Office Building 9 (045)

744 "P" Street, Sacramento, CA 95814

Facility Condition Assessment

June 2015

Prepared for the State of California Department of General Services

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EXECUTIVE SUMMARY

BACKGROUND

This Facility Condition Assessment (FCA), prepared by EMG Corporation (EMG) in collaboration with the Department of General Services (DGS) Real Estate Services Division (RESD) and the consulting team of Hellmuth, Obata & Kassabaum, Inc. (HOK), is a component of a comprehensive long-range strategic asset management plan for DGS's portfolio of general-purpose office buildings. The goal is to determine the best course of action to address DGS's general-purpose office buildings' infrastructure deficiencies and space needs with a focus on controlling long-term costs.

The DGS portfolio comprises nearly 17 million gross square feet (GSF) of state-owned office facilities statewide, contained within 54 general-purpose state-owned office building sites. The FCA inventories and evaluates each of the DGS general purpose office buildings to benchmark current condition and establish a replacement value. This FCA assesses the infrastructure conditions for the Office Building 9 (045).

The assessment methodology identifies infrastructure systems and components requiring immediate repair or replacement based on their useful life expectancy. In addition, the FCA projects the capital funding needs over a ten-year lifecycle horizon period of 2015 to 2024. The assessments evaluate envelope, structure, plumbing, heating, air conditioning, energy and lighting controls, electrical, data/communications, elevators, fire protection and suppression, security, and utility capacity and systems. The replacement value is determined by multiplying the existing building square footage (SF) by the cost per SF to construct a new, similar building on a similar site.

OBJECTIVE

The objective of the FCA is to identify the capital reserves for infrastructure lifecycle repair/replacement needs over the ten-year lifecycle. The FCA projections will become the basis for the Facility Condition Index (FCI). The FCI is the ratio of immediate repair costs or capital reserve needs to the current replacement value of the existing building. The FCI is a key performance indicator that is used to objectively quantify and evaluate the current condition of a building and can be used to compare the relative condition of the subject building with other buildings within the same portfolio and as a trending matrix for infrastructure "health" over time.

The Office Building 9 (045) FCI ratio will be incorporated as a comparative factor in the overall DGS portfolio analysis, enabling DGS to accurately rank and prioritize building repair/replacement needs in the long-range strategic plan.

SCOPE OF ASSESSMENT

The EMG evaluation team, comprised of engineers and architects, visited the Office Building 9 (045) on December 17 & 18, 2014. The evaluation team reviewed available engineering studies and construction documents to familiarize themselves with the physical conditions. The evaluation team conducted a walk-through of the building to observe building systems and components, identify physical deficiencies, and formulate recommendations to remedy any deficiencies.

SURVEY FINDINGS

One of the major goals of the FCA is to calculate the FCI, which gives an indication of a building's overall condition. Two FCI ratios are calculated and presented – Current Year and Ten-Year. The Current Year FCI is the ratio of Immediate Repair Costs to the building's Current Replacement Value. Similarly, the Ten-Year FCI is the ratio of anticipated Capital Reserve Needs over the next ten years to the Current Replacement Value.

The values are based on a scale from 0-100 percent. A lower FCI ratio indicates that the building's infrastructure is in "Good" condition. Based on industry standards, a "Good" condition building will have an FCI ratio at or below five percent. A "Fair" condition building will have an FCI ratio between five and ten percent. A "Poor" condition building will have an FCI ratio between 10 and 65 percent. A building with an FCI ratio exceeding 65 percent is considered "Very Poor" and is a candidate for replacement or divestment.

The table below represents summary-level findings for the FCA. The deficiencies identified in this assessment can be combined with potential new construction requirements to develop an overall strategy that can serve as the basis for a portfolio-wide capital improvement funding strategy. Key findings from the assessment include:

Key Finding	Metric
Current Replacement Value	$196,655,641
Immediate Repair Costs (12 months)	$793,031
1-5 Year Capital Needs	$5,988,755
6-10 Year Capital Needs	$199,815
Total 10-Year Capital Reserve Needs	$6,981,601

$$\text{FCI} = \frac{\text{Immediate Repair Costs or Ten-Year Capital Reserve Needs}}{\text{Current Replacement Value of Building}}$$

Current Year FCI

$$\text{Current FCI} = \frac{\$793{,}031}{\$196{,}655{,}641}$$

Ten-Year FCI

$$\text{Ten-Year FCI} = \frac{\$6{,}981{,}601}{\$196{,}655{,}641}$$

Current Year FCI	Ten-Year FCI
0.40 %= *Good Condition*	**3.55 %= *Good Condition***

The major issues contributing to the Immediate Repair Costs and the Current Year FCI ratio are summarized below:

- Repair and painting of the stucco exterior walls are recommended.
- The elevators require repairs, including work to fully comply with ADA Accessibility Guidelines. Installation of door restrictors is recommended on the elevator cars.
- Replace the original air handling unit (AHU) fans and motors.

Further detail on the specific costs that make up the Immediate Repair Costs can be found in the cost tables in the appendices.

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INTRODUCTION

BUILDING BACKGROUND

Designed under the direction of State Architect John Puisha, Office Building 9 (045) is located at 744 P Street, Sacramento. Construction was completed in 1969. The building shares the block with its twin, Office Building 8 (039). The 18-story "twin towers" were the tallest and largest office buildings in Sacramento in 1969. The buildings are organized around a central plaza that is the setting for "Apolymon," a large horizontal cast acrylic abstract sculpture by Bruce Beasley. A major renovation of Office Buildings 8 and 9 (039 and 045), designed by HGA Architects, was completed in 2009. The project was part of the state's "Excellence in Public Building" program, which includes an emphasis on sustainable architectural design.

The sole tenant of Office Building 9 (045) is the Department of Social Services. The building includes 18 floors of general-purpose open offices, private offices, computer rooms, and support areas. Building amenities include a childcare center.

Office Building 9 (045) is 308,975 GSF with a net usable area of 228,631 SF. The ratio of net usable to gross building area is 73.9 percent. The occupant capacity is 948. There is no on-site parking.

BUILDING DESCRIPTION

The structural system is steel framed on concrete slab with spread footings and pile caps. The roof structure is flat with single-ply membrane.

Exterior walls are finished with stucco.

The interior walls are painted drywall with terrazzo panels in the lobby entrance. The floor finishes are commercial carpet tile, vinyl composition tile, terrazzo, and ceramic tile in the restrooms. The ceilings are finished with acoustic tile.

The building is served by eight traction elevators. The machinery consists of originally installed components, though there were significant modernization efforts performed during the rehabilitation.

Domestic hot water is provided from the steam loop utilizing two separate heat exchangers.

The chilled and heated water are looped around the building to interior air handling units on each floor, including the basement and penthouse. The heating water pumps are original. Large chilled water pumps are recent replacements. The conditioned air from the dual-duct air handling units supplies variable air volume boxes throughout the building.

The facility is protected by a wet-pipe sprinkler system and fire alarm system. The fire pump and main panels are located in Office Building 9 and serve both buildings.

Most of the electrical infrastucture is original to the building.

The landscaping consists of perimeter planters on the north side of the main entrance and in the courtyard. Flower beds are located throughout the site. Landscaped areas are irrigated by a drip irrigation system.

Onsite parking stalls are located in an adjacent parking garage.

The sidewalks are constructed of cast-in-place concrete and brick paving. ADA ramps with metal handrails are located at grade changes.

Project Statistics

Item	Description
Project Name	Office Building 9
Building ID	045
Property Type	Administration
Year Built	1969
Number of Stories	18
Occupied	Yes
Land Area (acres)	2.51
Gross Square Feet (GSF)	308,975

FACILITY CONDITION ASSESSMENT

The goal of the FCA is to gather the data necessary to understand the existing building's condition, identify strategies to meet the building's lifecycle needs, and create the foundation for a long-range strategic plan.

COMPONENTS OF THE FCA

Current conditions analysis

The current condition analysis identifies the existing building's immediate requirements, including deferred maintenance, recommended discretionary improvements, and code non-compliance issues.

Anticipated building reserve analysis

The anticipated building reserve analysis projects the ongoing degradation of the building's components and costs associated with the reserve or replacement of these components as they reach the end of their useful lives.

Funding needs analysis

The funding needs analysis results in a summary report of deferred maintenance and systems reserve funding needs.

CALCULATION OF FUNDING NEEDS

Calculating probable funding needs involves identifying and quantifying the building's infrastructure systems or components that require immediate or future action over their lifecycle horizon. Funding needs are segregated into two categories, Immediate Repair Costs and Capital Reserve Needs. A Replacement Value is calculated and a Remaining Useful Life Estimate is determined as well as Opinions of Probable Cost in order to establish the FCI. The terms are defined as follows:

Immediate Repair Costs

Immediate Repair Costs are Opinions of Probable Cost that require immediate action as a result of: (1) material existing or potentially unsafe conditions, (2) material building or fire code violations, or (3) conditions that, if left un-remedied, have the potential to result in, or contribute to, critical element or system failure within **one year** that will likely result in a significant escalation of its remedial cost. Immediate Repair Costs are items which require action within year one.

Capital Reserve Needs

Capital Reserve Needs are recurring probable expenditures, which are not considered operation or maintenance expenses, that should be budgeted annually. In general, Capital Reserve Needs are reasonably predictable both in terms of frequency and cost. However, Capital Reserve Needs may also include components or systems that have an indeterminable life but nonetheless have a potential liability for failure within a ten-year period. The Capital Reserve Needs presented in the FCA represent average industry costs as of 2015, without inflation. The Ten-Year Expenditure Forecast table in Appendix G includes inflation by assuming a five percent annual inflation rate on Total Capital Needs by year.

Current Replacement Value

Current Replacement Value is determined by multiplying the existing building's SF by the Cost per SF to construct a new, similar building on a similar site. Current Replacement Value is not an appraised or

market value for the purposes of a property sale. To estimate the cost per SF, EMG referenced Marshall & Swift's *Marshall Valuation Service*. This building cost data index is an industry standard, adjusted annually, and relied upon by the insurance industry, as well as other agencies and organizations. Cost per SF is calculated by adjusting Marshall & Swift's unit cost for a Government Office Building to account for factors related to building systems, class of construction, and location to reflect the estimated cost of construction at the subject building site.

Remaining Useful Life

Remaining Useful Life (RUL) estimate is based upon site observations, research, and judgment, along with reference to Expected Useful Life (EUL) tables from various industry sources. A sample copy of the EUL table is included in the appendices. EMG estimates when a system or component will likely need replacement based on a visual review of the current condition and the RUL estimate. Exposure to the elements, quality of installation, extent of use, and quality and amount of preventive maintenance exercised are factors that impact the effective age of a system or component. As a result, a system or component might have an effective age that is greater or less than its actual chronological age. The RUL of a system or component equals the EUL less its effective age.

Opinions of Probable Cost

Opinions of Probable Cost are estimates for individual repair or replacement and are a key consideration of this engagement. These estimates may be based on invoice or bid documents provided by the owner or building manager, cost estimates developed by construction resources (such as R.S. Means), or EMG's experience with similar properties, city cost indexes, and projections of economic conditions. Where quantities cannot be derived from building plans, lump sum costs or allowances are utilized.

Opinions of Probable Cost should only be construed as preliminary, order-of-magnitude budgets. Actual costs will likely vary from EMG's estimates depending on type and design of suggested remedy, quality of materials and installation, manufacturer and type of equipment or system selected, field conditions, whether a physical deficiency is repaired or replaced in whole, phasing of the work (if applicable), quality of contractor, market conditions, and whether competitive pricing is solicited. ASTM E2018-08[1] recognizes that certain Opinions of Probable Cost cannot be developed within the scope of an FCA without further study. Instances where a visual inspection is not possible and further study is recommended, EMG provides a cost estimate of the additional study in the FCA.

