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**OB / GYN - Building 9** 1900 Massachusetts Ave SE Washington, DC

**Comprehensive Facility Condition Assessment And Space Utilization Study** DCAM-13-NC-0162

October 16, 2014

### **Submitted to:**

Ms. Cassandra White **Capital Program Financial & Systems Manager Department of General Services – Construction Division** 2000 14th Street NW, 8th Floor Washington, DC 20009

Innovation for the Built Environment\*

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## **Appendices**

Appendix A: Expenditure Forecast Appendix B: Photographic Record

Appendix C: Survey Information Resulting In Plant Adaptation Recommendations

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### EXECUTIVE SUMMARY

### 1.1 GENERAL DESCRIPTION

4tell Solutions, LP ("4tell") was retained by Washington DC's Department of General Services to undertake Property Condition Assessments (PCAs) on Municipal Facilities. The purpose of the PCAs are to inventory the elemental components in the buildings, identify key attributes of those components, determine estimated remaining useful lives (RULs) and replacement costs of those components, and to identify physical deficiencies and repair costs needing immediate attention.

### 1.2 SCOPE OF WORK

The Property Condition Assessments were carried out by 4tell Solutions, LP and were conducted following guidance in ASTM International's "Standard Guide for Property Condition Assessments: Baseline Condition Assessment Process (ASTM E2018-08)" as well as guidance from Washington DC's Department of General Services regarding additional survey information and cost estimates for possible plant adaptations. The Property Condition Report (PCR) summarizes the PCA process which includes the following:

- Document Reviews and Interviews
- Walk Through Site Assessment Surveys
- Building Components:
  - o Itemized Inventories
  - Conditions
  - o Opinions of remaining useful life (RUL)
  - Opinions of replacement costs at RUL
- Physical Deficiencies
  - Opinions of probable costs to remedy
- Survey Information Resulting in Plant Adaptation Recommendations
  - ADA Accessibility
  - Safety and Security
  - Fire Protection
  - Access Control
  - o Haz Mat
  - LEED Potential
  - o Green Roof for Low Impact Development



### 1.3 DEFINITIONS

**Property Condition Report (PCR)** - The work product resulting from completing a PCA is a Property Condition Report. The PCR incorporates the information obtained during the Walk-Through Site Assessment Survey, the Document Review and Interviews to develop Opinions of Probable Costs for components at their RUL along with costing for remediating physical deficiencies identified.

<u>Document Reviews and Interviews</u> - Includes document reviews, research, and interviews to augment the walk-through survey so as to assist the consultant's understanding of the subject property and identification of physical deficiencies.

<u>Walk Through Site Assessment Survey</u> - The walk-through survey identifies the subject property's elemental components, conditions, RULs, replacement costs at RUL, and costs to remediate identified physical deficiencies.

<u>Costing</u> - Replacement and repair costs are based on unit rates published from the 17th Annual Edition of the <u>Whitestone Facility Maintenance and Repair Cost Reference Guide</u> combined with local experience gained by 4tell. The quantities associated with each item have been estimated during a walk-through site assessment and do not represent exact measurements or quantities.

<u>Current Replacement Value (CRV) Methodology</u> – The value to replace the property as determined by the property's square footage and a square foot unit cost based on building classification using the <u>Whitestone Facility Operations Cost Reference Guide</u>.

<u>Physical Deficiencies</u> - In defining good commercial and customary practice for conducting a baseline PCA, the goal is to identify and communicate physical deficiencies to a user. The term physical deficiencies means the presence of conspicuous defects or material deferred maintenance of a subject property's material systems, components, or equipment as observed during the field observer's walk-through survey. This definition specifically excludes deficiencies that may be remedied with routine maintenance, miscellaneous minor repairs, normal operating maintenance, etc., and excludes de minimis conditions that generally do not present material physical deficiencies of the subject property.

<u>Survey Information Resulting in Plant Adaptation Recommendations</u> - These are methodical questions based upon defined industry or Owner standards resulting in a general costing amount that gives an Owner a cash expenditure to plan on within proformas.

<u>Life Cycle</u> - There are various approaches for determining an elemental component's service life such as a "modeling" approach where an industry standard expected useful life (EUL) is added to a component's date of installation resulting in a modeled or calculated expectation of replacement for that item. The methodology used in 4tell's reported value for the expected replacement of an elemental component is a field assessed opinion of remaining useful life (RUL). Observed RUL takes into account a field assessor's observation of the elemental component along with other factors such as maintenance records or observed measurable parameters.



<u>Planning Horizon</u> – Since the life cycles of many elemental components exceed industry standard cash flow proformas, 4tell's Property Condition Report (PCR) only includes a timeframe of importance to an Owner's immediate cash flow planning. In the case of this report, Washington DC's Department of General Services requested a planning horizon window of 6 years. The Planning Horizon years and remaining useful lives (RULs) as defined in this report's approach are summarized in the table below:

Planning Horizon	Remaining Useful Life (RUL)	
Year 1 - "Immediate" or "Current"	0	
Year 2	1	
Year 3	2	
Year 4	3	
Year 5	4	
Year 6	5	



#### 1.4 LIMITING CONDITIONS

This report has been prepared for the exclusive and sole use of the Department of General Services. The report may not be relied upon by any other person or entity without the express written consent of 4tell Solutions, LP.

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. 4tell Solutions, LP accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made, or actions taken, based on this report.

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 barrierfree compliance assessments, seismic assessments, detailed engineering calculations, or quantity surveying compilations have been made. No responsibility, therefore, is assumed concerning these matters. 4tell Solutions, LP did not design nor 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 opinions 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, 4tell Solutions, LP 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, 4tell Solutions, LP 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. 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. We expressly waive any responsibilities for the effects of any action taken as a result of these endeavors unless we are specifically advised of prior to, and participate in the action, at which time, our responsibility will be negotiated.

Our opinions and recommendations presented in our reports will be rendered in accordance with generally accepted professional standards and are not to be construed as a warranty or guarantee

regarding existing or future physical conditions at the Site or regarding compliance of Site systems/components and procedures/operations with the various regulating codes, standards, regulations, ordinances, etc.

#### 1.5 **BUILDING SUMMARY**

Item	Description	
Project Name	OB / GYN - Building 9	
Full Address	1900 Massachusetts Ave SE Washington, DC 20003	
Year Built	1977	
Gross Building Area (SF)	136,604	
Current Replacement Value	\$ 46,314,220	
CRV/GSF (\$/Sq Ft)	\$339.04 / Sq Ft	

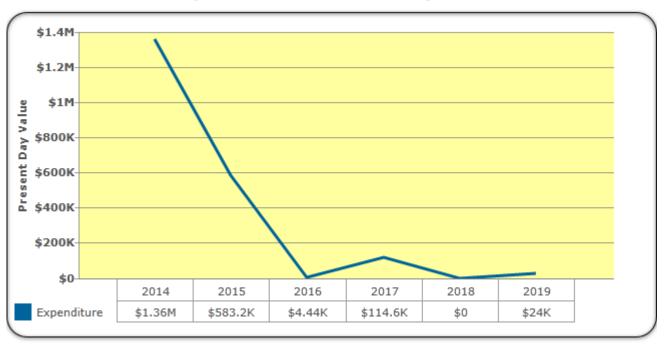
#### 1.6 SUMMARY OF FINDINGS

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 Finding	Metric	
Current Year	2.93%	
Facility Condition Index	2.93%	
Property Replacement Value	\$46,314,220	
(in Current Dollars)	\$40, <b>314,22</b> 0	
Current Year Capital Needs	\$1,356,925	
(included in FCI)	\$1,330,323	
Current Year Non-Capital Needs	\$11,830	
(not included in FCI)	\$11,03U	
Year 2 to Year 6 Capital Needs	\$726,230	

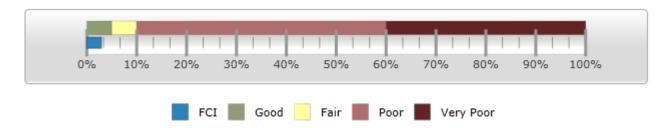


### **Expenditure Forecast Over Study Period**



### 1.7 FACILITY CONDITION INDEX

The Facility Condition Index (FCI) gives an indication of a building's or portfolio's overall state of condition. The values are based on a 0-100%+ scale and are derived by dividing the repair costs for a facility by a theoretical replacement value. This replacement value is based on building type from the 17th Annual Edition of the Whitestone Facility Maintenance and Repair Cost Reference. Typically, the FCI is calculated using only the current condition values, not taking into account the future need identified in the life cycle evaluation. Accounting principles indicate that a value of 65%, or the "rule of two-thirds", be utilized for the FCI threshold for identifying potential replacement candidates. Once the current repair costs reach 65%, or roughly two-thirds of the full replacement value of the estimated cost to replace a facility, it may not be prudent to continue to fund repairs. In cases where aggressive facilities planning is expected to be necessary, this threshold may be adjusted to address more pressing need.

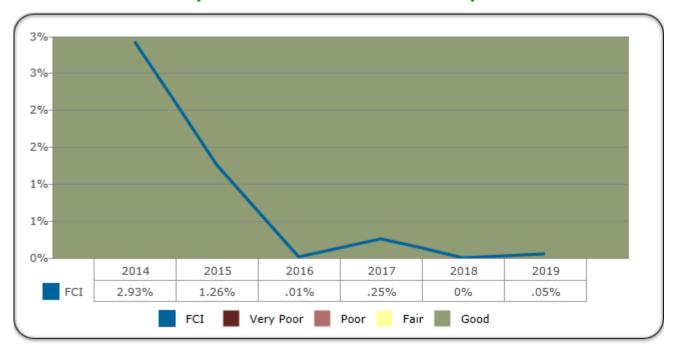


OB / GYN - Building 9 Current Year FCI = 2.93%



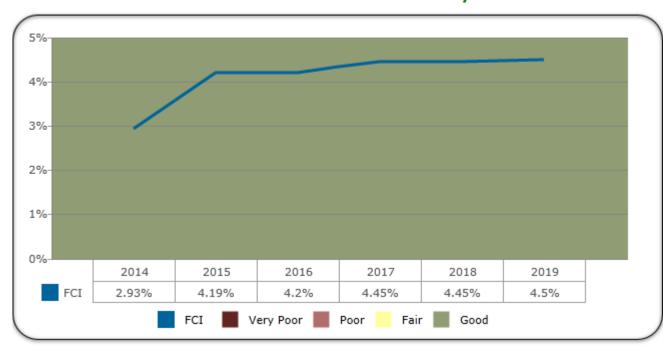
The chart below indicates the effects of the FCI ratio per year, assuming the required funds and expenditures **ARE** made to address the identified actions each year.

