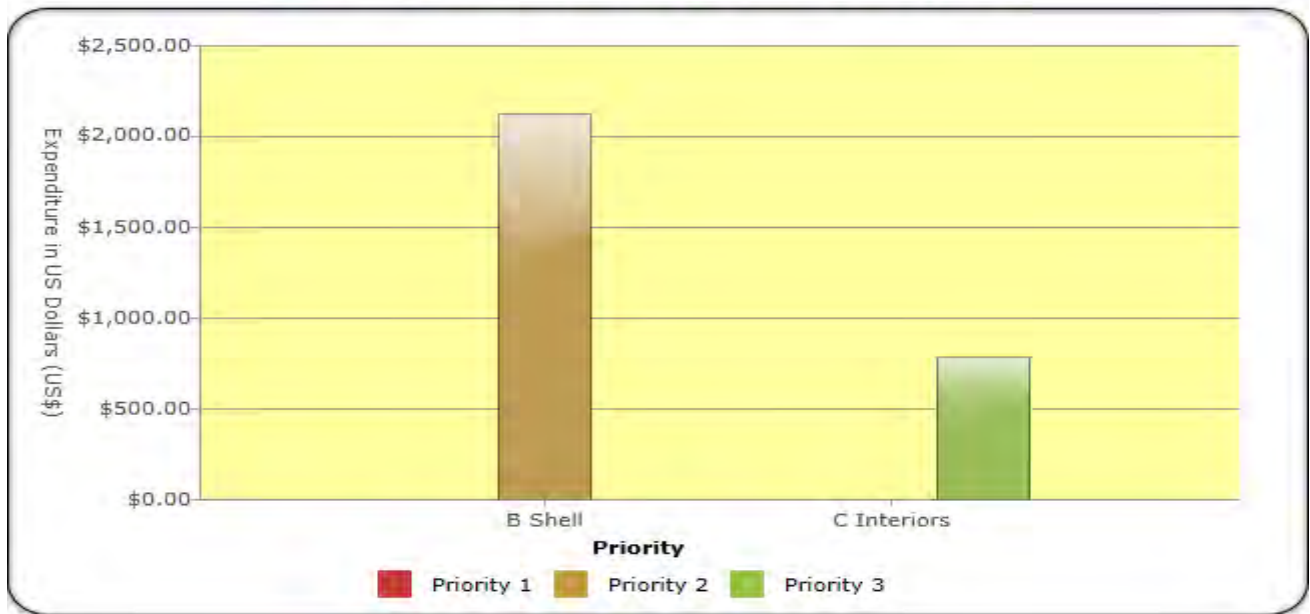
 - Systems requiring immediate action that have failed, compromises staff or public safety or requires to be upgraded to comply with current codes and accessibility
- Priority 2**
Potentially Critical:

 - A system or component is nearing end of useful life, if not addressed will cause additional deterioration and added repair costs
- Priority 3**
Necessary / Not Critical:

 - Lifecycle replacements necessary but not critical or mid-term future replacements to maintain the integrity of the facility or component

The chart below illustrates the breakdown of expenditure according the priority coding providing an opportunity to strategically plan and effectively direct funding to the highest priority.

Planning Horizon Needs by System and Priority



Building System	Priority 1	Priority 2	Priority 3	Total
B Shell	\$	\$2,119	\$	\$2,119
C Interiors	\$	\$	\$778	\$778
Totals	\$	\$2,119	\$778	\$2,897