Facility Condition Index

The FCI gives an indication of a building's overall state of condition. The values are based on a 0-100 percent scale. The Current Year FCI is the ratio of Immediate Repair Costs to Current Replacement

[1] ASTM 2018-08 is the national guideline for preparing a Facility Condition Assessment published by the American Society for the Testing of Materials.

Value. The Ten-Year FCI is the ratio of Capital Reserve Needs (2015 – 2024) to Current Replacement Value. The Ten-Year FCI is calculated using uninflated 2015 dollars because the year of project implementation is likely unknown or subject to change. Since both the repair/replacement costs and Current Replacement Value will increase at the same inflation rate, the impacts of inflation do not significantly affect the FCI ratio.

SCOPE OF ASSESSMENT

The evaluation team conducted a walk-through survey of Office Building 9 (045) on December 17 & 18, 2014. The survey included analysis and observation of the building's interior and exterior, including the roofs. The evaluation team interviewed the building maintenance staff to inquire about the subject property's previous repairs and replacements and their costs, level of preventive maintenance exercised, pending repairs and improvements, and frequency of repairs and replacements. Opinions were developed based on the site evaluation, interviews with relevant maintenance providers and facilities managers, and previous experience with comparable properties. The evaluation team questioned those knowledgeable of the subject property's physical condition and operation (or knowledgeable of similar systems) to gain comparative information to use in evaluation of the subject property. In addition, the building staff provided documents and information to the evaluation team that were relevant to the subject property's physical improvements, extent, and type of use and assisted the team in identifying potential discrepancies between reported information and observed conditions.

The evaluation team made a visual assessment for compliance with the American with Disabilities Act (ADA) Accessibility Guidelines and the California Title 24 disabled access requirements. Items determined to be out of compliance are included in the repair/replacement costs. The assessments did not include detailed measurements to determine compliance under the regulations.

The data collected in the FCA are the basis of the projected ten-year Capital Reserve Needs. The goals of the FCA are:

- Benchmark current building condition with recommended corrections for deficiencies to establish the Immediate Repair Costs.
- Estimate life expectancy of various building systems and components to establish the Capital Reserve Needs for infrastructure lifecycle repair/replacement for the ten-year assessment period from 2015 to 2024.
- Provide estimates for corrections for Immediate Repairs Costs and projections for Capital Reserve Needs for lifecycle component replacement within the ten-year projection timeframe.
- Serve as a guide for future replacement, repairs, and improvements and assist DGS in prioritizing its capital budget and expenditures across its real estate portfolio.

PRIORITY RANKING

The recorded existing conditions, identified problems and deficiencies, documented corrective action, and quantities of recommended repairs and/or replacements are documented during the assessment process. Data are collected and entered directly into the assessment and capital planning database using tablet computers. Based on the discussions with the client and industry standards, a Priority Ranking is calculated for each cost observation. The Priority Ranking calculation is a function of four key categories.

PRIORITY RANKING CATEGORIES

Building Mission Ranking

A building can be ranked on a scale of one to ten based on conversations with the client regarding the importance of each building to the overall mission of the building. The properties reviewed during this assessment are all general-purpose office buildings and for the purposes of this study are all ranked the same for Building Mission.

Remaining Useful Life Ranking

The EUL projection of the component is calibrated against the RUL as estimated by the field assessor. This ratio is then utilized as a factor in the priority ranking. An RUL of zero years is given the highest priority and always results in ranking the component as Priority 1.

Asset Component Category

Each material or system (asset) evaluated is assigned a unique Uniformat code. The Uniformat designation is then associated with a ranking based on the overall importance to the operation of the building. An asset that is related to the building envelope, e.g. roof, window, or exterior siding, is assigned a higher ranking than a component such a flooring, carpeting, or other finish material.

Functional Asset Categories

The cost associated with each asset or component evaluated is assigned to a category to include: Code Compliance, Facility Operations, Environmental Factors, Facility Functionality, and Integrity of the Facility. The Asset Categories are given a ranking based on their relative importance. For example, Code Compliance is ranked higher than Maintenance.

PRIORITY RATIO

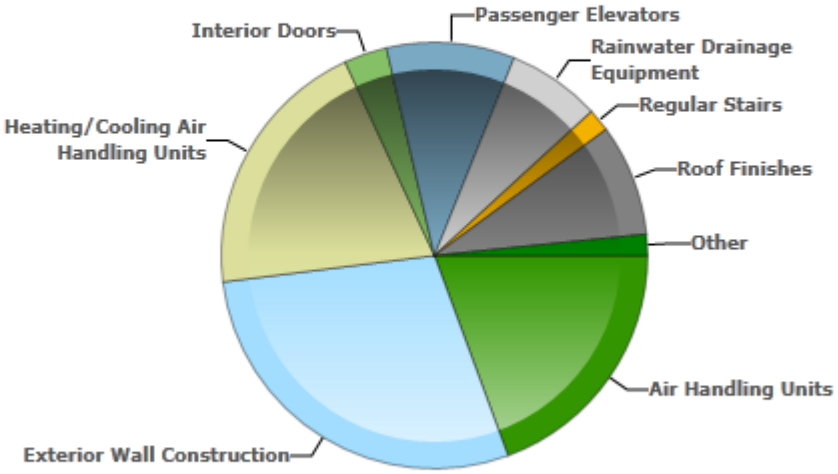
The four categories above are assigned a numerical value and the values are multiplied together for each cost observation. The resulting number is then assigned a priority by the capital planning software with

the lower range assigned Priority 1 and the higher range of numbers assigned among Priority 2, Priority 3, and Priority 4. Priority 5 is reserved for code issues that were permitted by the code at the time of construction but would be required only if a major renovation or code compliance project were to be undertaken.

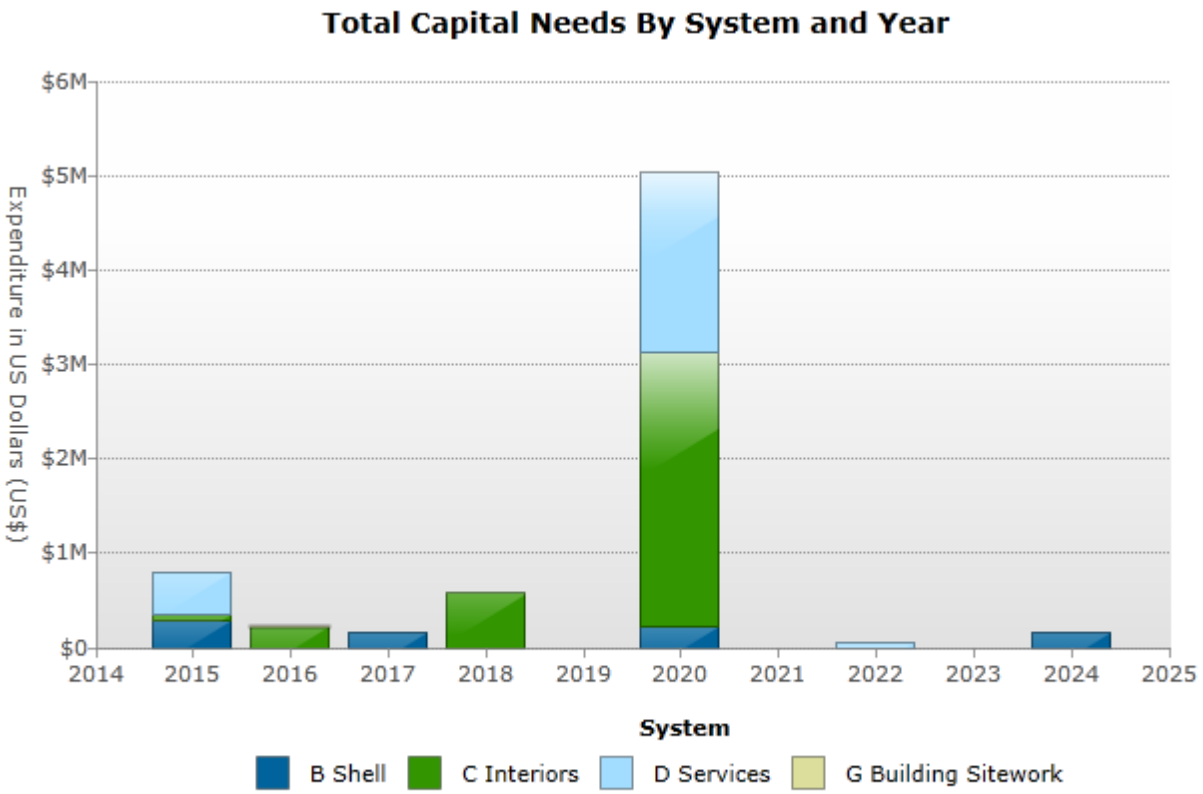
The physical condition of building systems and related components are typically defined as being in one of four conditions: Good, Fair, Poor, or Very Poor, or a combination thereof. For the purposes of this report, the following definitions are used:

Condition	Definition
Good	In new or well-maintained condition, with no visual evidence of wear, soiling, or other deficiencies.
Fair	Subjected to wear and soiling but is still in a serviceable and functioning condition.
Poor	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.
Very Poor	Subjected to hard or long-term wear. Has reached the end of its useful or serviceable life. Renewal is now necessary.

Distribution of Immediate Needs by Building System



Level	Building System	Estimated Cost
B2011	Exterior Wall Construction	$227,092
B3011	Roof Finishes	$67,190
C1021	Interior Doors	$25,914
C1035	Identifying Devices	$3,794
C2011	Regular Stairs	$13,660
C3005	ADA Renovations	$8,928
D1011	Passenger Elevators	$77,000
D2043	Rainwater Drainage Equipment	$56,328
D3041	Air Handling Units	$153,760
D3063	Heating/Cooling Air Handling Units	$159,365
	Total	**$793,031**



	Building System							
Year	A Sub-Structure	B Shell	C Interiors	D Services	E Equip. & Furnishings	F Spec. Const. & Demolition	G Bldg. Site Work	Total
2015	$0	$294,282	$52,296	$446,453	$0	$0	$0	**$793,031**
2016	$0	$0	$216,062	$0	$0	$0	$10,200	**$226,262**
2017	$0	$150,369	$0	$0	$0	$0	$0	**$150,369**
2018	$0	$0	$576,100	$0	$0	$0	$0	**$576,100**
2020	$0	$227,092	$2,907,829	$1,901,102	$0	$0	$0	**$5,036,023**
2022	$0	$0	$0	$49,447	$0	$0	$0	**$49,447**
2024	$0	$150,369	$0	$0	$0	$0	$0	**$150,369**
Total	**$0**	**$822,112**	**$3,752,287**	**$2,397,002**	**$0**	**$0**	**$10,200**	**$6,981,601**

CURRENT REPLACEMENT VALUE

The Current Replacement Value has been determined as $196,655,641 for the Office Building 9 Building (045). The Current Replacement Value is the existing building SF multiplied by the Cost per SF to construct a new, similar building. As noted previously, the basis of the Cost per SF amount is the Marshall & Swift Cost Valuation system. A copy of the cost calculation is included in Appendix H of this report.