### Year by Year Effects of FCI Over the Study Period



The Chart below 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 works and deferred maintenance each year.

### Cumulative Effects of FCI over the Study Period

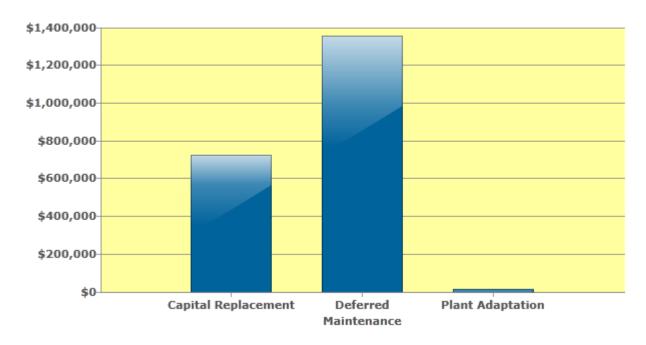




### 1.8 PLANNING HORIZON CATEGORY NEEDS: CURRENT YEAR TO YEAR 6

The deficiencies are sorted by categories which define briefly the reason the need exists. A requirement may have more than one applicable category. The category is selected based on the need priority, the most heavily impacted building system and the category with the greatest life safety significance.

### Planning Horizon Needs by Category



Plan Types	Total Cost
Deferred Maintenance	\$1,356,925
Plant Adaptation	\$11,830
Capital Replacement	\$726,230
Total	\$2,094,985

The following is a list of the Plan Types with a brief description:

### **Capital Replacement**

Indicates the need for replacement or major refurbishment of an asset, typically based on age and use but required in the future within a reasonable planning horizon.

### **Deferred Maintenance**

Indicates a deficiency or a conditional, performance, or failure related issue with an elemental component that has persisted past a reasonable time frame and should have been remedied prior to the time of assessment.



### **Routine Maint. Minor Repairs**

Indicates the need for normal or ongoing minor component renewal or repair, generally required to sustain the anticipated life cycle of the asset.

### **Plant Adaptation**

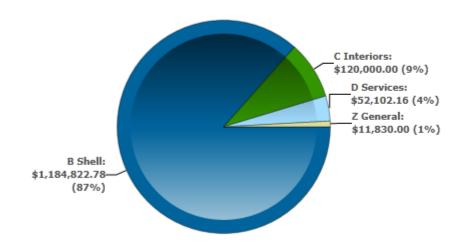
Indicates the need for alterations to the property for improvement in safety and security, ADA, hazardous materials abatement, green roof and LEED requirements.

Note that the Category selected is the primary factor understood to be the cause for the recommendation. However, there may be more than one driver of the need for repair, replacement, or upgrade.



## 1.9 BUILDING SYSTEM NEEDS: IMMEDIATE

## Distribution of Immediate Needs by Building System

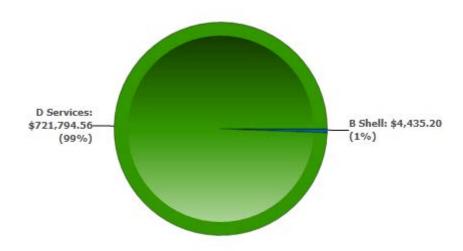


Building Systems	Estimated Costs	Percentage of Total Cost
B Shell	\$1,184,823	86.6%
C Interiors	\$120,000	8.8%
D Services	\$52,102	3.8%
Z General	\$11,830	0.9%
Total	\$1,368,755	100.0%



## 1.10 BUILDING SYSTEM NEEDS: YEAR 2 - YEAR 6

## Distribution of Capital Needs by Building System



Building Systems	Estimated Costs	Percentage of Total Cost
B Shell	\$4,435	0.6%
D Services	\$721,795	99.4%
Total	\$726,230	100.0%

∂Plan` MF-024

# SUBSTRUCTURE SYSTEMS

### A10 **FOUNDATIONS**

Item	Description	
A1031 Standard Slab on Grade	Concrete Slab	
Condition	Fair	
RUL	20	
Plan Type	Capital Replacement	
Quantity	35000	
Unit of Measure	Sq Ft	
Unit Cost	\$8.21	



# B SHELL SYSTEMS

## **B10** SUPERSTRUCTURE

Item	Description	
B1021 Flat Roof Construction	Cast-in-Place Reinforced Concrete Roof Deck	
Condition	Fair - Good	
RUL	30	
Plan Type	Capital Replacement	
Quantity	33057	
Unit of Measure	SF	
Unit Cost	\$19.97	

## **B20** EXTERIOR ENCLOSURE

Item	Description	
B2011 Exterior Wall Construction	Clay Brick, Exterior, = 3 Stories	
Condition	Fair	
RUL	20	
Plan Type	Capital Replacement	
Quantity	380000	
Unit of Measure	Sq Ft	
Unit Cost	\$35.93	





Exterior Wall Clay Brick

Item	Description	
B2011 Exterior Wall Construction	Stucco, Painted, Exterior, 2 Stories	
Condition	Poor	
RUL	0	
Plan Type	Deferred Maintenance	
Quantity	60000	
Unit of Measure	Sq Ft	
Unit Cost	\$13.31	







**Exterior Wall Stucco Finish** 

Туре	Component Description	Plan Type	Year	Expenditures (\$)
B2011	Replace Stucco, Painted, Exterior, 2 Stories	Deferred Maintenance	2014	\$798,420

Item	Description
B2021 Windows	Alum Fixed Therm Break Dbl Glaz, Gas, 2 Stry, 12SF
Condition	Fair
RUL	10
Plan Type	Capital Replacement
Quantity	27
Unit of Measure	Each
Unit Cost	\$481.92



Item	Description
B2021 Windows	Wood Operable Window, = 3 Stories, 12 Sq Ft
Condition	Poor
RUL	0
Plan Type	Deferred Maintenance
Quantity	81
Unit of Measure	Each
Unit Cost	\$503.60



**Operable Wood Windows** 

Туре	Component Description	Plan Type	Year	Expenditures (\$)
B2021	Replace Wood Operable Window, = 3 Stories, 12 Sq Ft	Deferred Maintenance	2014	\$40,792



Item	Description
B2023 Storefronts	Storefronts
Condition	Fair
RUL	12
Plan Type	Capital Replacement
Quantity	5
Unit of Measure	
Unit Cost	\$15,000

### **Comments**

5 - Patio Area, Three Building Entries (One Double Set of Two Doors)



Aluminum Storefront At Patio Area

Item	Description
B2032 Solid Exterior Doors	Steel, Painted, Exterior Door
Condition	Poor
RUL	2



Plan Type	Capital Replacement	
Quantity	5	
Unit of Measure	Each	
Unit Cost	\$887.04	



**Exterior Painted Metal Door** 

Туре	Component Description	Plan Type	Year	Expenditures (\$)
B2032	Replace Steel, Painted, Exterior Door	Capital Replacement	2016	\$4,435

### **B30** ROOFING

Item	Description
B3011 Roof Finishes	Built-up Roof
Condition	Poor
RUL	0



Plan Type	Deferred Maintenance
Quantity	33057
Unit of Measure	Sq Ft
Unit Cost	\$10.46



Low Slope Built Up Asphalt Roof

Туре	Component Description	Plan Type	Year	Expenditures (\$)
B3011	Replace Built-up Roof	Deferred Maintenance	2014	\$345,611

# **INTERIORS SYSTEMS**

### C10 INTERIOR CONSTRUCTION

Item	Description
C1014 Site Built Toilet Partitions	Site Built Toilet Partitions
Condition	Good
RUL	20
Plan Type	Capital Replacement
Quantity	8
Unit of Measure	
Unit Cost	\$450



**Bathroom Toilet Partion** 

Item	Description
C1021 Interior Doors	Steel, Painted, Interior Door
Condition	Fair - Good
RUL	30



Plan Type	Capital Replacement
Quantity	9
Unit of Measure	Each
Unit Cost	\$857.53



Interior Painted Steel Door

Item	Description
C1021 Interior Doors	Wood, Solid Core, Painted, Interior Door
Condition	Fair
RUL	20
Plan Type	Capital Replacement
Quantity	41
Unit of Measure	Each
Unit Cost	\$1,343.55

## **Comments**

**Stained Doors** 

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Interior Stained Solid Core Wood Doors

Item	Description
C1021 Interior Doors	Steel, Painted, Interior Double Door
Condition	Fair - Good
RUL	30
Plan Type	Capital Replacement
Quantity	1
Unit of Measure	Each
Unit Cost	\$1,857.80







Painted Steel Interior Double Doors

# C20 STAIRS

Item	Description
C2011 Regular Stairs	Metal, Painted, Interior Stairs
Condition	Poor
RUL	0
Plan Type	Deferred Maintenance
Quantity	6
Unit of Measure	Flight
Unit Cost	\$20,000

## **Comments**

Phot Not Available



Туре	Component Description	Plan Type	Year	Expenditures (\$)
C2011	Replace Metal, Painted, Interior Stairs	Deferred Maintenance	2014	\$120,000

Item	Description
C2011 Regular Stairs	Concrete, Interior Stairs
Condition	Fair - Good
RUL	30
Plan Type	Capital Replacement
Quantity	6
Unit of Measure	Flight
Unit Cost	\$20,000



**Concrete Interior Stair** 



# C30 INTERIOR FINISHES

Item	Description
C3012 Wall Finishes to Interior Walls	Ceramic Tile, Interior Wall Finish, 16 Sq In
Condition	Fair - Good
RUL	30
Plan Type	Capital Replacement
Quantity	1840
Unit of Measure	Sq Ft
Unit Cost	\$12.70



Interior Ceramic Tile Wall Finish

Item	Description
C3024 Flooring	Ceramic Tile Flooring
Condition	Fair - Good
RUL	20
Plan Type	Capital Replacement



Quantity	2590
Unit of Measure	Sq Ft
Unit Cost	\$13.49



Ceramic Floor Tile

Item	Description
C3024 Flooring	Vinyl Tile Flooring
Condition	Fair
RUL	8
Plan Type	Capital Replacement
Quantity	23340
Unit of Measure	Sq Ft
Unit Cost	\$3.04

Item	Description
C3032 Suspended Ceilings	Acoustical Tile, Dropped Ceiling



Condition	Fair
RUL	10
Plan Type	Capital Replacement
Quantity	25930
Unit of Measure	Sq Ft
Unit Cost	\$2.97



**Suspended Acoustical Ceiling Tile** 



# D SERVICES SYSTEMS

## D20 PLUMBING

Item	Description
D2011 Water Closets	Tankless Water Closet
Condition	Good
RUL	20
Plan Type	Capital Replacement
Quantity	9
Unit of Measure	Each
Unit Cost	\$643.39