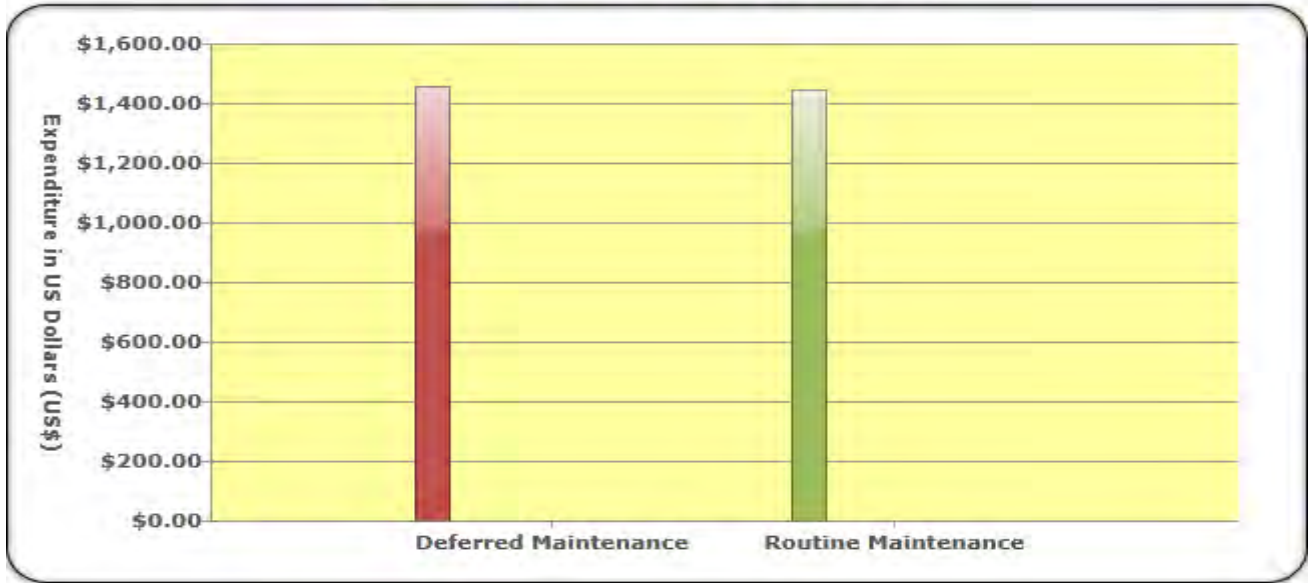
NEEDS SORTED BY PLAN TYPE

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 assessment. The following Plan Types are shown below:

Plan Type 1 Deferred Maintenance	<ul style="list-style-type: none"> •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	<ul style="list-style-type: none"> •Maintenance that is planned and performed on a routine basis to maintain and preserve the condition
Plan Type 3 Capital Renewal	<ul style="list-style-type: none"> •Planned replacement of building systems that have or will reach the end of their useful life
Plan Type 4 Energy & Sustainability	<ul style="list-style-type: none"> •When the repair or replacement of equipment or systems are recommended to improve energy and sustainability performance
Plan Type 5 ADA	<ul style="list-style-type: none"> •When the repair or replacement of equipment or systems are recommended to comply with ADA
Plan Type 6 Seismic	<ul style="list-style-type: none"> •Projects identified as part of a Seismic Study
Plan Type 7 Environmental	<ul style="list-style-type: none"> •When the repair or replacement of equipment or systems are recommended to remove hazardous materials
Plan Type 8 Functionality	<ul style="list-style-type: none"> •Projects identified to improve the functionality of the facility

The chart below illustrates the breakdown of expenditure according to the Plan Type or deficiency categories providing an opportunity to strategically plan and effectively direct funding.

Planning Horizon Needs by Category



Building System	Total Cost
Deferred Maintenance	\$1,454
Routine Maintenance	\$1,442
Total	\$2,897



APPENDICES

- APPENDIX A: Capital Expenditures
- APPENDIX B: Photographic Record
- APPENDIX C: Document Review and
Warranty Information
- APPENDIX D: Equipment Tables
- APPENDIX E: Glossary of Terms



APPENDIX A:
CAPITAL EXPENDITURES

Deficiency Report

Generator Room

GSF: 240

Year Built: 1960

Renew Year :

Replacement Cost: \$14,400

Fiscal Year	\$	ID	CSI	Type Name	Description	Materials				Estimate	\$
						Qty	Units	Cost	Other Material		
2014	\$1,454	85217	B2010	Deferred Maintenance	Replace Weather board	60	SF	\$24.24	\$1,454	\$1,454	
2015	\$50	85218	B2030	Routine Maintenance	Paint Exterior Doors	20	SF	\$2.52	\$50	\$50	
2019	\$634	85216	B2010	Routine Maintenance	Repaint Exterior Wall Surfaces	420	SF	\$1.51	\$634	\$634	
2023	\$50	85219	B2030	Routine Maintenance	Paint Exterior Doors	20	SF	\$2.52	\$50	\$50	
Total										Total:	\$2,189

The background features abstract geometric shapes. A large blue triangle is in the top-left corner. A green shape, resembling a stylized 'T' or a cross-section, is positioned in the center-left. A large green trapezoidal shape occupies the bottom-right area. Thin white lines intersect these shapes, creating a grid-like structure.

APPENDIX B:
PHOTOGRAPHIC RECORD



B2011 Exterior Wall Construction.1:- Painted CMU walls and decayed weather board.



B2039 Other Doors & Entrances.1:- View of mesh door.



B3011 Roof Finishes.1:- A view of the corrugated roof finish.



B3016 Gutters and Downspouts.1:- View of the gutter and downspout.



C3012 Wall Finishes to Interior Walls.1:- View of paint finish to CMU walls.



D3011 Oil Supply System.1:- Gasoline and Diesel fuel storage tank



G4092 Site Emergency Power Generation.1:- Generator



APPENDIX C:
DOCUMENT REVIEW AND
WARRANTY INFORMATION

The following documents were reviewed as part of the facility condition assessment of the Generator Room facility:

- ✚ Client supplied reports and project forecasts



APPENDIX D:
EQUIPMENT TABLES

Table G40 Summary of Site Emergency Power Generation

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Barcode Tag	Capacity/ Rating	Voltage	Year
Interior	Generator - Diesel	Kato	S060-0045	63445-422	Unknown	150	120/208 3 Phase	1994



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
GPF	Gallons Per Flush
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
FCU	Fan Coil Unit
EF	Exhaust Fan
VFD	Variable Frequency Drives
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: $R = \text{Thickness (in inches)} / K$

Structural Frame – The components or building systems that support the building's non-variable 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.