Building Area	Cost/SF	Current Replacement Value
308,975 GSF	$636	$196,655,641

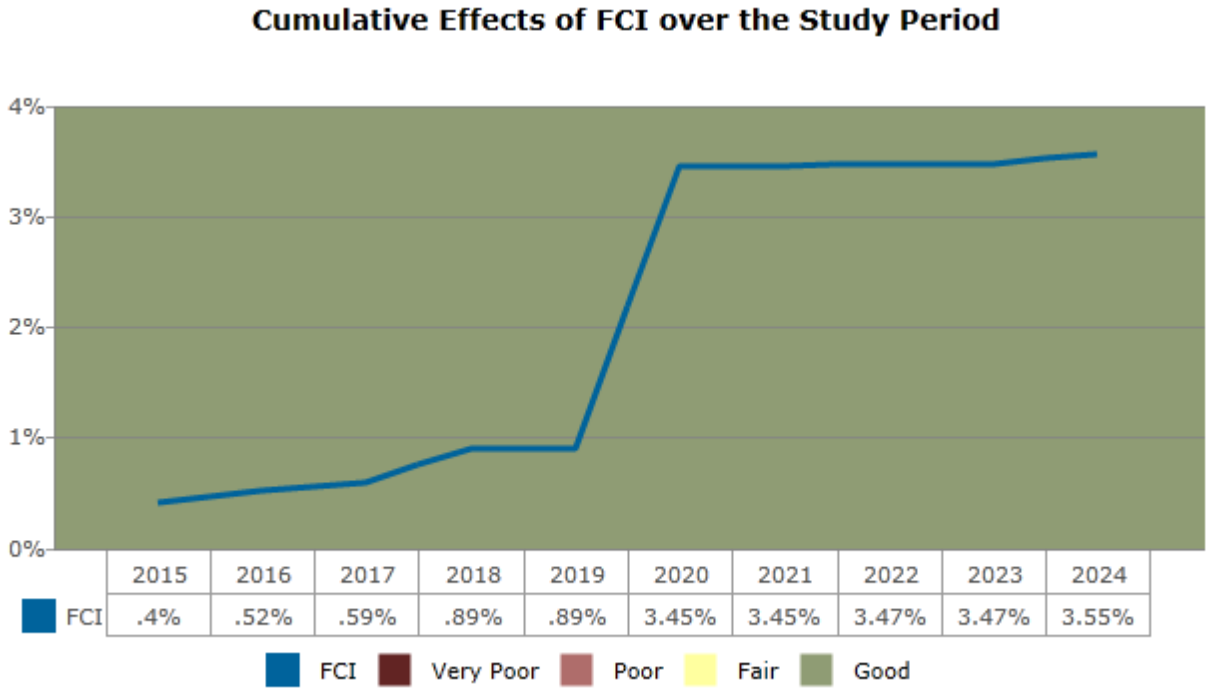
FACILITY CONDITION INDEX

The FCI[1] is an indication of a building's current and future overall condition. According to industry standards an FCI ratio of 65 percent, or the "rule of two-thirds," is the threshold for identifying potential candidates for replacement or divestment.[2] Once the FCI ratio reaches 65 percent, or roughly two-thirds of the Current Replacement Value of the estimated cost to replace a building, 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 needs.

Condition	Definition	Value
Good	In new or well-maintained condition, with no visual evidence of wear, soiling or other deficiencies.	0% to 5%
Fair	Subjected to wear and soiling but is still in a serviceable and functioning condition.	Greater than 5% to 10%
Poor	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.	Greater than 10% to 65%
Very Poor	Subjected to hard or long-term wear. Has reached the end of its useful or serviceable life. Renewal is now necessary.	Greater than 65%

[2] Sean C. Rush (1991). Managing the Facilities Portfolio: a Practical Approach to Institutional Facility Renewal and Deferred Maintenance. National Association of College and University Business Officers. pp. 26–66. ISBN 978-0-915164-59-2.

The chart below indicates the cumulative effects of the FCI ratio over the ten-year study period assuming the required funds are NOT provided to address the identified repairs and replacements for each year.



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APPENDICES

APPENDIX A: ACCESSIBILITY ISSUES

Item	Description
C1021 Interior Doors	B2031 Solid Wood Door
Condition	Good
Qty / UOM	43 / EA
RUL (years)	35
Location	All Floor

Item	Description
C1035 Identifying Devices	C1035 Directional Signage
Condition	Poor
Qty / UOM	12 / EACH
RUL (years)	0
Location	All Floor

Item	Description
C3005 ADA Renovations	C3005 ADA door signage / Restrooms
Condition	Fair
Qty / UOM	24 / EA
RUL (years)	0
Location	All upper floors

Recommendations:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C1021	Add ADA automatic door opener	12.0 - EA	2159.5	CC - Accessibility	Priority 2	2015	25,914
C1035	Replace C1035 Directional Signage	12.0 - EACH	316.2	CC - Accessibility	Priority 1	2015	3,794
C3005	Replace C3005 ADA door signage / Restrooms	24.0 - EA	372.0	CC - Accessibility	Priority 1	2015	8,928
D1011	Reorder buttons in high rise cars to meet ADA	3.0 - EA	2000.0	CC - Accessibility	Priority 1	2015	6,000

Cost Summary:

Year	Total Expenditures
2015	$44,636

APPENDIX B: GENERAL ASSESSMENT INFORMATION

B Shell Systems

B20 EXTERIOR ENCLOSURE

Item	Description
B2011 Exterior Wall Construction	B2011 Exterior Walls
Condition	Good
Qty / UOM	123250 / SF
RUL (years)	10
Location	All Floors
Exterior Wall Construction	Stucco
Parapets	Yes
Balcony Walls and Handrails	Metal
Exterior Soffits	Concealed
Lintels and Sills	Metal

OBSERVATIONS/COMMENTS:

The exterior walls were power-washed and repaired in 2010. Further repairs are required in the near term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2011	Repair 10% of stucco	12,391.0 - SF	18.3	OP - Maintenance	Priority 2	2015	227,092
B2011	Repair 10% of stucco	12,391.0 - SF	18.3	OP - Maintenance	Priority 2	2020	227,092

Item	Description
B2021 Windows	B2021 Windows /Curtain Walls
Condition	Good
Qty / UOM	2000 / EA
RUL (years)	45
Location	All Floor
Window Type	Fixed
Windows Material	Steel
Windows Glazing	Double Glazed
Window Operation	Manual

OBSERVATIONS/COMMENTS:

The curtain walls at the main lobby were installed in 2010 and some of windows were replaced during seismic renovation. Re-sealing windows and replacing gasket in near term are recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2021	Re-seal windows and replace gaskets	3,950.0 - LF	38.1	OP - Maintenance	Priority 2	2017	150,369
B2021	Re-seal windows and replace gaskets	3,950.0 - LF	38.1	OP - Maintenance	Priority 2	2024	150,369

COST SUMMARY:

Type	Year	Total Expenditures
B20 Exterior Enclosure	2015	$227,092
B20 Exterior Enclosure	2017	$150,369
B20 Exterior Enclosure	2020	$227,092
B20 Exterior Enclosure	2024	$150,369

B30 ROOFING

Item	Description
B3011 Roof Finishes	B3011 Building Roof
Condition	Fair - Good
Qty / UOM	172 / SQ
RUL (years)	13
Location	All roof sections
Insulation	None
Flashings and Trim	Metal
Roof Eaves and Soffits	No
Roof Drainage	Metal Gutter And Down Spouts
Roof Warranty	Yes

OBSERVATIONS/COMMENTS:

The building roof is PVC roof with single ply membrane, replaced in 2008. There were some water puddles observed during the roof inspection. Re-sloping these areas is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B3011	Install roof walk pads per building plans	8.0 - EA	487.5	CC - Life Safety	Priority 1	2015	3,900
B3011	Repair 20% of roof due to excessive ponding	34.0 - SQ	1861.5	OP - Maintenance	Priority 2	2015	63,290

COST SUMMARY:

Type	Year	Total Expenditures
B30 Roofing	2015	$67,190

C Interiors Systems

C10 Interior Construction

Item	Description
C1021 Interior Doors	C1021 Interior Door
Condition	Good
Qty / UOM	284 / EA
RUL (years)	20
Location	All Floor

OBSERVATIONS/COMMENTS:

No further action is required.

Item	Description
C1021 Interior Doors	B2031 Solid Wood Door
Condition	Good
Qty / UOM	43 / EA
RUL (years)	35
Location	All Floor

OBSERVATIONS/COMMENTS:

As part of 2009 DGS ADA Accessibility Survey, adding automatic door openers with DC actuators at all floor entrance doors was recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C1021	Add ADA automatic door opener	12.0 - EA	2159.5	CC - Accessibility	Priority 2	2015	25,914

Item	Description
C1035 Identifying Devices	C1035 Directional Signage
Condition	Poor
Qty / UOM	12 / EACH
RUL (years)	0
Location	All Floor

OBSERVATIONS/COMMENTS:

Replacing directional signage at the lobby area and hallways as part of ADA accessibility requirement in near term is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C1035	Replace C1035 Directional Signage	12.0 - EACH	316.2	CC - Accessibility	Priority 1	2015	3,794

COST SUMMARY:

Type	Year	Total Expenditures
C10 Interior Construction	2015	$29,708

C20 STAIRS

Item	Description
C2011 Regular Stairs	C2011 Fire exit stairs
Condition	Fair - Good
Qty / UOM	19830 / LF
RUL (years)	45
Location	Stairs
Stairs Frame	Steel
Stair Riser	Closed
Stair Treads	Concrete-Filled/Metal Pan
Stair Railings	Metal
Stair Soffit Finishes	Plaster
Stair Handrail Finishes	Painted

OBSERVATIONS/COMMENTS:

There are two fire exit stairs built in 1969. An additional fire exit stairway was added in 2010. Paint and floor covering maintenance will be required during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C2011	Paint stairwells and stair parts	55,830.0 - SF	3.9	IN - Appearance	Priority 2	2016	216,062

Item	Description
C2011 Regular Stairs	C2011 Roof exterior metal stair
Condition	Poor
Qty / UOM	3600 / SF
RUL (years)	0
Location	Roof
Stairs Frame	Steel
Stair Riser	Open
Stair Treads	Steel
Stair Railings	Metal
Stair Handrail Finishes	Natural Finish

OBSERVATIONS/COMMENTS:

The vertical metal ladder for access to the mechanical room roof is a potential safety hazard. Installation of an exterior metal stairway is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C2011	Replace C2011 Roof exterior metal stair	3,600.0 - SF	3.8	CC - Life Safety	Priority 1	2015	13,660

COST SUMMARY:

Type	Year	Total Expenditures
C20 Stairs	2015	$13,660
C20 Stairs	2016	$216,062

C30 INTERIOR FINISHES

Item	Description
C3005 ADA Renovations	C3005 ADA door signage / Restrooms
Condition	Fair
Qty / UOM	24 / EA
RUL (years)	0
Location	All upper floors

OBSERVATIONS/COMMENTS:

All restrooms and drinking fountains were upgraded in 2010; however, only the ground floor restrooms retained the California Title 24 accessibility signage on the doors. ADA accessibility signage is provided at all restrooms. Upper floor restrooms require the addition of the Title 24 signage on doors.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3005	Replace C3005 ADA door signage / Restrooms	24.0 - EA	372.0	CC - Accessibility	Priority 1	2015	8,928

Item	Description
C3012 Wall Finishes to Interior Walls	C3012 Interior Painted Walls
Condition	Fair
Qty / UOM	204200 / SF
RUL (years)	3
Location	All floors

OBSERVATIONS/COMMENTS:

Interior wall finishes will require paint maintenance throughout the assessment period due to normal wear. Painted walls include offices and common areas.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3012	Replace C3012 Interior Painted Walls	204,200.0 - SF	2.1	IN - Appearance	Priority 3	2018	435,518

Item	Description
C3012 Wall Finishes to Interior Walls	C3012 Terrazzo panels
Condition	Good
Qty / UOM	810 / SF
RUL (years)	45
Location	Entrance Lobby

OBSERVATIONS/COMMENTS:

No further action is required.