**Tankless Water Closet** 

Item	Description
D2013 Lavatories	Lavatory, Vitreous China
Condition	Good
RUL	20



Plan Type	Capital Replacement
Quantity	9
Unit of Measure	Each
Unit Cost	\$468.21



Wall Hung Lavatory

Item	Description
D2018 Drinking Fountains and Coolers	Drinking Fountain, Refrigerated
Condition	Fair
RUL	3
Plan Type	Capital Replacement
Quantity	4
Unit of Measure	Each
Unit Cost	\$988.98







**Refrigerated Drinking Fountains** 

Туре	Component Description	Plan Type	Year	Expenditures (\$)
D2018	Replace Drinking Fountain, Refrigerated	Capital Replacement	2017	\$3,956

Item	Description
D2022 Hot Water Service	2000 Gallon Domestic Hot Water tank
Condition	Fair
RUL	5
Plan Type	Capital Replacement
Quantity	2
Unit of Measure	
Unit Cost	\$12,000

### **Comments**

Basement Level Domestic Hot Water Storage Tank







Domestic Hot Water Storage Tank

Туре	Component Description	Plan Type	Year	Expenditures (\$)
D2022	Replace 2000 Gallon Domestic Hot Water tank	Capital Replacement	2019	\$24,000

## D30 HVAC

Item	Description
D3031 Chilled Water Systems	Chiller, Absorption, 30 Ton
Condition	Poor
RUL	0
Plan Type	Deferred Maintenance
Quantity	1
Unit of Measure	Each
Unit Cost	\$52,102.16
Make	Carrier



Model	NA
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## **Comments**

Carrier Rooftop Chiller - Not Operational



RootopChiller

Туре	Component Description	Plan Type	Year	Expenditures (\$)
D3031	Replace Chiller, Absorption, 30 Ton	Deferred Maintenance	2014	\$52,102

Item	Description
D3041 Air Distribution Systems	Air Handler, Multizone, 10,000 Cfm
Condition	Poor - Fair
RUL	3
Plan Type	Capital Replacement
Quantity	1
Unit of Measure	Each



Unit Cost	\$26,680.99
Make	Carrier
Model	CB-17-135V-3

### **Comments**

Common Hallway Air Handler Photo Not Available

Туре	Component Description	Plan Type	Year	Expenditures (\$)
D3041	Replace Air Handler, Multizone, 10,000 Cfm	Capital Replacement	2017	\$26,681

Item	Description		
D3041 Air Distribution Systems	Air Handler, Multizone, 65,000 Cfm		
Condition	Poor		
RUL	1		
Plan Type	Capital Replacement		
Quantity	2		
Unit of Measure	Each		
Unit Cost	\$162,841.50		
Make	Carrier		
Model	28CW1420FB1066		

## **Comments**

Carrier Rooftop Penthouse Air Handler Basement Level Air Handler -AHU #7





Carrier Rooftop Penthouse Air Handler

Туре	Component Description	Plan Type	Year	Expenditures (\$)
D3041	Replace Air Handler, Multizone, 65,000 Cfm	Capital Replacement	2015	\$325,683

Item	Description		
D3052 Package Units	Air Conditioner Multizone Variable Volume 25 Ton		
Condition	Poor - Fair		
RUL	3		
Plan Type	Capital Replacement		
Quantity	1		
Unit of Measure	Each		
Unit Cost	\$73,298.22		
Make	Trane		
Model	TCH2408300JB		



Common Area Pad Mounted Packaged Unit with Retrofit Steam Heat



Pad Mounted Trane Package Unit

Туре	Component Description	Plan Type	Year	Expenditures (\$)
D3052	Replace Air Conditioner Multizone Variable Volume 25 Ton	Capital Replacement	2017	\$73,298

Item	Description
D3052 Package Units	Air Conditioner Multizone Variable Volume 50 Ton
Condition	Poor
RUL	1
Plan Type	Capital Replacement
Quantity	1
Unit of Measure	Each
Unit Cost	\$131,271.56



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Make	Carrier
Model	NA



Carrier Pad Mounted Packaged Unit

Туре	Component Description	Plan Type	Year	Expenditures (\$)
D3052	Replace Air Conditioner Multizone Variable Volume 50 Ton	Capital Replacement	2015	\$131,272

#### D50 **ELECTRICAL SYSTEMS**

Item	Description	
D5012 Low Tension Service & Dist.	Transfer Switch, Auto, 600 V, 1,200 Amp	
Condition	Fair - Good	
RUL	10	
Plan Type	Capital Replacement	
Quantity	3	



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Unit of Measure	Each
Unit Cost	\$25,816.86
Make	ASCO



**Generator Transfer Switch** 

Item	Description	
D5012 Low Tension Service & Dist.	Circuit Breaker, 3 Ph., 600 V, 100 Amp	
Condition	Fair	
RUL	15	
Plan Type	Capital Replacement	
Quantity	7	
Unit of Measure	Each	
Unit Cost	\$1,459.62	
Make	Square D	
Model	NA	

#### **Comments**

Rooftop Penthouse Circuit Break Panel Common Hallways





Rooftop Penthouse Circuit Breaker Panel

Item	Description
D5012 Low Tension Service & Dist.	Secondary Transformer, Dry, 75 kVA
Condition	Fair
RUL	10
Plan Type	Capital Replacement
Quantity	102
Unit of Measure	Each
Unit Cost	\$7,032.12
Make	Westinghouse
Model	NA

**Basement Electrical Room** 





**Basement Electric Room Secondary Transformer** 

Item	Description
D5012 Low Tension Service & Dist.	Distribution Panel Board
Condition	Poor - Fair
RUL	3
Plan Type	Capital Replacement
Quantity	1
Unit of Measure	Each
Unit Cost	\$10,664.25
Make	Square D
Model	NA

Rooftop Penthouse Air Handler Panel Board





Rooftop Penthouse Air Handler Distribution Panel

Туре	Component Description	Plan Type	Year	Expenditures (\$)
D5012	Replace Distribution Panel Board	Capital Replacement	2017	\$10,664

Item	Description	
D5012 Low Tension Service & Dist.	Circuit Breaker, Main, 208 Y, 120 V, 400 Amp	
Condition	Fair - Good	
RUL	25	
Plan Type	Capital Replacement	
Quantity	4	
Unit of Measure	Each	
Unit Cost	\$4,521.40	
Make	Square D	

**Basement Electric Room** 





400 Amp Circuit Breaker Panel

Item	Description
D5012 Low Tension Service & Dist.	Circuit Breaker, Main, 208 Y, 120 V, 1,200 Amp
Condition	Fair
RUL	20
Plan Type	Capital Replacement
Quantity	1
Unit of Measure	Each
Unit Cost	\$8,573.57
Make	Square D

Basement Electric Circuit Breaker Panel





Basement Electric 1200 Amp Circuit Breaker Panel

Item	Description
D5012 Low Tension Service & Dist.	Secondary Transformer, Dry, 30 kVA
Condition	Fair
RUL	10
Plan Type	Capital Replacement
Quantity	1
Unit of Measure	Each
Unit Cost	\$4,899.35

Rooftop Penthouse Transformer





Rooftop Penthouse Transformer

Item	Description
D5012 Low Tension Service & Dist.	Disconnect Switch, 400 Amp
Condition	Fair
RUL	20
Plan Type	Capital Replacement
Quantity	4
Unit of Measure	Each
Unit Cost	\$4,112.51
Make	Square D





**Basement Level Electrical Disconnect Switch** 

Item	Description					
D5012 Low Tension Service & Dist.	Secondary Transformer, Dry, 300 kVA					
Condition	Fair					
RUL	8					
Plan Type	Capital Replacement					
Quantity	1					
Unit of Measure	Each					
Unit Cost	\$21,839.42					
Make	Westinghouse					

Basement Level Electric Room





**Basement Level Electric Secondary Transformer** 

Item	Description
D5012 Low Tension Service & Dist.	Main Switchgear, 208 Y, 120 V, 2,000 Amp
Condition	Fair - Good
RUL	15
Plan Type	Capital Replacement
Quantity	1
Unit of Measure	Each
Unit Cost	\$245,569.16
Make	Square D

Basement Level Main Disconnect Panel





Basement Level Main Electric Disconnect

Item	Description
D5022 Lighting Equipment	Fluorescent Lighting Fixture, T12, 60 W
Condition	Fair
RUL	6
Plan Type	Capital Replacement
Quantity	164
Unit of Measure	Each
Unit Cost	\$178.94







Recessed Ceiling Mounted Fluorescent Light Fixture

Item	Description
D5092 Emergency Light & Power Systems	Generator, Diesel, 375 kW
Condition	Fair - Good
RUL	20
Plan Type	Capital Replacement
Quantity	1
Unit of Measure	Each
Unit Cost	\$155,570.02

Kohler Pad Mounted Generator





Kohler Pad Mounted Generator

Item	Description
D5092 Emergency Light & Power Systems	Uninterruptible Power Supply, 80 kVA
Condition	Poor - Fair
RUL	1
Plan Type	Capital Replacement
Quantity	2
Unit of Measure	Each
Unit Cost	\$63,120.30
Make	Emerging-Lite
Model	120LC7500UPS120-90

Rooftop Penthouse Ups 125 Amps 90 Minute Run Time





Rooftop Penthouse UPS

Туре	Component Description	Plan Type	Year	Expenditures (\$)
D5092	Replace Uninterruptible Power Supply, 80 kVA	Capital Replacement	2015	\$126,241



# **APPENDICES**

**Appendix A: Expenditure Forecast** 

**Appendix B: Photographic Record** 

**Appendix C: Survey Information Resulting In Plant Adaptation** 

Recommendations

**Appendix D: Predictive Maintenance Templated Actions** 



# Appendix A: Expenditure Forecast

# **6 YEAR CAPITAL EXPENDITURE FORECAST**



OB / GYN - Building 9 1900 Massachusetts Ave SE, Washington, DC 1112-0804, 6

Element No.	Actions	Last Assigned Condition	EUL* or ReplacementC ycle (Yrs)	RUL** (Yrs)	Qty.	Units	Unit Cost	Plan Type	2014	2015	2016	2017	2018	2019	Total***
A. SUBST	RUCTURE	_					\$		0	1	2	3	4	5	
A. SUBST	RUCTURE SUB-TOTALS								\$0	\$0	\$0	\$0	\$0	\$0	\$0
B. SHELL	EXTERIOR ENCLOSURE				<u> </u>		<u> </u>								
							212.21		<b>A-00</b> (00						<b></b>
	Replace Stucco, Painted, Exterior, 2 Stories	Poor	75	0	60,000.00	Sq Ft	\$13.31	Deferred Maintenance	\$798,420						\$798,420
B2021	Replace Wood Operable Window, = 3 Stories, 12 Sq Ft	Poor	30	0	81.00	Each	\$503.60	<b>Deferred Maintenance</b>	\$40,792						\$40,792
B2032	Replace Steel, Painted, Exterior Door	Poor	75	2	5.00	Each	\$887.04	Capital Replacement			\$4,435				\$4,435
B30	ROOFING														
	Replace Built-up Roof	Poor	30	0	33,057.00	Sq Ft	\$10.46	Deferred Maintenance	\$345,611						\$345,611
D CHELL	SUB-TOTALS			_	_	_	_		\$4 404 022	60	¢4.425	<b>60</b>	¢0	<b>60</b>	¢4 490 259
C. INTERI									\$1,184,823	\$0	\$4,435	\$0	\$0	\$0	\$1,189,258
C20	STAIRS														
C2011	Replace Metal, Painted, Interior Stairs	Poor	75	0	6.00	Flight	\$20,000.00	<b>Deferred Maintenance</b>	\$120,000						\$120,000
C INTERI	ORS SUB-TOTALS	_	_	_	_	_	_	_	\$120,000	\$0	\$0	\$0	\$0	<b>\$0</b>	\$120,000
D. SERVIC									ψ120,000	ΨΟ	ΨΟ	ΨΟ	ΨΟ	ΨΟ	ψ120,000
	PLUMBING						4000.00					40.050			40.050
	Replace Drinking Fountain, Refrigerated	Fair	10	3	4.00	Each	\$988.98	Capital Replacement				\$3,956			\$3,956
D2022	Replace 2000 Gallon Domestic Hot Water tank	Fair	20	5	2.00		\$12,000.00	Capital Replacement						\$24,000	\$24,000
D30	HVAC I														
	Replace Chiller, Absorption, 30 Ton	Poor	20	0	1.00	Each	\$52,102.16	Deferred Maintenance	\$52,102						\$52,102
	Replace Air Handler, Multizone, 10,000 Cfm	Poor - Fair	15	3	1.00	Each	\$26,680.99					\$26,681			\$26,681
	Replace Air Handler, Multizone, 65,000 Cfm Replace Air Conditioner Multizone Variable	Poor	15	1	2.00	Each	#########	Capital Replacement		\$325,683					\$325,683
D3052	Volume 25 Ton	Poor - Fair	15	3	1.00	Each	\$73,298.22	Capital Replacement				\$73,298			\$73,298
	Replace Air Conditioner Multizone Variable Volume 50 Ton	Poor	15	1	1.00	Each	#########	Capital Replacement		\$131,272					\$131,272
D50	ELECTRICAL SYSTEMS									l					
	Replace Distribution Panel Board	Poor - Fair	30	3	1.00	Each	\$10,664.25	Capital Replacement				\$10,664			\$10,664
	Replace Uninterruptible Power Supply, 80 kVA	Poor - Fair	15	1	2.00	Each	\$63,120.30			\$126,241		,			\$126,241
D. SERVIC	CES SUB-TOTALS								\$52,102	\$583,195	\$0	\$114,599	<b>\$</b> 0	\$24,000	\$773,897
E. EQUIPN	MENT & FURNISHING														
	MENT & FURNISHING SUB-TOTALS  L CONSTRUCTION AND DEMOLITION								\$0	\$0	\$0	\$0	\$0	\$0	\$0
	L CONSTRUCTION AND DEMOLITION  L CONSTRUCTION AND DEMOLITION SUB	-TOTALS							\$0	\$0	\$0	\$0	\$0	\$0	\$0
G. BUILDI	NG SITEWORK														
G. BUILDI Z. GENER	NG SITEWORK SUB-TOTALS AL								\$0	\$0	\$0	\$0	\$0	\$0	\$0

Z. GENERAL SUB-TOTALS \$0 \$0 \$0 \$0 Expenditure Totals per Year \$1,356,925 \$4,435 \$2,083,155 \$583,195 \$114,599 \$0 \$24,000 FCI<sup>†</sup> By Year 2.93% 1.26% 0.01% 0.25% 0.00% 0.05%

CRV\*\*\* \$46,314,220

#### Notes

- \* EUL is the Estimated Useful Life of an Asset
- \*\* RUL is the Remaining Useful Life of an Asset
- \*\*\* Non-Escalated and Non-Inflated Adusted Dollars
- + FCI Formula (As Currently Programmed):

(Deferred Maintenance + Capital Renewal + Capital Replacement)/(Building Replacement Value)

# **6 YEAR ROUTINE MAINTENANCE EXPENDITURE FORECAST**



OB / GYN - Building 9 1900 Massachusetts Ave SE, Washington, DC 1112-0804, 6

Element No.	Actions	Last Assigned Condition	EUL* or ReplacementC ycle (Yrs)	RUL** (Yrs)	Qty.	Units	Unit Cost	Priority	Plan Type	2014	2015	2016	2017	2018	2019	Total***
							\$			0	1	2	3	4	5	
A. SUBST																
	RUCTURE SUB-TOTALS									\$0	\$0	\$0	\$0	\$0	\$0	\$0
B. SHELL																
	SUB-TOTALS									\$0	\$0	\$0	\$0	\$0	\$0	\$0
C. INTERIO																
	ORS SUB-TOTALS									\$0	\$0	\$0	\$0	\$0	\$0	\$0
D. SERVIC																
	ES SUB-TOTALS									\$0	\$0	\$0	\$0	\$0	\$0	\$0
	IENT & FURNISHING															
	IENT & FURNISHING SUB-TOTALS									\$0	\$0	\$0	\$0	\$0	\$0	\$0
	L CONSTRUCTION AND DEMOLITION															
	L CONSTRUCTION AND DEMOLITION SUB-	TOTALS								\$0	\$0	\$0	\$0	\$0	\$0	\$0
	NG SITEWORK															
	NG SITEWORK SUB-TOTALS									\$0	\$0	\$0	\$0	\$0	\$0	\$0
Z. GENERA			<del></del>		<u> </u>		<u> </u>									
	GENERAL REQUIREMENTS															
Z1010.2	ADA Remediation Cost	Poor	0	0	1.00	LS	\$11,830.00	Priority 4	Plant Adaptation	\$11,830						\$11,830
Z. GENER	AL SUB-TOTALS									\$11,830	\$0	\$0	\$0	\$0	\$0	\$11,830
								Exp	oenditure Totals per Year	\$11,830	\$0	\$0	\$0	\$0	\$0	\$11,830
							CRV***		\$46,314,220							

#### Notes

<sup>\* -</sup> EUL is the Estimated Useful Life of an Asset

<sup>\*\* -</sup> RUL is the Remaining Useful Life of an Asset

<sup>\*\*\* -</sup> Non-Escalated and Non-Inflated Adusted Dollars

2014 iPlan Scoring									
Condition	Score		From	То	Rating				
Good	10	100%	0%	20%	Good				
Fair-Good	8	80%	20%	40%	Fair				
Fair	6	60%	40%	60%	Poor				
Poor-Fair	4	40%	60%	80%	Poor				
Poor	2	20%	80%	100%	Unsatisfactory				

Uniformat Level 2 Asset C	Condition Rating For OB	/ GYN - Building 9
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Uniformat Level 2 Asset Condition Rating For OB / GYN - Building 9														
Plan Type	Condition	Element No.	Asset	Qty.	UOM.	Unit Cost (\$)	Asset Value (\$)	Actual Asset Condition Score	Max Possible Score	Asset Weighting Based Upon Asset Value	Asset Condition Weighted Score	Max. Possible Weighted Score	Cond. (%)	Condition Rating
A10 Foundations  Capital Replacement Fair A10 Foundations Concrete Slab 35,000.00 Sq Ft 8.21 287,315.00 6 10.00 100% 6.00 10.00														
Capital Replacement	<u> Fair</u>	A10 Foundations A10 Foundations	Concrete Slab	35,000.00	J Sq Ft	8.21	287,315.00 287,315.00	6	10.00	100%	6.00 6.00	10.00 10.00	40%	Fair
B10 SuperStructure		7110 I Calidations					207,313.00	<u> </u>			0.00	10.00	<del>40</del> /0	I dii
Capital Replacement	Fair - Good	B10 SuperStructure	Cast-in-Place Reinforced Concrete Roof Deck	33,057.00	SF	19.97	660,280.52	8	10.00	100%	8.00	10.00		
		B10 SuperStructure					660,280.52	8			8.00	10.00	20%	Good
B20 Exterior Enclosure		B20 Exterior Englesure	Ctack Dainted Futorior Dans	F 00	NEssh I	997.04	4 425 20	2	40.00	00/	0.00	0.00		
	Poor Fair	B20 Exterior Enclosure B20 Exterior Enclosure	Steel, Painted, Exterior Door Clay Brick, Exterior, = 3 Stories	380,000.00	Each So Et	887.04 35.93	4,435.20 13,653,400.00	6	10.00 10.00	0% 94%	0.00 5.62	0.00 9.36		
Capital Replacement	Fair	B20 Exterior Enclosure	Alum Fixed Therm Break Dbl Glaz, Gas, 2 Stry, 12SF		Each	481.92	13,011.81	6	10.00	0%	0.01	0.01		
Deferred Maintenance	Poor	B20 Exterior Enclosure	Stucco, Painted, Exterior, 2 Stories	60,000.00	Sq Ft	13.31	798,420.00	2	10.00	5%	0.11	0.55		
	Poor	B20 Exterior Enclosure	Wood Operable Window, = 3 Stories, 12 Sq Ft		Each	503.60	40,791.84	2	10.00	0%	0.01	0.03		
Capital Replacement	Fair	B20 Exterior Enclosure	Storefronts	5.00	) <u> </u>	15,000.00	75,000.00	6	10.00	1%	0.03	0.05	1007	
B30 Roofing		<b>B20 Exterior Enclosure</b>					14,585,058.85	24			5.77	10.00	42%	Poor
	Poor	B30 Roofing	Built-up Roof	33,057.00	Sq Ft	10.46	345,610.94	2	10.00	100%	2.00	10.00		
		B30 Roofing					345,610.94	2			2.00	10.00	80%	Poor
C10 Interior Construction	on	<u> </u>	lw 10 510 - 5 1111 1	I	1		T							
	Fair	C10 Interior Construction	Wood, Solid Core, Painted, Interior Door		Each	1,343.55	55,085.43	6	10.00	81%	4.84	8.07		
	Fair - Good Good	C10 Interior Construction C10 Interior Construction	Steel, Painted, Interior Double Door Site Built Toilet Partitions	1.00 8.00	Each	1,857.80 450.00	1,857.80 3,600.00	8 10	10.00 10.00	3% 5%	0.22 0.53	0.27 0.53		
		C10 Interior Construction	Steel, Painted, Interior Door		) Each	857.53	7,717.76	8	10.00	11%	0.90	1.13		
	1	C10 Interior Construction			1=0011	99.100	68,260.99	32		1170	6.49	10.00	35%	Fair
C20 Stairs											-			
Deferred Maintenance		C20 Stairs	Metal, Painted, Interior Stairs		Flight	20,000.00	120,000.00	2	10.00	50%	1.00	5.00		
Capital Replacement	Fair - Good	C20 Stairs C20 Stairs	Concrete, Interior Stairs	6.00	Flight	20,000.00	120,000.00 240,000.00	8 10	10.00	50%	4.00 5.00	5.00 10.00	50%	Poor
C30 Interior Finishes		C20 Stall'S					240,000.00]	10			5.00	10.00	30%	Poor
	Fair	C30 Interior Finishes	Acoustical Tile, Dropped Ceiling	25,930.00	Sq Ft	2.97	77,012.10	6	10.00	37%	2.24	3.73		
		C30 Interior Finishes	Ceramic Tile, Interior Wall Finish, 16 Sq In	1,840.00		12.70	23,373.52	8	10.00	11%	0.91	1.13		
		C30 Interior Finishes	Ceramic Tile Flooring	2,590.00		13.49	34,946.87	8	10.00	17%	1.36	1.69		
Capital Replacement	Fair	C30 Interior Finishes C30 Interior Finishes	Vinyl Tile Flooring	23,340.00	OSq Ft	3.04	70,953.60	6	10.00	34%	2.06 6.57	3.44	2.40/	Fair
D20 Plumbing		- 030 IIIICIIOI I IIIISIICS					206,286.09	28			0.37	10.00	34%	- raii
	Fair	D20 Plumbing	2000 Gallon Domestic Hot Water tank	2.00		12,000.00	24,000.00	6	10.00	63%	3.79	6.32		
Capital Replacement	Fair	D20 Plumbing	Drinking Fountain, Refrigerated	4.00	Each	988.98	3,955.93	6	10.00	10%	0.63	1.04		
	Good	D20 Plumbing	Tankless Water Closet		Each	643.39	5,790.52	10		15%	1.53	1.53		
Capital Replacement	Good	D20 Plumbing D20 Plumbing	Lavatory, Vitreous China	9.00	Each	468.21	4,213.87	10		11%	1.11	1.11	200/	Fair
D20 Plumbing         37,960.32         32         7.05         10.00         29%         Fair           D30 HVAC														
	Poor - Fair	D30 HVAC	Air Conditioner Multizone Variable Volume 25 Ton	1.00	Each	73,298.22	73,298.22	4	10.00	12%	0.48	1.20		
Capital Replacement	Poor - Fair	D30 HVAC	Air Handler, Multizone, 10,000 Cfm	1.00	Each	26,680.99	26,680.99	4	10.00	4%	0.18	0.44		