Item	Description
C3025 Carpeting	C3025 Carpet flooring
Condition	Good
Qty / UOM	30100 / SY
RUL (years)	5
Location	All Floors
Floor Toppings	Light Weight Concrete

OBSERVATIONS/COMMENTS:

All office areas are carpeted. Based on normal wear and deterioration, replacement will be required during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3025	Replace C3025 Carpet flooring	30,100.0 - SY	96.6	IN - Appearance	Priority 4	2020	2,907,829

Item	Description
C3032 Suspended Ceilings	C3032 Offices Area Ceilings
Condition	Good
Qty / UOM	2335 / CSF
RUL (years)	15
Location	All Floor

OBSERVATIONS/COMMENTS:

The suspended ceilings were replaced as part of the seismic renovation in 2010. Replacement of damaged tiles is recommended in the near term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3032	Repair 5% of Asset: Offices Area Ceilings	117.0 - CSF	1201.6	IN - Appearance	Priority 3	2018	140,583

COST SUMMARY:

Type	Year	Total Expenditures
C30 Interior Finishes	2015	$8,928
C30 Interior Finishes	2018	$576,100
C30 Interior Finishes	2020	$2,907,829

D Services Systems

D10 Conveying Systems

Item	Description
D1011 Passenger Elevators	D1011 Traction Gearedless Elevator - High Rise
Condition	Good
Qty / UOM	8 / EA
RUL (years)	5
Location	Throughout Facility
Elevator Style	Passenger
Elevator Type	Traction
Machinery Location	Penthouse At The Top Of The Shaft

OBSERVATIONS/COMMENTS:

The building supports six passenger elevators from the basement through the 17th floor. A seventh elevator is routed from the 17th to the 18th floor. The elevators were renovated during the recent renovations. A comprehensive elevator report is included in the appendix.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D1011	Install door restrictors on cars	8.0 - EA	3000.0	IN - Reliability	Priority 1	2015	24,000
D1011	Replace hoist ropes on car 2	1.0 - EA	15000.0	IN - Reliability	Priority 1	2015	15,000
D1011	perform 5-year load test	8.0 - EA	3000.0	IN - Reliability	Priority 1	2015	24,000
D1011	Deferred maintenance items	8.0 - EA	1000.0	IN - Reliability	Priority 1	2015	8,000
D1011	Reorder buttons in high rise cars to meet ADA	3.0 - EA	2000.0	CC - Accessibility	Priority 1	2015	6,000
D1011	Modernize cars 1-6 with new controllers, SCR Drives, and updated fire service	6.0 - EA	300000.0	IN - Reliability	Priority 3	2020	1,800,000

COST SUMMARY:

Type	Year	Total Expenditures
D10 Conveying Systems	2015	$77,000
D10 Conveying Systems	2020	$1,800,000

D20 PLUMBING

Item	Description
D2011 Water Closets	D2011 Commercial Grade Water Closets
Condition	Good
Qty / UOM	133 / EA
RUL (years)	30
Location	Throughout Facility
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

The restrooms are equipped with china toilets with dual-flush water saving manual valves. No further action required.

Item	Description
D2012 Urinals	D2012 Urinals
Condition	Good
Qty / UOM	40 / EA
RUL (years)	30
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Two urinals are located in each men's restroom at standard and ADA heights. The urinals are equipped with dual-flow water-saving mechanical flush valves. No further action required.

Item	Description
D2013 Lavatories	D2013 Wall-Hung Lavatories and Faucets
Condition	Good
Qty / UOM	89 / EA
RUL (years)	30
Location	Restrooms

OBSERVATIONS/COMMENTS:

The wall-hung lavatories were replaced during the recent renovations. No further action required.

Item	Description
D2018 Drinking Fountains and Coolers	D2018 Drinking Fountains
Condition	Good
Qty / UOM	19 / EA
RUL (years)	15
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The facility has refrigerated water fountains of stainless steel construction, one per floor, located by the restrooms. No further action required.

Item	Description
D2023 Domestic Water Supply Equipment	D2023 Domestic Water Booster Pumps 40 HP (old)
Condition	Fair
Qty / UOM	3 / EA
RUL (years)	5
Location	Basement Mechanical

OBSERVATIONS/COMMENTS:

Four domestic water pressure pumps are run in parallel to provide increased pressure, ensuring adequate flow to the upper floors of each building. Pumps are rated at 500 psi and powered by 40-hp motors. Three pumps appear to be original and one pump appears to be new. Replacement during the term is expected.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2023	Replace D2023 Domestic Water Booster Pumps 40 HP (old)	3.0 - EA	33700.8	IN - Beyond Rated Life	Priority 3	2020	101,102

Item	Description
D2023 Domestic Water Supply Equipment	D2023 Domestic Water Booster Pumps 40 HP (new)
Condition	Good
Qty / UOM	1 / EA
RUL (years)	19
Location	Basement Mechanical

OBSERVATIONS/COMMENTS:

Four domestic water pressure pumps are run in parallel to provide increased pressure, ensuring adequate flow to the upper floors of each building. Pumps are rated at 500 psi and powered by 40-hp motors. Three pumps appear to be original and one pump appears to be new. Replacement during the term is expected.

Item	Description
D2034 Sanitary Waste Equipment	D2030 Sanitary Sump Pumps
Condition	Good
Qty / UOM	2 / EA
RUL (years)	15
Location	Basement

OBSERVATIONS/COMMENTS:

Two sanitary waste pumps share a pit in the basement, providing outflow from those locations (without gravity feed) into the municipal waste drain. No further action required.

Item	Description
D2043 Rainwater Drainage Equipment	D2043 Storm Water System Pump, 20 HP
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	0
Location	Basement

OBSERVATIONS/COMMENTS:

Two older/original storm water drain pumps within a shared pit in the basement provide outflow from those locations (without gravity feed) into the municipal storm sewer. Replacement during the term is expected.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2043	Replace D2043 Storm Water System Pump, 20 HP	2.0 - EA	28164.2	IN - Beyond Rated Life	Priority 1	2015	56,328

COST SUMMARY:

Type	Year	Total Expenditures
D20 Plumbing	2015	$56,328
D20 Plumbing	2020	$101,102

D30 HVAC

Energy Supply	
Item	**Description**
Fuel Oil Type	N/A
Fuel Gas Type	N/A
Solid Fuel Type	N/A
District Heat Type	Site Physical Plant Steam
District Cooling Type	Site Physical Plant Chilled Water
Solar Thermal	No
Fuel Tank Type	N/A
Fuel Tank Size (gallons)	N/A
Fuel Tank Location	N/A
Gas Meter Location	N/A
Electrical Meter Location	Electrical room
Water Meter Location	Street

Item	Description
D3041.1 Air Handling Units	D3041 Interior Air Handlers 18,000-20,000 CFM
Condition	Fair
Qty / UOM	15 / EA
RUL (years)	20
Location	Utility Rooms/Closets

OBSERVATIONS/COMMENTS:

Original air handlers are used throughout the facility. Most of the floors have dual-duct units nominally rated at 19,000 CFM. The supply fans are powered by 25 HP motors and the return fans are powered by 10 HP motors. All units are equipped with VFD's, which were installed during the renovations. Most of the dampers and approximately half of the motors are original and require replacement.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3041	Replace AHU supply fan motors 25 HP	7.0 - EA	8928.0	OP - Maintenance	Priority 2	2015	62,496
D3041	Replace AHU return fan motors 10 HP	7.0 - EA	4960.0	OP - Maintenance	Priority 2	2015	34,720

Item	Description
D3041.1 Air Handling Units	D3041 Interior Air Handlers 11,000-14,000 CFM
Condition	Fair
Qty / UOM	3 / EA
RUL (years)	20
Location	Basement Mechanical

OBSERVATIONS/COMMENTS:

Original air handlers are used throughout the facility. The basement has three units nominally rated at 11,000 to 14,000 CFM each, for supply and exhaust only. The supply fans are powered by 20-hp to 25-hp motors, and there are no return fans. All units are equipped with VFDs, which were installed during the renovations. Most of the dampers and approximately half of the motors are original, and require replacement.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3041	Replace AHU supply fan motors 25 HP	3.0 - EA	8928.0	OP - Maintenance	Priority 2	2015	26,784
D3041	Replace AHU return fan motors 7.5 HP	3.0 - EA	4960.0	OP - Maintenance	Priority 2	2015	14,880

Item	Description
D3041.1 Air Handling Units	D3041 Interior Air Handlers 4,000-7,000 CFM
Condition	Fair
Qty / UOM	3 / EA
RUL (years)	20
Location	Penthouse Mechanical

OBSERVATIONS/COMMENTS:

Original air handlers are used throughout the facility. The rooftop penthouse has three units nominally rated at 4,000 to 7,000 CFM each, supply and exhaust only. The supply fans are powered by 5-hp to 7.5-hp motors, and there are no return fans. All units are equipped with VFDs, which were installed during the renovations. Most of the dampers and approximately half of the motors are original, and require replacement.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3041	Replace AHU supply fan motors 5-7.5 HP	3.0 - EA	4960.0	OP - Maintenance	Priority 2	2015	14,880

Item	Description
D3041.2 Terminal Units VAV	D3041 VAV Boxes
Condition	Fair
Qty / UOM	331 / EA
RUL (years)	15
Location	Throughout Facility
Terminal Units VAV Boxes	Traditional (Air Flow Control Only)
Terminal Units Control	Building System

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by dual-duct variable air volume terminals (VAVs) supplied with conditioned air from the central system air handlers. No further action required.

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan 7,000-13,000 CFM
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	15
Location	Penthouse Mechanical

OBSERVATIONS/COMMENTS:

The large penthouse exhaust fans were refurbished during the 2010 renovations and appear to be in reliable working condition. No further action required.

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Stair Pressurization Fans, 15-20 HP
Condition	Good
Qty / UOM	2 / EA
RUL (years)	15
Location	Rooftop

OBSERVATIONS/COMMENTS:

The stairwell pressurization fans are located on the roof. No further action required.

Item	Description
D3052 Package Units	D3052 Computer/Server Room AC, 5 Tons
Condition	Good
Qty / UOM	1 / EA
RUL (years)	15
Location	Utility Rooms/Closets

OBSERVATIONS/COMMENTS:

The main server room has one dedicated 5-ton air conditioning unit installed during the 2010 renovation. The unit is supplied with chilled water from the central plant. No further action required.

Item	Description
D3063 Heating/Cooling Air Handling Units	D3063 AHU Dampers
Condition	Poor - Fair
Qty / UOM	42 / EA
RUL (years)	0
Location	Utility Rooms/Closets

OBSERVATIONS/COMMENTS:

The automatic dampers on both the supply and return sides of the air handlers are original components that have aged substantially. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3063	Replace D3063 AHU Dampers	42.0 - EA	3794.4	IN - Reliability	Priority 1	2015	159,365

Item	Description
D3068 Building Automation Systems	D3068 DDC Controls
Condition	Good
Qty / UOM	308479 / SF
RUL (years)	15
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

In 2010 the older pneumatic controls were converted to a full direct digital control (DDC) system. The CPU software is installed and appears new. The maintenance person stated that the system works properly and to his satisfaction, although the system is not web-based and requires local access. Periodic software upgrades are recommended. No further action required.