		1	T			•								
Deferred Maintenance	Poor	D30 HVAC	Chiller, Absorption, 30 Ton	1.00	Each	52,102.16	52,102.16	2	10.00	9%	0.17	0.86		
Capital Replacement	Poor	D30 HVAC	Air Conditioner Multizone Variable Volume 50 Ton	1.00	Each	131,271.56	131,271.56	2	10.00	22%	0.43	2.16		
Capital Replacement	Poor	D30 HVAC	Air Handler, Multizone, 65,000 Cfm	2.00	Each	162,841.50	325,683.00	2	10.00	53%	1.07	5.35		1
		D30 HVAC					609,035.93	14			2.33	10.00	77%	Poor
D50 Electrical Systems														
Capital Replacement	Fair	D50 Electrical Systems	Disconnect Switch, 400 Amp	4.00	Each	4,112.51	16,450.06	6	10.00	1%	0.07	0.11		1
Capital Replacement	Fair	D50 Electrical Systems	Secondary Transformer, Dry, 75 kVA	102.00	Each	7,032.12	717,276.15	6	10.00	50%	2.98	4.97		
Capital Replacement	Fair - Good	D50 Electrical Systems	Generator, Diesel, 375 kW	1.00	Each	155,570.02	155,570.02	8	10.00	11%	0.86	1.08		1
Capital Replacement	Fair	D50 Electrical Systems	Secondary Transformer, Dry, 30 kVA	1.00	Each	4,899.35	4,899.35	6	10.00	0%	0.02	0.03		
Capital Replacement	Fair	D50 Electrical Systems	Circuit Breaker, Main, 208 Y, 120 V, 1,200 Amp	1.00	Each	8,573.57	8,573.57	6	10.00	1%	0.04	0.06		
Capital Replacement	Fair - Good	D50 Electrical Systems	Transfer Switch, Auto, 600 V, 1,200 Amp	3.00	Each	25,816.86	77,450.57	8	10.00	5%	0.43	0.54		
Capital Replacement	Fair	D50 Electrical Systems	Secondary Transformer, Dry, 300 kVA	1.00	Each	21,839.42	21,839.42	6	10.00	2%	0.09	0.15		
Capital Replacement	Poor - Fair	D50 Electrical Systems	Uninterruptible Power Supply, 80 kVA	2.00	Each	63,120.30	126,240.61	4	10.00	9%	0.35	0.88		
Capital Replacement	Fair - Good	D50 Electrical Systems	Main Switchgear, 208 Y, 120 V, 2,000 Amp	1.00	Each	245,569.16	245,569.16	8	10.00	17%	1.36	1.70		
Capital Replacement	Fair	D50 Electrical Systems	Fluorescent Lighting Fixture, T12, 60 W	164.00	Each	178.94	29,346.16	6	10.00	2%	0.12	0.20		
Capital Replacement	Poor - Fair	D50 Electrical Systems	Distribution Panel Board	1.00	Each	10,664.25	10,664.25	4	10.00	1%	0.03	0.07		
Capital Replacement	Fair	D50 Electrical Systems	Circuit Breaker, 3 Ph., 600 V, 100 Amp	7.00	Each	1,459.62	10,217.33	6	10.00	1%	0.04	0.07		
Capital Replacement	Fair - Good	D50 Electrical Systems	Circuit Breaker, Main, 208 Y, 120 V, 400 Amp	4.00	Each	4,521.40	18,085.59	8	10.00	1%	0.10	0.13		
D50 Electrical Systems							1,442,182.23	82			6.50	10.00	35%	Fair



# Appendix B: Photographic Record







Abandoned Rooftop Penthouse Air Handler

First Floor West Wing



First Floor West Wing



First Floor West Wing





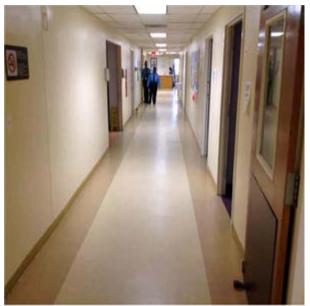


Abandoned Passenger Elevators

Abandoned Basement Level



Common Hallway



Common Hallway







**Building Exterior** 

**Building Exterior** 



Building Exterior

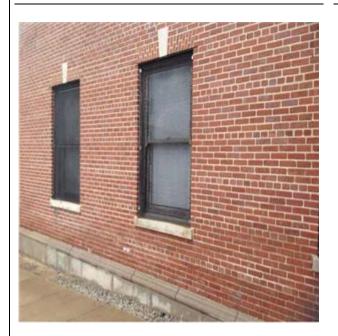




Clay Brick, Exterior, = 3 Stories :- Exterior Wall Clay Brick



Stucco, Painted, Exterior, 2 Stories:- Exterior Wall Stucco Finish

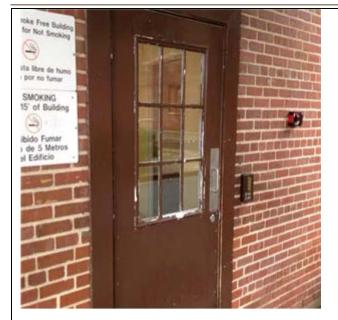


Wood Operable Window, = 3 Stories, 12 Sq Ft :-Operable Wood Windows



Storefronts:- Aluminum Storefront At Patio Area

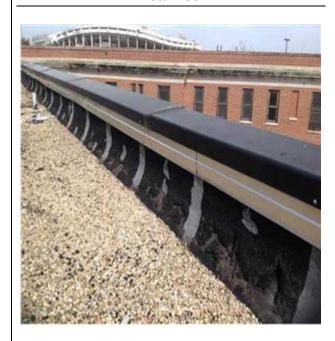




Steel, Painted, Exterior Door :- Exterior Painted Metal Door



Built-up Roof:- Low Slope Built Up Asphalt Roof



Built-up Roof :- Roof Parapet Flashings



Site Built Toilet Partitions:- Bathroom Toilet Partion





Steel, Painted, Interior Door :- Interior Painted
Steel Door



Steel, Painted, Interior Double Door:- Painted Steel Interior Double Doors



Wood, Solid Core, Painted, Interior Door :- Interior Stained Solid Core Wood Doors



Concrete, Interior Stairs:- Concrete Interior Stair





Ceramic Tile, Interior Wall Finish, 16 Sq In:-Interior Ceramic Tile Wall Finish



Ceramic Tile Flooring:- Ceramic Floor Tile



Acoustical Tile, Dropped Ceiling :- Suspended Acoustical Ceiling Tile



Tankless Water Closet:- Tankless Water Closet





Lavatory, Vitreous China :- Wall Hung Lavatory



Drinking Fountain, Refrigerated:- Refrigerated
Drinking Fountains



2000 Gallon Domestic Hot Water tank :- Domestic Hot Water Storage Tank



Chiller, Absorption, 30 Ton:- RootopChiller





Air Handler, Multizone, 65,000 Cfm :- Carrier Rooftop Penthouse Air Handler



Air Handler, Multizone, 65,000 Cfm:- Basement Level Air Handler



Air Conditioner Multizone Variable Volume 25 Ton :- Pad Mounted Trane Package Unit Nameplate



Air Conditioner Multizone Variable Volume 25 Ton:- Pad Mounted Trane Package Unit





Air Conditioner Multizone Variable Volume 50 Ton :- Carrier Pad Mounted Packaged Unit



Circuit Breaker, 3 Ph., 600 V, 100 Amp:- Rooftop Penthouse Circuit Breaker Panel



Circuit Breaker, 3 Ph., 600 V, 100 Amp :- Common Hallway 100 Amp Circuit Breaker Panel