COST SUMMARY:

Type	Year	Total Expenditures
D30 HVAC	2015	$313,125

D40 Fire Protection Systems

Fire and Life Safety System	
Item	**Description**
Fire Alarm System Components Present	
Smoke detectors	Yes
Pull stations	Yes
Audible alarms	Yes
Strobe lights	Yes
Central fire alarm panel	Yes
Annunciator panel	Yes
Smoke Detectors Power Supply	Hardwired Electric with Battery Backup
Carbon Monoxide Detectors	No
Heat Detector	No
Central Fire Alarm Panel Location	N/A
Annunciator Panel Location	N/A
Fire Extinguishers	N/A
Fire Extinguisher Inspection Date	N/A
Distance to Nearest Fire Hydrant (ft)	N/A
Illuminated Exit Signs	N/A
Kitchen Suppression Systems	N/A
Halon Gas Systems	No
Smoke Evacuation Systems	No
Fire-rated Stairwells	Yes
Fire-rated Stairwell Finish	Drywall
Stairwell Discharge	Exterior of the building at Grade
Stairwell Pressurized	No
Fire-Rated Doors Observed	Yes
Location of Fire-Rated Doors	Stairwells
Fire Alarm Service Company	N/A
Date of Last Fire Alarm Service	N/A
Are the individual office unit fire alarm systems monitored?	N/A
Are the common area fire alarm systems monitored?	N/A
Types of Common Areas Monitored	N/A
Fire Alarm Monitoring Company	N/A

Item	Description
D4011 Sprinkler Water Supply	D4011 Water Storage Tank for Fire Sprinklers, 10,000 Gal
Condition	Good
Qty / UOM	1 / EA
RUL (years)	22
Location	Outdoor Maintenance Courtyard

OBSERVATIONS/COMMENTS:

An above-ground 10,000 gallon tank stores water for the sprinkler system. The exterior has been painted for corrosion control, and no exterior corrosion was noted. No further action required.

Item	Description
D4011 Sprinkler Water Supply	D4011 Sprinkler Heads
Condition	Good
Qty / UOM	308479 / SF
RUL (years)	20
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The sprinkler system was installed during the 2007 through 2010 renovations. No further action required.

Item	Description
D4012 Sprinkler Pumping Equipment	D4012 Fire Pump 500 GPM and 125 HP
Condition	Good
Qty / UOM	1 / EA
RUL (years)	17
Location	Basement
Fire Pump Delivery Rate (GPM)	500

OBSERVATIONS/COMMENTS:

A fire pump located in the basement serves both Building 8 and Building 9. The pump provides additional hydronic pressure to the sprinkler system for the upper levels of the high rise buildings. No further action required.

D50 ELECTRICAL SYSTEMS

Item	Description
D5012 Low Tension Service & Dist.	D5012 Breaker Panel 225 Amps, 30 Circuits (new)
Condition	Good
Qty / UOM	44 / EA
RUL (years)	32
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

The electrical panels are a mix of original and 2007 through 2010 panels. No further action required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Breaker Panel 225 Amps, 30 Circuits (old)
Condition	Fair
Qty / UOM	42 / EA
RUL (years)	15
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

The electrical panels are a mix of original and 2007 through 2010 panels. No further action required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Switchgear Primary Distribution, 3000 AMP
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	15
Location	Basement
Service Size (Amperage)	3000
Service Voltage	277/480
Service Voltage Type	Three-Phase Four-Wire Alternating Current (Ac)
Step Down Transformers	Yes

Item	Description
Electrical Wiring Material	Solid Copper

OBSERVATIONS/COMMENTS:

Sacramento Municipal Utility District (SMUD) provides power to a secure power vault located in the basement of Building 8. From there, the power is routed to the Building 8 main power switchgear before being distributed to two 3000 amp feeders in Building 9 via the underground connecting tunnels. Building 9 power enters into an original distribution frame built in 1967. It is then redistributed via breaker panels to destinations throughout the building. Most of the main switchgear is original, with infrared scanning and a thermograph survey last performed during the 2010 renovations. No further action required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Secondary Dry Transformer 75 kVA
Condition	Good
Qty / UOM	20 / EA
RUL (years)	22
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Step-down transformers provide 480 VAC 3 Phase for 120/208 VAC step-down capability throughout the facility. The majority of transformers are 2007 through 2010 replacements. No further action required.

Item	Description
D5037 Fire Alarm Systems	D5037 Fire Alarm Panels
Condition	Good
Qty / UOM	3 / EA
RUL (years)	7
Location	Fire Control Room with exterior entrance

OBSERVATIONS/COMMENTS:

Remote alarm panels are mounted within each floor's electrical rooms. The data is fed to the Fire Command Center on the first floor of Building 9 where fire sensor reports are displayed on the main fire alarm locator displays. Replacement during the term is expected.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D5037	Replace D5037 Fire Alarm Panels	3.0 - EA	16482.2	CC - Life Safety	Priority 3	2022	49,447

Item	Description
D5037 Fire Alarm Systems	D5037 Fire Alarm System
Condition	Good
Qty / UOM	308479 / SF
RUL (years)	20
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The fire alarm system was fully upgraded during the 2010 renovations. The system appears adequate and comprehensive with strobes, and an adequate number of modern devices placed throughout the spaces. No further action required.

Item	Description
D5092 Emergency Light & Power Systems	D5092 Diesel Generator 750 kW
Condition	Good
Qty / UOM	1 / EA
RUL (years)	17
Location	Outdoor Maintenance Courtyard
Generator Fuel	Diesel
Generator Serves	Fire And Life Safety Systems

OBSERVATIONS/COMMENTS:

A 750 KW diesel emergency power backup generator is in a steel shipping container structure in the Maintenance Courtyard. A 12-cylinder turbocharged diesel engine provides the power. No further action required.

Item	Description
D5092 Emergency Light & Power Systems	D5092 Transfer Switch

Item	Description
Condition	Good
Qty / UOM	7 / EA
RUL (years)	17
Location	Basement Mechanical

OBSERVATIONS/COMMENTS:

Seven transfer switches located in the basement provide emergency power to specific circuits during utility power outages. No further action required.

COST SUMMARY:

Type	Year	Total Expenditures
D50 Electrical Systems	2022	$49,447

G Building Sitework Systems

G20 Site Improvements

Site Information	
Item	Description
Main Ingress and Egress	9th Street
Access from	N
Additional Entrances	Q street
Access from	SW
Parking Count: Open lot	0
Parking Count: Sheltered by carports	0
Parking Count: Private garages	0
Parking Count: Subterranean garage	0
Parking Count: Freestanding parking structure	0
Number of ADA Compliant Spaces	0
Number of ADA Compliant Spaces for Vans	0
Method of obtaining parking count	Physical count
Property Identification Sign-Primary	Structure mounted
Property Identification Sign- Secondary	N/A
Illuminated Identification Signage	No
Building Identification Sign	Yes
Illuminated Sign	N/A
Location of Property ID Sign	Main entrance drive
Trees Present	Yes
Shrubs Present	No
Grasses Present	No
Flower beds Present	No
Decorative Rocks Present	No
Lava Rocks Present	No
Ponds Present	No
Fountains Present	No
Topography	Flat

Item	Description
G2031 Paving & Surfacing	G2031 Concrete Pavement
Condition	Fair
Qty / UOM	550 / SF
RUL (years)	20
Location	Site

OBSERVATIONS/COMMENTS:

There are several cracks on sidewalks around the building which could pose potential safety hazard, as the cracks widen due to expansion, contraction and load. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
G2031	Repair 90% of Asset: Concrete Pavement	450.0 - SF	22.7	CC - Life Safety	Priority 1	2016	10,200

COST SUMMARY:

Type	Year	Total Expenditures
G20 Site Improvements	2016	$10,200

The weather at the time of the assessment was:

Item	Description
Approximate Outdoor Temperature (degrees F)	54
Weather Conditions	Rainy
Snow Covering Ground	
Wind Conditions	Light Winds

The documentation provided at the time of the assessment is as:

Item	Description
Site Plan Reviewed	Yes
Floor Plan Reviewed	Yes
Construction Drawings Reviewed	Yes
Termite Inspection Report Reviewed	No
Boiler Certificates Reviewed	No
Document Year Built Information Obtained From	2010

APPENDIX C: CERTIFICATION

EMG has completed a FCA of the subject property listed on the cover page. The FCA was performed at the Client's request using methods and procedures consistent with good commercial and customary practice conforming with ASTM E2018-08, Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process. Within this Property Condition Report (PCR), EMG's reference to the Client follows the ASTM guide's definition of User, that is, the party that retains EMG for the preparation of a baseline FCA of the subject property.

This report is exclusively for the use and benefit of the Client identified on the first page of this report. The purpose for which this report shall be used shall be limited to the use as stated in the contract between the client and EMG.

The opinions EMG expresses in this report were formed utilizing the degree of skill and care ordinarily exercised by any prudent architect or engineer in the same community under similar circumstances. EMG assumes no responsibility or liability for the accuracy of information contained within this report that has been obtained from the Client or the Client's representatives, from other interested parties, or from the public domain. The conclusions presented represent EMG's professional judgment based on information obtained during the course of this assignment. EMG's evaluations, analyses, and opinions are not representations regarding the building design, structural soundness, or actual value of the property. Factual information regarding operations, conditions, and test data provided by the Client or the Client's representative has been assumed to be correct and complete. The conclusions presented within this report are based on the data provided, observations made, and conditions that existed specifically on the date of the assessment. EMG certifies that EMG has no undisclosed interest in the subject property, that EMG's relationship with the Client is at arms-length, and that EMG's employment and compensation are not contingent upon the findings or estimated costs to remedy any noted deficiencies due to deferred maintenance and/or any noted component or system replacements.

EMG's FCA cannot wholly eliminate the uncertainty regarding the presence of physical deficiencies and/or the performance of a subject property's building systems. Preparation of a FCA in accordance with ASTM E2018-08 is intended to reduce, but not eliminate, the uncertainty regarding the potential for component or system failure and to reduce the potential that such component or system failure may not be initially observed. This FCA was prepared recognizing the inherent subjective nature of EMG's opinions as to such issues as workmanship, quality of original installation, and estimating the remaining useful life of any given component or system. It should be understood that EMG's suggested remedy may be determined under time constraints or may be formed without the aid of engineering calculations, testing, exploratory probing, the removal of materials, or design. Furthermore, there may be other alternate or more appropriate schemes or methods to remedy the noted physical deficiencies. EMG's opinions are generally formed without detailed knowledge from individuals familiar with the performance of noted components or systems.

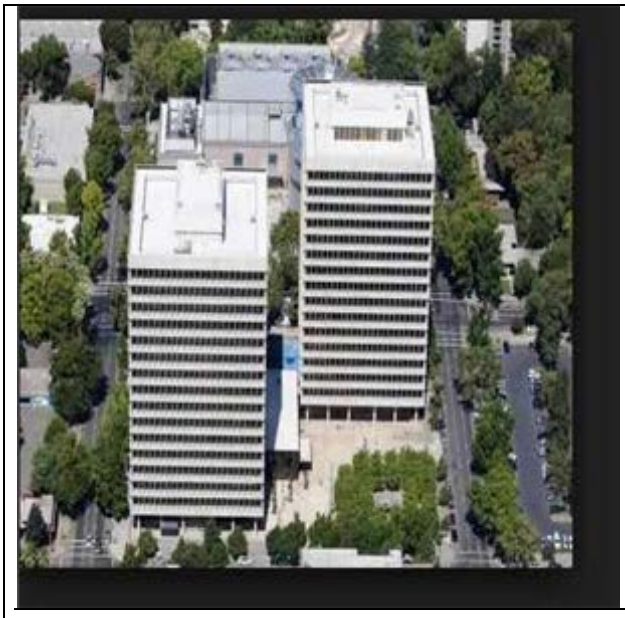
Any questions regarding this report should be directed to the Program Manager.

Prepared By: Djahan Nabili, Field Observer

Reviewed By:

Matt Anderson , Program Manager

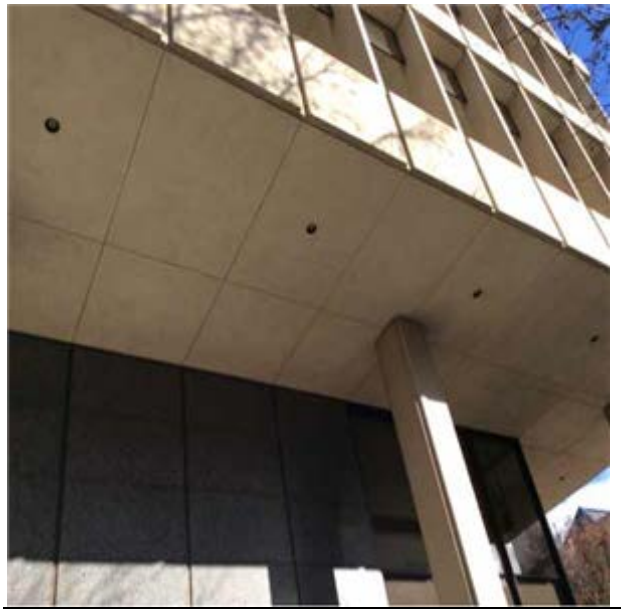
APPENDIX D: PHOTOS



:- Office Buildings 8 and 9

:- Elevation

B2011 Exterior Walls



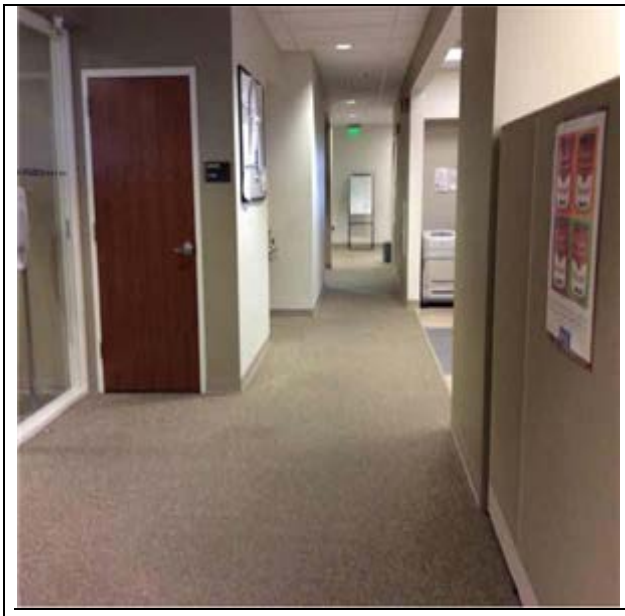
B2011 Exterior Walls

B2021 Windows /Curtain Walls

B2021 Windows /Curtain Walls

B3011 Building Roof

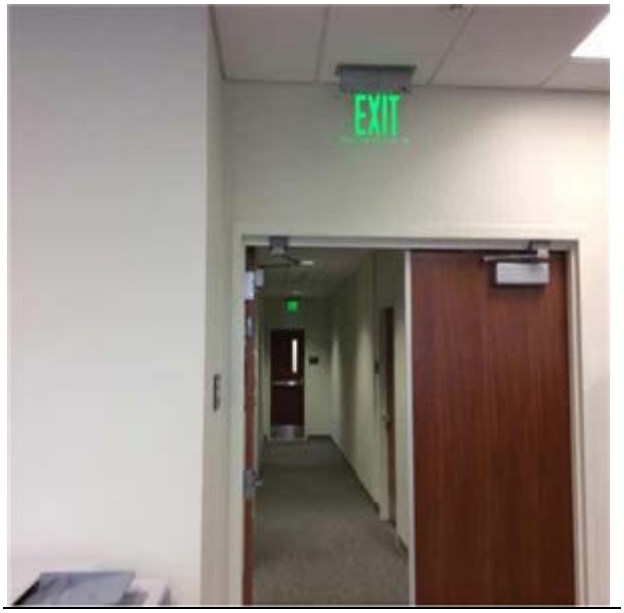
B3011 Building Roof:- Excessive ponding



C1021 Interior Door

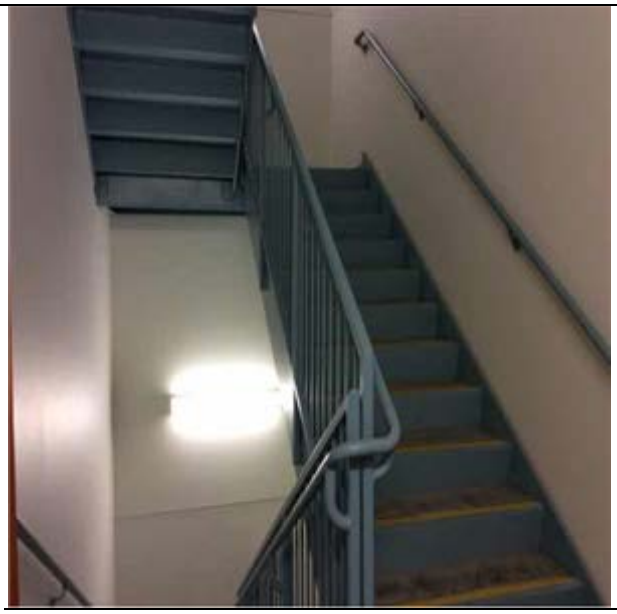
C1021 Interior Door

B2031 Solid Wood Door



B2031 Solid Wood Door

C2011 Roof exterior metal stair



C2011 Fire exit stairs

C2011 Fire exit stairs

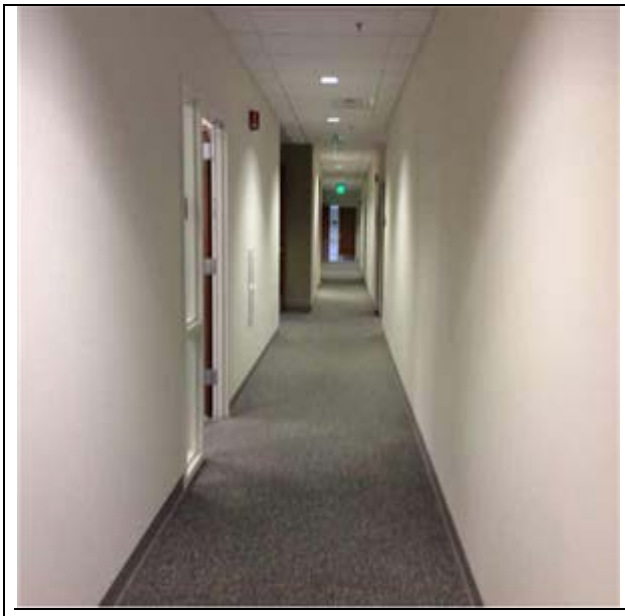
C3005 ADA door signage / Restrooms

C3005 ADA door signage / Restrooms

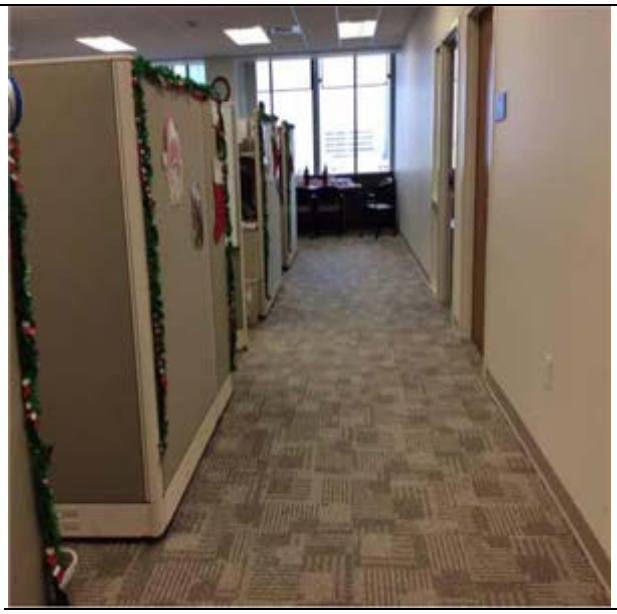
C3012 Terrazzo panels

C3012 Terrazzo panels

C3012 Interior Painted Walls



C3012 Interior Painted Walls



C3025 Carpet flooring

C3025 Carpet flooring

C3032 Offices Area Ceilings

D1011 Traction Gearedless Elevator - High Rise :- Elevator #6 Hoist/Motor

D1011 Traction Gearedless Elevator - High Rise

D1011 Traction Gearedless Elevator - High Rise

D1011 Traction Gearedless Elevator - High Rise

D2011 Commercial Grade Water Closets

D2012 Urinals

D2013 Wall-Hung Lavatories and Faucets

D2023 Domestic Water Booster Pumps 40 HP (old):- Domestic Water Pressure Booster Pumps. Three operating in parallel, fourth pump de-commissioned in place.

D2023 Domestic Water Booster Pumps 40 HP (old)

D2023 Domestic Water Booster Pumps 40 HP (old)

D3041 Interior Air Handlers 18,000-20,000 CFM

D3041 Interior Air Handlers 18,000-20,000 CFM:- Air handler unit with heated water/chilled water provisioning used on floors 3 through 17.

D3042 Stair Pressurization Fans, 15-20 HP

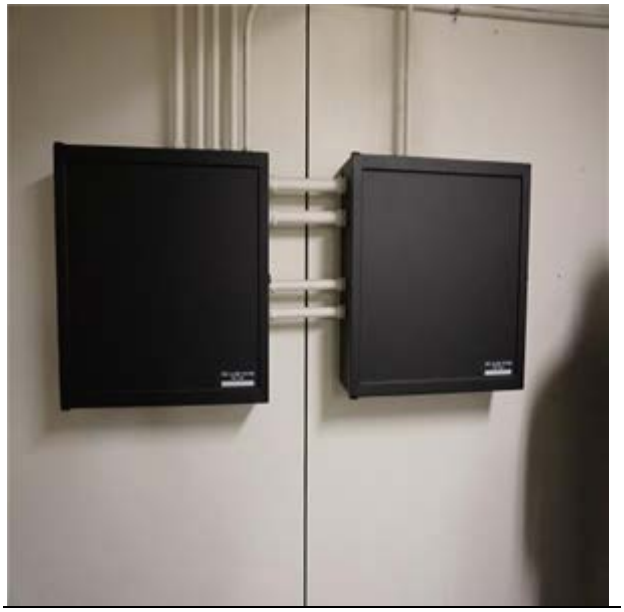
D3042 Exhaust Fan 7,000-13,000 CFM

D3052 Computer/Server Room AC, 5 Tons

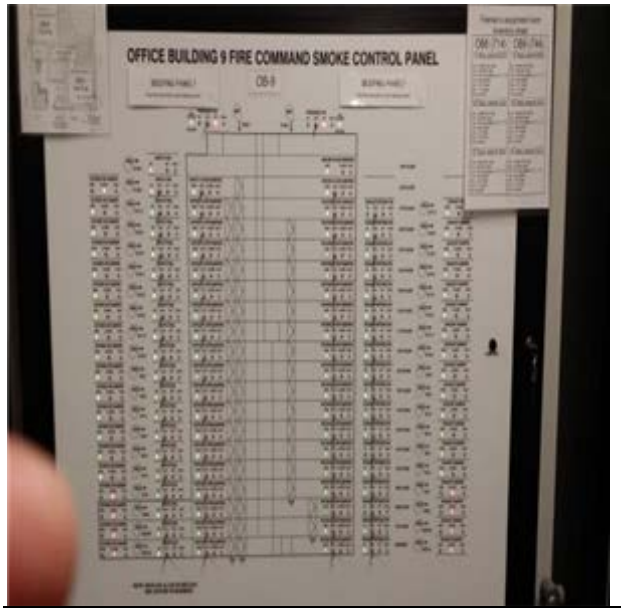
D4011 Water Storage Tank for Fire Sprinklers, 10,000 Gal