Circuit Breaker, Main, 208 Y, 120 V, 1,200 Amp:-Basement Electric 1200 Amp Circuit Breaker Panel





Circuit Breaker, Main, 208 Y, 120 V, 400 Amp :- 400 Amp Circuit Breaker Panel



Disconnect Switch, 400 Amp:- Basement Level Electrical Disconnect Switch



Distribution Panel Board :- Rooftop Penthouse Air Handler Distribution Panel



Main Switchgear, 208 Y, 120 V, 2,000 Amp:-Basement Level Main Electric Disconnect





Secondary Transformer, Dry, 30 kVA :- Rooftop Penthouse Transformer



Secondary Transformer, Dry, 300 kVA:- Basement Level Electric Secondary Transformer



Secondary Transformer, Dry, 75 kVA :- Basement Electric Room Secondary Transformer



Transfer Switch, Auto, 600 V, 1,200 Amp:-Generator Transfer Switch





Fluorescent Lighting Fixture, T12, 60 W :- Recessed Ceiling Mounted Fluorescent Light Fixture



Generator, Diesel, 375 kW:- Kohler Pad Mounted Generator



Uninterruptible Power Supply, 80 kVA :- Rooftop Penthouse UPS



Uninterruptible Power Supply, 80 kVA:- UPS Nameplate



## Appendix C: Survey Information Resulting In Plant Adaptation Recommendations



Access Control	
Does the facility have a key card proximity entry system	No
Are all windows at grade level locked or fixed at all times	Yes
. Comments	Much of the building is unutilized, abandoned space. Some windows in the non-utilized space were broken or cracked.
Is there at least one clearly marked and designated entrance for visitors	No
Are there signs posted for visitors to report to main office or through a designated entrance	No
Access to public transport loading area is restricted to other vehicles during loading/unloading	Yes
Lighting is provided at entrances and points of possible intrusion	Yes
Outside hardware has been removed from all doors except at points of entry	No
Restricted areas are properly identified	Yes
Access to electrical panels are restricted	Yes
Are there control gates to separate distinct areas of the building after hours without changing means of egress	No
Are all perimeter doors equipped with recessed magnetic contact – door position door sensors	No
. Comments	There are motion sensors present in the old, unutilized lobby of the building. These sensors are not in service.
Are interior doors with specific vulnerability equipped with door position monitoring sensors	No
. Comments	There are motion sensors present in the old, unutilized lobby of the building. These sensors are not in service.

## ADA



How many additional designated car parking stalls are needed for compliance.	0
How many additional designated can parking stalls are needed for compliance.	0
How many additional signs for accessible parking are needed for compliance.	0
How many LF of curb ramps are required from the parking area to the sidewalks.	0
How many additional passenger drop off areas are required	0
How many additional signs directing to accessible parking or accessible building entrances to the facility are required	1
ADA Parking Comments	There is no parking for this building specifically, but ADA parking exists for the complex.
How many LF of a straight entrance ramp with handrails are needed to allow wheelchair access	24
How many LF of existing exterior ramps and stairs are not equipped with the required handrails.	0
ADA Ramp Comments	There is a small curb cut and lip at the entrance of the facility. A proper ramp with handrails needs to be installed.
How many buzzers or intercoms used for assistance and service at exterior entrance doors or parking space are needed.	0
How many entrance doors are not wide enough to accommodate wheelchair access, and clear floor space beside the door swing is lacking	0
How many vestibule doors are set too close to the front doors for wheelchair access	0
How many lever action hardware are missing at all accessible locations	0
ADA Entrance and Exit Comments	The entrance to the utilized space is ADA accessible.
How many obstacles or protrusion from the wall are impeding access.	0
How many SF of existing carpeting is not securely attached or has a pile thickness exceeding 1/2".	0
	•



How many stair handrails do not extend beyond the top and bottom risers.	0
How many signs used to indicate accessible entrances and general information are not provided	1
How many telephones are installed higher than what is essential for basic operation	0
How many objects are mounted higher than 27" off the floor, project more than 4" into walks, halls, corridors, passageways, or aisles	0
How many visual alarms need to be added to existing audible fire alarm systems.	0
How many cup dispensers are required at an existing non- conforming water fountain.	2
How many elevator control panels and hall buttons are mounted higher than 54" above the floor.	0
How many control panels do not have raised elevator markings and hall buttons.	8
How many elevators do not have audible signals at floor level changes.	0
How many elevators do not have safety stops installed	0
How many elevators do not have communication equipment set up for speech impaired communication	0
ADA Elevator Comments	Both elevators were inoperable at the time of the site visit.
How many existing restroom doors are not wide enough to accommodate wheelchair access.	0
How many grab bars need to be installed in accessible stalls at 36" above the floor.	0
How many bathrooms require modification to existing toilet room accessories and mirrors	0
How many existing lavatory faucets need paddle type faucets added	0
How many drain pipes are below lavatory with insulation; protect against contact with hot, sharp, or abrasive surfaces	0
How many pull stations alarms are needed in unisex bathroom	2



ADA Restroom Comments	The bathrooms in the useable space
	are ADA appropriate. We were not able to access many of the restrooms
	in the non-utilized area.

Fire Protection	
Does the facility have a fire sprinkler system	No
Does the facility have wall mounted fire extinguishers	Yes
. Comments	Last inspected in June 2014.
Does the kitchen and cooking area have hood vent mounted fire suppression systems	No
Does combustion equipment have dedicated fire sprinkler system e.g. boilers, hot water heater	No
Are current fire protection system inspections up to date and onsite	No
. Comments	The Facilities Manager has the inspections, but they are not up-to-date. Many violations have bee noted by Fire Prevention Division.
A record of Fire Inspection by the local or state Fire Officer is maintained	Yes
Exit signs are clearly visible and pointing in the correct direction	Yes
. Comments	Instead of internally illuminated signs, some walls in the stairwell are simply painted with the word "EXIT".
Does the facility have monitored fire alarm system	Yes
. Comments	The system is damaged according to a DGS Work Order. It sites that more than fifty devices are notworking properly. As of 07/23/14 the control panel is back online.



Is the fire alarm control panel solid-state, modular design	No
type,	
incorporating the following standard features: lamp test, red alarm and amber LEDs per zone,	
positive and negative ground fault indicators, power ON indicator,	
two (2) auxiliary form C alarm contacts with disconnect switches and lights,	
one (1) auxiliary form C trouble contact, regulated 24Vdc four-wire smoke detector power supply,	
and remote reset connection	
Is the power supply to the fire alarm control panel from an individual circuit	Yes
Does the activation of any initiating device including but not limited to	Yes
manual pull stations, smoke detectors, heat detectors and flow switches shall cause all signals	
to sound continuously until manually reset; flash all visual alarm indicator lights; illuminate	
respective zone indicator lamps in the control panel; illuminate respective zone indicator lamps	
in the graphic display on the door of the control panel; and illuminate respective zone indicator	
lamps in the remote annunciator	
. Comments	As stated, the system is damaged.But some fire devices should be operational.
Are the audible and visual devices such as combination horn/strobe indicating	Yes
type wired to separate zones so that audible devices correctly provide code three temporal output	
and visual devices correctly provide ADA compliant strobe effect	
. Comments	Horns and strobes are present, but not all are functional.
Is the fire alarm wiring enclosed in ¾" metal conduit raceway to the manufacturer's instructions	No
Is there a smoke detector directly above the fire alarm control panel	No



Are there smoke detectors within 5'-0" on each side of the fire doors?	No
Are there duct-type smoke detectors on the supply side of HVAC units rated greater than 2000 cfm but less than 15,000 cfm	No
greater than 2000 this but less than 15,000 this	
Are there duct-type smoke detectors on both the supply side and return side of the	No
HVAC units rated 15,000 cfm or more	
Are there duct-type smoke detectors at all smoke damper locations within the HVAC system ductwork?	No
Is there additional wiring to close the damper and turn off the associated HVAC unit	

Green Roof Feasibility	
Asset	Z1010.4 Consider: Green Roof Investments
Quantity	1
Unit Cost	\$0.00
Total Cost	\$0.00
Is the roof a sloped system	No
Is the roof less than 5 years in age	No
Does the roof have significant amounts of penetration and equipment	Yes
Will structural modification need to be made to support a green roof	Yes
Comments	There is a large standing pool of water in the mechanical room off of the roof.

Hazardous Materials	
Does the facility have a current AHERA Asbestos Inspection on File	No
. Comments	There was no asbestos on site, but a very significant amount of mold in both utilized and non-utlized space.



Does the facility currently have a Asbestos Containing material OM plan in place	No
Has the facility been tested for Lead Paint	Yes
Does the facility have a Lead containing paint OM plan in place	No
Has the facility been tested for Lead in Water	Yes
Does the facility have a Lead in water OM plan in place	No
Does the facility have a UST	No
Does the facility have a AST	No
Is there any known PCB containing equipment onsite	No

LEED		
SS.C1	Is the Building LEED Certified Design and Construction	No
	If No, level of effort to achieve	Hard
SS.C2	Does the facility have a Building Exterior and Hardscape Management Plan	No
	If No, level of effort to achieve	Hard
SS.C3	Does the facility have an Integrated Pest Management, Erosion Control, and Landscape Management Plan	No
	If No, level of effort to achieve	Hard
SS.C4	Does the facility provide car pooling or Alternative Commuting Transportation options or incentives	No
	If No, level of effort to achieve	Hard
SS.C5	Does the way the site is developed Protect or Restore Open Habitat	No
	If No, level of effort to achieve	Not Feasible
SS.C6	Does the facility have retention ponds rain gardens to control the quantity of Storm water	No
	If No, level of effort to achieve	Hard



SS.C7.1	Does the facility have non asphalt / macadam based paving such as light colored pavers or concrete	Yes
SS.C7.2	Does the facility have a cool roof (white or light color roof surface)	No
	If No, level of effort to achieve	Hard
SS.C8	Are measures installed preventing operable exterior lighting from encroaching on adjacent properties	No
	If No, level of effort to achieve	Easy
WE.P1	The facility has a Minimum Indoor Plumbing Fixture and Fitting Efficiency policy	No
	If No, level of effort to achieve	Hard
WE.C1	Does the facility have a water meter for the whole building	Yes
	Does the facility have sub meters for boiler wtr, cooling tower wtr, irrigation wtr, fire sprinkler	No
WE.C2	Are all of the plumbing fixtures at the facility non-water saving devices	Yes
	Are some of the plumbing fixture at the facility are non-water saving devices (10-25%)	Yes
	Are all of the plumbing fixture at the facility water saving devices (100%)	No
	If No, level of effort to achieve	Hard
WE.C3	Does the Building use native planting that does not require irrigation	No
	If No, level of effort to achieve	Hard
	Does the Building have an irrigation system with a rain gauge and time system	No
	If No, level of effort to achieve	Hard
	Does the Building hand water on an as needed basis	No
	If No, level of effort to achieve	Easy



WE.C4	Does the Cooling Tower utilize a Chemical Management System	No
	Does the Cooling Tower utilize a Non- Potable Water Source (not public drinking water system)	No
EA.P1	Does the Building have an Energy Efficiency Best Management Practices policy	No
	If No, level of effort to achieve	Hard
EA.P2	Has an energy audit been performed and were E.C.M.s implemented to achieve Min Energy Eff Performance	No
	If No, level of effort to achieve	Hard
EA.P3	Does the Building have a Fundamental Refrigerant Management program	No
	If No, level of effort to achieve	Hard
EA.C1	Is it feasible for the facility to achieve an EnergyStar rating of 71 or higher	No
	If No, level of effort to achieve	Not Feasible
EA.C2.1	Have building lighting and HVAC systems been Investigated and Analyzed for retro Commissioning	No
	If No, level of effort to achieve	Hard
EA.C2.2	Has the Building performed retro Commissioning of the building lighting and HVAC systems	No
	If No, level of effort to achieve	Hard
EA.C2.3	Is the Building performing ongoing Commissioning of the building lighting and HVAC systems	No
	If No, level of effort to achieve	Hard
EA.C3.1	Does the Building have a HVAC or Lighting — Building Automation System	No
	If No, level of effort to achieve	Hard
EA.C3.2	re the HVAC and lighting systems individually metered at 40%	No



	If No, level of effort to achieve	Hard
	Are the HVAC and lighting systems individually metered at 80%	No
	If No, level of effort to achieve	Hard
EA.C4	Does the Building use on-site or off-site renewable energy	No
	If No, level of effort to achieve	Hard
EA.C5	Does the Building have an Enhanced Refrigerant Management	No
	If No, level of effort to achieve	Hard
EA.C6	Does the Building have an Emissions Reduction Reporting program	No
	If No, level of effort to achieve	Hard
MR.P1	Does the Building have a Sustainable Purchasing Policy	No
	If No, level of effort to achieve	Hard
MR.P2	Does the Building have a Solid Waste Management Policy	No
	If No, level of effort to achieve	Hard
MR.C1	Does the Building have a Sustainable Purchasing program for Ongoing Consumables	No
	If No, level of effort to achieve	Hard
MR.C2.1	Is a Sustainable Purchasing policy used for purchasing at least 40% of Electric-Powered Equipment	No
	If No, level of effort to achieve	Hard
MR.C2.2	Is a Sustainable Purchasing policy used for purchasing at least 40% of Furniture	No
	If No, level of effort to achieve	Hard
MR.C3	Is a Sustainable Purchasing policy used when making Facility Alterations and Additions	No
	If No, level of effort to achieve	Hard



MR.C4	Is a Sustainable Purchasing policy used to reduce Mercury content in Lamps purchased	No
	If No, level of effort to achieve	Hard
MR.C5	Is a Sustainable Purchasing policy used when making Food purchases at the Building	No
	If No, level of effort to achieve	Hard
MR.C6	Has the Building performed a Waste Stream Audit	No
	If No, level of effort to achieve	Hard
MR.C7	Has the Building implemented a policy to reduce the quantity Ongoing Consumables going into landfills	No
	If No, level of effort to achieve	Hard
MR.C8	Has the Building implemented a policy to reduce the quantity durable goods (furniture, equipment) going into landfills	No
	If No, level of effort to achieve	Hard
MR.C9	Does the Building recycle building materials during construction which prevents material going to landfill	No
	If No, level of effort to achieve	Not Feasible
IEQ.P1	Has the Building performed a Minimum Indoor Air Quality (IAQ) Performance evaluation of the facility	No
	If No, level of effort to achieve	Hard
IEQ.P2	Is the facility and surrounding area smoke free - Environmental Tobacco Smoke (ETS) Control	No
	If No, level of effort to achieve	Hard
IEQ.P3	Does the Building have a Green Cleaning Policy	No
	If No, level of effort to achieve	Hard
IEQ.C1.1	Does the Building have an Indoor Air Quality Management Program	No
	If No, level of effort to achieve	Hard
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IEQ.C1.2	Does the Building have Outdoor Air Delivery Monitoring	No
	If No, level of effort to achieve	Hard
IEQ.C1.3	Has the Building modified the HVAC systems to allow Increased Ventilation	No
	If No, level of effort to achieve	Hard
IEQ.C1.4	Does the Building have a plan to Reduce Particulates in Air Distribution	No
	If No, level of effort to achieve	Hard
IEQ.C1.5	Does the Building have a policy to enhance IAQ performance during Facility Alterations and Additions	No
	If No, level of effort to achieve	Hard
IEQ.C2.1	Has the Building performed an Occupant Survey for IAQ	No
	If No, level of effort to achieve	Easy
IEQ.C2.2	Does the Building allow for the Controllability of Systems—Lighting by occupants	No
	If No, level of effort to achieve	Not Feasible
IEQ.C2.3	Does the Building allow for the Occupant Comfort—Thermal Comfort Monitoring	No
	If No, level of effort to achieve	Not Feasible
IEQ.C2.4	Does the Building take advantage of Daylight and Views for tenant comfort	No
	If No, level of effort to achieve	Not Feasible
IEQ.C3.1	Does the Building have a High Performance Cleaning Program	No
	If No, level of effort to achieve	Hard
IEQ.C3.2	Does the Building have a Custodial Effectiveness Assessment	No
	If No, level of effort to achieve	Hard
IEQ.C3.3	Does the Building Purchase Sustainable Cleaning Products and Materials	No
	•	•



	If No, level of effort to achieve	Hard
IEQ.C3.4	Does the Building use Sustainable Cleaning Equipment	No
	If No, level of effort to achieve	Hard
IEQ.C3.5	Does the Building have Indoor Chemical and Pollutant Source Control	No
	If No, level of effort to achieve	Hard
IEQ.C3.6	Does the Building have an Indoor Integrated Pest Management	Yes
IO.C1.1	Does the Building have an Innovation in Operations program	No
	If No, level of effort to achieve	Hard
IO.C2	Does the Building have a LEED Accredited Professional on staff	No
	If No, level of effort to achieve	Hard
IO.C3	Is the Building Documenting Sustainable Building Cost Impacts	No
	If No, level of effort to achieve	Hard

Safety Security	
Do all areas of the Building, including bathrooms, hallways, and offices, have the ability to receive an announcement via the P.A. System	No
Do all areas of the Building have the ability to privately call the main office or for emergency	No
Does the general office, principal's office, assistant principal's office have CCTV receptacles	Yes
. Comments	The Facilities Manager has video surveillance of utilized space in her office.
Is there an automated notification system to lockdown the building envelope	No
Does the facility have a monitored burglar alarm system	No
Are all classrooms and all other rooms that are grade- accessible will be equipped with motion detector	No



Are all general corridor or lobby areas plus rooms with	No
specific vulnerability equipped with motion detectors?	
Is the main office and one or more additional locations(s) accessed by designated staff equipped with IDS arm/disarm keypads	No
Are alarm monitoring and response performed by DCPS via their existing central alarm monitoring facility via either dialup telephone lines or LAN/WAN	No
Is there a video surveillance system that provides general surveillance of the site, common areas and building entry and exit points	Yes
. Comments	There are security cameras in the hallways and common areas of the utilized space. Cameras do not exist in the non-utilized space.
Does the facility have monitored video surveillance system at the interior	Yes
Does the facility have monitored video surveillance system at the exterior	No
Does the facility have exterior door hardware that allows controlled access to the building?	Yes
. Comments	Keyed entry to the building.
Does the facility have exterior card access readers that allow controlled access to the building?	No
Does the facility have allow occupants a quick, unimpeded egress from the building?	Yes
. Comments	In the populated space, the path of egress is clear. In the rest of the building, the path of egress is extremely obstructed.
Does the facility have interor door hardware that allows controlled access to classrooms?	Yes
. Comments	All interior doors have lock and key entry.
Does the facility have interior card access readers that allow controlled access within the building?	No
Does the facility have Magnetometers that monitor for the entry of "unwanted items" into the building?	No



. Comments	There is a secuirty guard present at the entrance of the facility.
Does the facility have equipment that allows announcements to be made during large gatherings?	No



## **Appendix D: Routine and Predictive Maintenance Actions**





## **Benchmark Routine and Predictive Maintenance Actions**

Uniformat Level 3 Code	Uniformat Level 3 Description	Description	Units	Trade	iPlan Plan Type
A1020	Special Foundations	Inspect Special Foundations	Sq Ft	<b>Contract Cement Masons</b>	Predictive Maint Test Inspec
B1010	Floor Construction	Refinish Floor Construction	Sq Ft	Contract Painter	<b>Routine Maint Minor Repairs</b>
B1010	Floor Construction	Repair Floor Construction	Sq Ft	Contract Carpenter	<b>Routine Maint Minor Repairs</b>
B2010	Exterior Walls	Refinish Exterior Walls	Sq Ft	Contract Painter	Routine Maint Minor Repairs
B2020	Exterior Windows	Repair Exterior Windows	Sq Ft	Contract Carpenter	Routine Maint Minor Repairs
B2020	Exterior Windows	Refinish Exterior Windows	Each	Contract Painter	Routine Maint Minor Repairs
B2030	Exterior Doors	Maintain Exterior Doors	Each	Staff Gen Maint Worker	Routine Maint Minor Repairs
B2030	Exterior Doors	Refinish Exterior Doors	Each	Contract Painter	Routine Maint Minor Repairs
B2030	Exterior Doors	Replace Exterior Doors	Each	Contract Maint Worker	Routine Maint Minor Repairs
B3020	Roof Openings	Maintain Roof Openings	Each	Staff Carpenter	Routine Maint Minor Repairs
B3020	Roof Openings	Repair Roof Openings	Each	Contract Carpenter	Routine Maint Minor Repairs
B3010	Roof Coverings	Maintain Roof Coverings	Sq Ft	Staff Gen Maint Worker	Routine Maint Minor Repairs
B3010	Roof Coverings	Replace Roof Coverings	Sq Ft	Contract Roofer	Routine Maint Minor Repairs
B3010	Roof Coverings	Inspect Roof Coverings	Sq Ft	Contract Roofer	Predictive Maint Test Inspec
C1010	Partitions	Refinish Partitions	Each	Contract Painter	Routine Maint Minor Repairs
C1020	Interior Doors	Maintain Interior Doors	Each	Staff Gen Maint Worker	Routine Maint Minor Repairs
C1020	Interior Doors	Replace Interior Doors	Each	Contract Maint Worker	Routine Maint Minor Repairs
C1030	Fittings	Refinish Fittings	Ln Ft	Contract Painter	Routine Maint Minor Repairs
C2010	Stair Construction	Refinish Stair Construction	Sq Ft	Contract Painter	Routine Maint Minor Repairs
C2010	Stair Construction	Repair Stair Construction	Sq Ft	Contract Carpenter	Routine Maint Minor Repairs
C3010	Wall Finishes	Refinish Wall Finishes	Sq Ft	Contract Painter	<b>Routine Maint Minor Repairs</b>
C3010	Wall Finishes	Repair Wall Finishes	Sq Ft	Contract Carpenter	<b>Routine Maint Minor Repairs</b>
C3010	Wall Finishes	Clean Wall Finishes	Sq Ft	Staff Painter	<b>Routine Maint Minor Repairs</b>
C3020	Floor Finishes	Repair Floor Finishes	Sq Ft	Contract Carpet Layer	<b>Routine Maint Minor Repairs</b>
C3020	Floor Finishes	Refinish Floor Finishes	Sq Ft	Contract Painter	Routine Maint Minor Repairs
C3030	Ceiling Finishes	Repair Ceiling Finishes	Sq Ft	Contract Carpenter	Routine Maint Minor Repairs