D4012 Fire Pump 500 GPM and 125 HP

D5012 Switchgear Primary Distribution, 3000 AMP:- Westinghouse Distribution Switchgear for Bldg 9. Panel input are Feeds 1 and 2 from Main Switchboard from Bldg 8. Each Feeder



D5037 Fire Alarm Panels :- Fire Alarm Panel: Typical on each floor



D5037 Fire Alarm Panels

D5092 Diesel Generator 750 kW

D5092 Transfer Switch

G2031 Concrete Pavement

G2031 Concrete Pavement

APPENDIX E: TERMINOLOGY AND ABBREVIATIONS

TERMINOLOGY and ABBREVIATIONS	
Actual Knowledge	Information or observations known first hand by EMG.
ADA	The Americans with Disabilities Act
AHU	Air Handling Unit
Ancillary Structures	Structures that are not the primary improvements of the Property but which may have been constructed to provide support uses.
ASTM	American Society for Testing and Materials
Baseline	A minimum scope level of observation, inquiry, research, documentation review, and cost estimating for conducting a Property Condition Assessment as normally conducted by EMG.
BOMA	Building Owners & Managers Association
Building	Referring to the primary building or buildings on the Property, which are within the scope of the FCA.
Building Codes	A compilation of rules adopted by the municipal, county and/or state governments having jurisdiction over the Property that govern the property's design &/or construction of buildings.
Building Department Records	Information concerning the Property's compliance with applicable Building, Fire and Zoning Codes that is readily available for use by EMG within the time frame required for production of the Property Condition Assessment.
Building Systems	Interacting or interdependent components that comprise a building such as structural, roofing, side wall, plumbing, HVAC, water, sanitary sewer and electrical systems.
BUR	Built Up Roof
CBC	California Building Code
Component	A piece of equipment or element in its entirety that is part of a system.
CFM	Cubic Feet per Minute, usually referring to air flow in a heating or cooling system.
Dangerous or Adverse Conditions	Situations which may pose a threat or possible injury to the Project Manager, or those situations which may require the use of special protective clothing, safety equipment, access equipment, or any precautionary measures.
Deferred Maintenance	Deficiencies that result from postponed maintenance, or repairs that have been put off until a later time and that require repair or replacement to an acceptable condition relative to the age of the system or property.
DHW	Domestic Hot Water
DDC	Direct Digital Controls, for HVAC systems
Dismantle	To take apart; disassemble; tear down any component, device or piece of equipment that is bolted, screwed, secured, or fastened by other means.
DWV	Drainage Waste Ventilation
EPDM	Ethylene propylene diene terpolymer, a single ply roofing material, usually black
EIFS	Exterior Insulation and Finish System
EMS	Energy Management System
Engineering	Analysis or design work requiring extensive formal education, preparation and experience in the use of mathematics, chemistry, physics, and the engineering sciences as provided by a Professional Engineer licensed to practice engineering by any state of the 50 states.
Expected Useful Life (EUL)	The average amount of time in years that a system or component is estimated to function when installed new.

TERMINOLOGY and ABBREVIATIONS	
FEMA	Federal Emergency Management Agency
Fire Department Records	Information generated or acquired by the Fire Department having jurisdiction over the Property, and that is readily available to EMG within the time frame required for production of the FCA.
FIRM	Flood Insurance Rate Maps
FM	Factory Mutual
FRT	Fire Retardant Treated
Guide	A series of options or instructions that do not recommend a specific course of action.
HP	Horse Power, a unit of measure for pumps and motors.
HVAC	Heating, Ventilating & Air Conditioning
IAQ	Indoor Air Quality
Immediate Repairs	Physical deficiencies that require immediate action as a result of: (i) existing or potentially material unsafe conditions, (ii) significant negative conditions impacting tenancy/marketability, (iii) material building code violations, or (iv) poor or deteriorated condition of critical element or system, or (v) a condition that if left "as is", with an extensive delay in addressing same, has the potential to result in or contribute to critical element or system failure within one (1) year.
Interviews	Interrogatory with those knowledgeable about the Property.
kVA	Kilo Volt Amps, a measurement used for electrical devices where Amps is the plural of Amperage, a measure of electrical force.
kW	One thousand Watts, a measure of electrical output.
Material	Having significant importance or great consequence to the asset's intended use or physical condition.
MEP	Mechanical, Electrical, and Plumbing
NFPA	National Fire Protection Association
Observations	The results of the Project Manager's Walk-through Survey.
Observe	The act of conducting a visual, unaided survey of items, systems or conditions that are readily accessible and easily visible on a given day as a result of the Project Manager's walk-through.
Obvious	That which is plain or evident; a condition that is readily accessible and can be easily seen by the Project Manager as a result of his Walk-through without the removal of materials, moving of chattel, or the aid of any instrument, device, or equipment.
Owner	The entity holding the deed to the Property that is the subject of the FCA.
Physical Deficiency	Patent, conspicuous defects, or significant deferred maintenance of the Property's material systems, components, or equipment as observed during the Project Manager's Walk-through Survey. Material systems, components, or equipment that are approaching, have realized, or have exceeded their typical Expected Useful Life (EUL); or, that have exceeded their useful life result of abuse, excessive wear and tear, exposure to the elements, or lack of proper or adequate maintenance. This definition specifically excludes deficiencies that may be remedied with routine maintenance, miscellaneous repairs, normal operating maintenance, and conditions that do not present a material deficiency to the Property.
PVC	Poly Vinyl Chloride

TERMINOLOGY and ABBREVIATIONS	
Practically Reviewable	Information that is practically reviewable means that the information is provided by the source in a manner and form that, upon examination, yields information relevant to the property without the need for extraordinary analysis of irrelevant data.
Practice	A definitive procedure for performing one or more specific operations or functions that does not produce a test result.
Primary Improvements	The site and building improvements that are of fundamental importance with respect to the Property.
Project Manager	The individual Professional Engineer, Contractor, or Registered Architect having a general, well rounded knowledge of all pertinent site and building systems and components that conducts the on site visit and walk-through observation.
Property	The site and building improvements, which are specifically within the scope of the FCA to be prepared in accordance with the agreement between the Client and EMG.
Readily Accessible	Those areas of the Property that are promptly made available for observation by the Project Manager without the removal of materials or chattel, or the aid of any instrument, device, or equipment at the time of the Walk-through Survey.
Reasonably Ascertainable	Information that is publicly available, provided to EMG's offices from either its source or an information research/retrieval concern, practically reviewable, and available at a nominal cost for either retrieval, reproduction or forwarding.
Recreational Facilities	Spas, saunas, steam baths, swimming pools, tennis courts, playground equipment, and other exercise, entertainment, or athletic facilities.
Remaining Useful Life (RUL)	The consultant's professional opinion of the number of years before a system or component will require replacement or reconditioning. The estimate is based upon observation, available maintenance records, and accepted EUL's for similar items or systems. Inclement weather, exposure to the elements, demand on the system, quality of installation, extent of use, and the degree and quality of preventive maintenance exercised are all factors that could impact the RUL of a system or component. As a result, a system or component may have an effective age greater or less than its actual age. The RUL may be greater or less than its Expected Useful Life (EUL) less actual age.
Replacement Costs	Costs to replace the system or component "in kind" based on Invoices or Bid Documents provided by the current owner or the client, construction costs developed by construction resources such as *Means* and *Dodge*, EMG's experience with past costs for similar properties, or the current owner's historical incurred costs.
RTU	Rooftop Unit
Shut-Down	Equipment or systems that are not operating at the time of the Project Manager's Walk-through Survey. Equipment or systems may be considered shutdown if it is not in operation as a result of seasonal temperatures.
Significant	Important, material, and/or serious.
Site Visit	The visit to the property by EMG's Project Manager including walk-through visual observations of the Property, interviews of available project personnel and tenants (if appropriate), review of available documents and interviews of available municipal personnel at municipal offices, all in accordance with the agreement for the Property Condition Assessment.

TERMINOLOGY and ABBREVIATIONS	
Specialty Consultants	Practitioners in the fields of engineering, architecture; or, building system mechanics, specialized service personnel or other specialized individuals that have experience in the maintenance and repair of a particular building component, equipment, or system that have acquired detailed, specialized knowledge in the design, assessment, operation, repair, or installation of the particular component, equipment, or system.
Structural Component	A component of the building, which supports non-variable forces or weights (dead loads) and variable forces or weights (live loads).
Suggested Remedy	A preliminary opinion as to a course of action to remedy or repair a physical deficiency. There may be alternate methods that may be more commensurate with the Client's requirements. Further investigation might make other schemes more appropriate or the suggested remedy unworkable. The suggested remedy may be to conduct further research or testing, or to employee Specialty Consultants to gain a better understanding of the cause, extent of a deficiency (whether observed or highly probable), and the appropriate remedy.
Survey	Observations as the result of a walk-through scan or reconnaissance to obtain information by EMG of the Property's readily accessible and easily visible components or systems.
System	A combination of interacting or interdependent components assembled to carry out one or more functions.
Technically Exhaustive	The use of measurements, instruments, testing, calculations, exploratory probing or discover, and/or other means to discover and/or troubleshoot Physical Deficiencies, develop scientific or Engineering findings, conclusions, and recommendations.
Term	Reserve Term: The number of years that Capital Reserves are projected for as specified in the Expenditure Forecast.
TPO	Thermoplastic polyolefin, a white single ply roofing material, usually white
Timely Access	Entry provided to the Project Manager at the time of his site visit.
UST	Underground Storage Tank
Walk-through Survey	The Project Manager's site visit of the Property consisting of his visual reconnaissance and scan of readily accessible and easily visible components and systems. This definition connotes that such a survey should not be considered in depth, and is to be conducted without the aid of special protective clothing, exploratory probing, removal of materials, testing, or the use of special equipment such as ladders, scaffolding, binoculars, moisture meters, air flow meters, or metering/testing equipment or devices of any kind. It is literally the Project Manager's walk of the Property and observations.

APPENDIX F: BUILDING FACT SHEET

OFFICE BUILDING 9 FACT SHEET

744 P Street
Sacramento
Sacramento County
Category 4 - Low Priority - Renovated in Last 20 Years, Special Repairs and Maintenance

BUILDING INFORMATION

- Age: 45 years (completed in 1969) - Complete renovation in 2010 (4 years)
- Size:* 18-story, one of two 18-story building in a campus style setting on a city block site
  308,975 GSF 228,631 NUSF 228,631 Assigned SF
  2.33 Acre Parcel
  No parking spaces
  Capacity - 948 occupants
- Financial: State Public Works Board
  Lease-Revenue Bond 2009 Series A, matures April 2034
  Bond is for both OB 8 & 9
  Original Bond $182,860,000 - Balance as of 6/30/13 $170,545,000
  IRR Rate - $3.72/month per SF, FY 2013-14 (DGS Price Book)
  $3.65/month per SF, FY 2014-15 (Proposed DGS Price Book)
  Central Plant rate an additional $0.60/month per SF

SPI Structure #:	2366
Real Property #:	679
BPM #:	045

- LEED Status: LEED-NC Gold Certification, 2011
- Tenants: The Department of Social Services is the sole tenant. Completion of both buildings consolidated the department.