MF-024

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D3020 Heat Generating Systems Lubricate Heat Generating Systems Each Staff HVAC Technician Routine Maint Minor D3020 Heat Generating Systems Inspect Heat Generating Systems Each Staff HVAC Technician Predictive Maint Technician D3020 Heat Generating Systems Clean Heat Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Maintain Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each	D3010	Energy Supply	Repair Energy Supply	Each	Contract HVAC Technician	Routine Maint Minor Repairs
D3020 Heat Generating Systems Repair Heat Generating Systems Each Contract HVAC Technician Routine Maint Mino D3020 Heat Generating Systems Inspect Heat Generating Systems Each Staff HVAC Technician Predictive Maint Technician D3020 Heat Generating Systems Clean Heat Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Maintain Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Tech	D3020	Heat Generating Systems	Maintain Heat Generating Systems	Each	Staff HVAC Technician	Routine Maint Minor Repairs
D3020 Heat Generating Systems Inspect Heat Generating Systems Each Staff HVAC Technician Predictive Maint Technician D3020 Heat Generating Systems Clean Heat Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Maintain Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Minor D3030 Cooling Generating Systems Lubricate Cooling Generating System	D3020	Heat Generating Systems	Lubricate Heat Generating Systems	Each	Staff HVAC Technician	Routine Maint Minor Repairs
D3020 Heat Generating Systems Clean Heat Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Maintain Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mino	D3020	Heat Generating Systems	Repair Heat Generating Systems	Each	Contract HVAC Technician	Routine Maint Minor Repairs
D3030 Cooling Generating Systems Maintain Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mind D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mind	D3020	Heat Generating Systems	Inspect Heat Generating Systems	Each	Staff HVAC Technician	Predictive Maint Test Inspec
D3030 Cooling Generating Systems Lubricate Cooling Generating Systems Each Staff HVAC Technician Routine Maint Mind	D3020	Heat Generating Systems	Clean Heat Generating Systems	Each	Staff HVAC Technician	Routine Maint Minor Repairs
	D3030	Cooling Generating Systems	Maintain Cooling Generating Systems	Each	Staff HVAC Technician	Routine Maint Minor Repairs
D2020 Cooling Congrating Systems Inspect Cooling Congrating Systems Each Staff HVAC Technician Predictive Maint To	D3030	Cooling Generating Systems	Lubricate Cooling Generating Systems	Each	Staff HVAC Technician	Routine Maint Minor Repairs
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D3040	Distribution Systems	Maintain Distribution Systems	Each	Staff HVAC Technician	Routine Maint Minor Repairs
D3040	Distribution Systems	Repair Distribution Systems	Each	Contract HVAC Technician	Routine Maint Minor Repairs
D3050	Terminal & Package Units	Maintain Terminal & Package Units	Each	Staff HVAC Technician	Routine Maint Minor Repairs
D3050	Terminal & Package Units	Repair Terminal & Package Units	Each	Contract HVAC Technician	Routine Maint Minor Repairs
D3060	Controls & Instrumentation	Maintain Controls & Instrumentation	Each	Staff HVAC Technician	Routine Maint Minor Repairs
D3060	Controls & Instrumentation	Inspect Controls & Instrumentation	Each	Staff HVAC Technician	Predictive Maint Test Inspec
D3060	Controls & Instrumentation	Repair Controls & Instrumentation	Each	Contract HVAC Technician	Routine Maint Minor Repairs
D4010	Sprinklers	Overhaul Sprinklers	Each	Staff Plumber	Routine Maint Minor Repairs
D4010	Sprinklers	Test Sprinklers	Each	Staff Plumber	Predictive Maint Test Inspec
D4010	Sprinklers	Inspect Sprinklers	Each	Staff Electrician	Predictive Maint Test Inspec
D4010	Sprinklers	Repair Sprinklers	Each	Contract Electrician	Routine Maint Minor Repairs
D4030	Fire Protection Specialties	Maintain Fire Protection Specialties	Each	Staff Gen Maint Worker	<b>Routine Maint Minor Repairs</b>
D4030	Fire Protection Specialties	Repair Fire Protection Specialties	Each	Contract Carpenter	Routine Maint Minor Repairs
D4030	Fire Protection Specialties	Inspect Fire Protection Specialties	Each	Staff Gen Maint Worker	Predictive Maint Test Inspec
D4030	Fire Protection Specialties	Refinish Fire Protection Specialties	Each	Contract Painter	Routine Maint Minor Repairs
D5010	Electrical Serv & Dist	Maintain Electrical Serv & Dist	Each	Staff Electrician	Routine Maint Minor Repairs
D5010	Electrical Serv & Dist	Repair Electrical Serv & Dist	Each	Contract Electrician	Routine Maint Minor Repairs
D5010	Electrical Serv & Dist	Maintain Electrical Serv & Dist	Each	Staff Electrician	Routine Maint Minor Repairs
D5020	Lighting & Branch Wiring	Maintain Lighting & Branch Wiring	Each	Staff Electrician	Routine Maint Minor Repairs
D5020	Lighting & Branch Wiring	Inspect Lighting & Branch Wiring	Each	Staff Electrician	Predictive Maint Test Inspec
D5020	Lighting & Branch Wiring	Repair Lighting & Branch Wiring	Each	Contract Electrician	Routine Maint Minor Repairs
D5020	Lighting & Branch Wiring	Clean Lighting & Branch Wiring	Each	Staff Electrician	Routine Maint Minor Repairs
D5030	<b>Communications &amp; Security</b>	Maintain Communications & Security	Each	Staff Electrician	Routine Maint Minor Repairs
D5030	<b>Communications &amp; Security</b>	Check Communications & Security	Each	Staff Electrician	Predictive Maint Test Inspec
D5030	<b>Communications &amp; Security</b>	Repair Communications & Security	Each	Contract Electrician	Routine Maint Minor Repairs
D5030	<b>Communications &amp; Security</b>	Inspect Communications & Security	Each	Staff Electrician	Predictive Maint Test Inspec
D5090	Other Electrical Systems	Clean Other Electrical Systems	Each	Staff Electrician	Routine Maint Minor Repairs
D5090	Other Electrical Systems	Maintain Other Electrical Systems	Each	Staff Electrician	Routine Maint Minor Repairs
D5090	Other Electrical Systems	Test Other Electrical Systems	Each	Staff Electrician	Predictive Maint Test Inspec
E1010	Commercial Equipment	Maintain Commercial Equipment	Each	Staff Electrician	Routine Maint Minor Repairs
E1020	Institutional Equipment	Test Institutional Equipment	Each	Staff Plumber	Predictive Maint Test Inspec
E1020	Institutional Equipment	Maintain Institutional Equipment	Each	Staff Plumber	Routine Maint Minor Repairs

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E1020	Institutional Equipment	Resolder Institutional Equipment	K Ln Ft	Contract Plumber	Routine Maint Minor Repairs
E1020	Institutional Equipment	Re-tape Institutional Equipment	K Ln Ft	Staff Plumber	Routine Maint Minor Repairs
F1010	Special Structures	Refinish Special Structures	Each	Contract Painter	Routine Maint Minor Repairs
F1040	Special Facilities	Lubricate Special Facilities	Each	Staff Plumber	Routine Maint Minor Repairs
F1040	Special Facilities	Check Special Facilities	Each	Staff Plumber	Predictive Maint Test Inspec
F1040	Special Facilities	Repair Special Facilities	Each	Contract Carpenter	Routine Maint Minor Repairs
G2010	Roadways	Patch Roadways	Sq Ft	Staff Road Worker	Routine Maint Minor Repairs
G2010	Roadways	Resurface Roadways	Sq Ft	Contract Road Worker	Routine Maint Minor Repairs
G2020	Parking Lots	Patch Parking Lots	Sq Ft	Staff Road Worker	Routine Maint Minor Repairs
G2020	Parking Lots	Inspect Parking Lots	Each	Staff Electrician	Predictive Maint Test Inspec
G2020	Parking Lots	Paint Parking Lots	Each	Contract Painter	Routine Maint Minor Repairs
G2040	Site Development	Maintain Site Development	Each	Staff Gen Maint Worker	Routine Maint Minor Repairs
G2040	Site Development	Replace Site Development	Each	Contract Electrician	Routine Maint Minor Repairs
G2040	Site Development	Maintain Site Development	Each	Staff Gen Maint Worker	Routine Maint Minor Repairs
G2040	Site Development	Replace Site Development	Each	Contract Electrician	Routine Maint Minor Repairs
G3010	Water Supply	Inspect Water Supply	Each	Staff Plumber	Predictive Maint Test Inspec
G3010	Water Supply	Resolder Water Supply	Ln Ft	Contract Plumber	Routine Maint Minor Repairs
G3010	Water Supply	Lubricate Water Supply	Each	Staff Plumber	Routine Maint Minor Repairs
G3010	Water Supply	Maintain Water Supply	Each	Staff Plumber	Routine Maint Minor Repairs
G3060	Fuel Distribution	Resolder Fuel Distribution	Ln Ft	Contract HVAC Technician	Routine Maint Minor Repairs
G4020	Site Lighting	Replace Site Lighting	Each	Contract Electrician	Routine Maint Minor Repairs