COMPLETED STUDIES AND SIGNIFICANT FINDINGS

A. 2001 Infrastructure Study

Deficiencies included: ADA compliance, seismic compliance, hazardous materials abatement, mechanical upgrades, and a new reception area, and resulted in the renovation project.

B. 2010 American Disability Act Accessibility Compliance Survey

This survey revealed minor accessibility deficiencies, including: handrail extensions in the stairwells; door operating pressure; centerline of toilet in restrooms; and protruding object in "path of travel".

C. 2012 Access Compliance Conceptual Budget/Evaluation

In follow up to the 2010 American Disability Act Accessibility Compliance Survey this report provides the Conceptual Cost and Path of Travel Plans. ADA upgrades have been proposed for this building as part of DGS's ten year ADA Compliance Upgrades and Deferred Special Repairs Program.

ADDITIONAL BUILDING ISSUES

A utilization survey completed in 2013 shows underutilized space on several floors. A restack study is underway as part of the Governor's Utilization Initiative. An elevator modernization not included in the scope of the renovation is needed.

CURRENT UTILIZATION PROJECTS

No utilization projects.

RECENTLY COMPLETED PROJECTS — Cost

TBD

ACTIVE PROJECTS — Cost

TBD

PLANNED SPECIAL REPAIRS BY FISCAL YEAR — Estimated Cost

TBD

DGS STRATEGY: Continue to operate/maintain the building as-is through the special repair/maintenance process; no capital outlay work required for this building at this time.

* Source: Statewide Property Inventory

APPENDIX G: COST TABLES

10 YEAR EXPENDITURE FORECAST

Office Building 9
744 P Street
Sacramento

Useful Life[1]	
	Estimated Useful Life
	Remaining Useful Life

Plan Type[1]		
	OP: Operations	**CC:** Code Compliance
	EN: Environmental	**FN:** Functionality
	IN: Integrity	

Legend
Deferred
Scheduled

Element #	Component Description	Asset	Location	Action	EUL (Yrs)	RUL (Yrs)	Qty.	Unit of Meas.	Unit Cost	Plan Type	Priority[2]	2015 Year 0	2016 Year 1	2017 Year 2	2018 Year 3	2019 Year 4	2020 Year 5	2021 Year 6	2022 Year 7	2023 Year 8	2024 Year 9	Total - Deferred	Total - Scheduled
A. SUBSTRUCTURE																							
Substructure Subtotal												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
B. SHELL																							
B20	**EXTERIOR ENCLOSURE**																						
B2011	Stucco and Lath	B2011 Exterior Walls	All Floors	Repair 10% of stucco	5	0	12,391.00	SF	$18.33	OP - Maintenance	Priority 2	$227,092	$0	$0	$0	$0	$227,092	$0	$0	$0	$0	$227,092	$227,092
B2021	Curtain Wall , Up to 12 Stories	B2021 Windows /Curtain Walls	All Floor	Re-seal windows and replace gaskets	7	2	3,950.00	LF	$38.07	OP - Maintenance	Priority 2	$0	$0	$150,369	$0	$0	$0	$0	$0	$0	$150,369	$0	$300,737
B30	**ROOFING**																						
B3011	Tpo, Roof 45 Mills, Full Adhered	B3011 Building Roof	All roof sections	Install roof walk pads per building plans	20	0	8.00	EA	$487.49	CC - Life Safety	Priority 1	$3,900	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,900	$0
	Tpo, Roof 45 Mills, Full Adhered	B3011 Building Roof	All roof sections	Repair 20% of roof due to excessive ponding	20	0	34.00	SQ	$1,861.46	OP - Maintenance	Priority 2	$63,290	$0	$0	$0	$0	$0	$0	$0	$0	$0	$63,290	$0
Shell Subtotal												**$294,282**	**$0**	**$150,369**	**$0**	**$0**	**$227,092**	**$0**	**$0**	**$0**	**$150,369**	**$294,282**	**$527,830**
C. INTERIORS																							
C10	**INTERIOR CONSTRUCTION**																						
C1021	Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware	B2031 Solid Wood Door	All Floor	Add ADA automatic door opener	20	0	12.00	EA	$2,159.46	CC - Accessibility	Priority 2	$25,914	$0	$0	$0	$0	$0	$0	$0	$0	$0	$25,914	$0
C1035	Directional Signage	C1035 Directional Signage	All Floor	Replace C1035 Directional Signage	10	0	12.00	EACH	$316.20	CC - Accessibility	Priority 1	$3,794	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,794	$0
C20	**STAIRS**																						
C2011	C2011 Regular Stairs	C2011 Fire exit stairs	Stairs	Paint stairwells and stair parts	10	1	55,830.00	SF	$3.87	IN - Appearance	Priority 2	$0	$216,062	$0	$0	$0	$0	$0	$0	$0	$0	$0	$216,062
C2011	Metal Steps	C2011 Roof exterior metal stair	Roof	Replace C2011 Roof exterior metal stair	30	0	3,600.00	SF	$3.79	CC - Life Safety	Priority 1	$13,660	$0	$0	$0	$0	$0	$0	$0	$0	$0	$13,660	$0
C30	**INTERIOR FINISHES**																						
C3005	C3005 ADA Renovations	C3005 ADA door signage / Restrooms	All upper floors	Replace C3005 ADA door signage / Restrooms	12	0	24.00	EA	$372.00	CC - Accessibility	Priority 1	$8,928	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,928	$0
C3012	C3012 Wall Finishes to Interior Walls	C3012 Interior Painted Walls	All floors	Replace C3012 Interior Painted Walls	8	3	204,200.00	SF	$2.13	IN - Appearance	Priority 3	$0	$0	$0	$435,518	$0	$0	$0	$0	$0	$0	$0	$435,518
C3025	Carpet, Standard Commercial, Medium Traffic	C3025 Carpet flooring	All Floors	Replace C3025 Carpet flooring	10	5	30,100.00	SY	$96.61	IN - Appearance	Priority 4	$0	$0	$0	$0	$0	$2,907,829	$0	$0	$0	$0	$0	$2,907,829
C3032	Acoustical Tile With Exposed Grid System	C3032 Offices Area Ceilings	All Floor	Repair 5% of Asset: Offices Area Ceilings	20	3	117.00	CSF	$1,201.56	IN - Appearance	Priority 3	$0	$0	$0	$140,583	$0	$0	$0	$0	$0	$0	$0	$140,583
Interiors Subtotal												**$52,296**	**$216,062**	**$0**	**$576,100**	**$0**	**$2,907,829**	**$0**	**$0**	**$0**	**$0**	**$52,296**	**$3,699,991**
D. SERVICES																							
D10	**CONVEYING SYSTEMS**																						
D1011	Traction Gearedless Elevator - High Rise	D1011 Traction Gearedless Elevator - High Rise	Throughout Facility	Deferred maintenance items	15	0	8.00	EA	$1,000.00	IN - Reliability	Priority 1	$8,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,000	$0
	Traction Gearedless Elevator - High Rise	D1011 Traction Gearedless Elevator - High Rise	Throughout Facility	Install door restrictors on cars	15	0	8.00	EA	$3,000.00	IN - Reliability	Priority 1	$24,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$24,000	$0
	Traction Gearedless Elevator - High Rise	D1011 Traction Gearedless Elevator - High Rise	Throughout Facility	Modernize cars 1-6 with new controllers, SCR Drives, and updated fire service	15	5	6.00	EA	$300,000.00	IN - Reliability	Priority 3	$0	$0	$0	$0	$0	$1,800,000	$0	$0	$0	$0	$0	$1,800,000
	Traction Gearedless Elevator - High Rise	D1011 Traction Gearedless Elevator - High Rise	Throughout Facility	perform 5-year load test	15	0	8.00	EA	$3,000.00	IN - Reliability	Priority 1	$24,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$24,000	$0
	Traction Gearedless Elevator - High Rise	D1011 Traction Gearedless Elevator - High Rise	Throughout Facility	Reorder buttons in high rise cars to meet ADA	15	0	3.00	EA	$2,000.00	CC - Accessibility	Priority 1	$6,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,000	$0
	Traction Gearedless Elevator - High Rise	D1011 Traction Gearedless Elevator - High Rise	Throughout Facility	Replace hoist ropes on car 2	15	0	1.00	EA	$15,000.00	IN - Reliability	Priority 1	$15,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$15,000	$0
D20	**PLUMBING**																						
D2023	Booster Pumps	D2023 Domestic Water Booster Pumps 40 HP (old)	Basement Mechanical	Replace D2023 Domestic Water Booster Pumps 40 HP (old)	20	5	3.00	EA	$33,700.80	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$0	$101,102	$0	$0	$0	$0	$0	$101,102
D2043	Storm Water System Pump, 20 HP	D2043 Storm Water System Pump, 20 HP	Basement	Replace D2043 Storm Water System Pump, 20 HP	20	0	2.00	EA	$28,164.24	IN - Beyond Rated Life	Priority 1	$56,328	$0	$0	$0	$0	$0	$0	$0	$0	$0	$56,328	$0
D30	**HVAC**																						
D3041.1	Air Handler 13,000 to 15,000 CFM	D3041 Interior Air Handlers 11,000-14,000 CFM	Basement Mechanical	Replace AHU return fan motors 7.5 HP	15	0	3.00	EA	$4,960.00	OP - Maintenance	Priority 2	$14,880	$0	$0	$0	$0	$0	$0	$0	$0	$0	$14,880	$0
	Air Handler 13,000 to 15,000 CFM	D3041 Interior Air Handlers 11,000-14,000 CFM	Basement Mechanical	Replace AHU supply fan motors 25 HP	15	0	3.00	EA	$8,928.00	OP - Maintenance	Priority 2	$26,784	$0	$0	$0	$0	$0	$0	$0	$0	$0	$26,784	$0
D3041.1	Air Handler 18,000-20,000 CFM	D3041 Interior Air Handlers 18,000-20,000 CFM	Utility Rooms/Closets	Replace AHU return fan motors 10 HP	15	0	7.00	EA	$4,960.00	OP - Maintenance	Priority 2	$34,720	$0	$0	$0	$0	$0	$0	$0	$0	$0	$34,720	$0
	Air Handler 18,000-20,000 CFM	D3041 Interior Air Handlers 18,000-20,000 CFM	Utility Rooms/Closets	Replace AHU supply fan motors 25 HP	15	0	7.00	EA	$8,928.00	OP - Maintenance	Priority 2	$62,496	$0	$0	$0	$0	$0	$0	$0	$0	$0	$62,496	$0
D3041.1	Air Handler 4,000 to 8,000 CFM	D3041 Interior Air Handlers 4,000-7,000 CFM	Penthouse Mechanical	Replace AHU supply fan motors 5-7.5 HP	15	0	3.00	EA	$4,960.00	OP - Maintenance	Priority 2	$14,880	$0	$0	$0	$0	$0	$0	$0	$0	$0	$14,880	$0
D3063	Mizer Automatic Air Damper	D3063 AHU Dampers	Utility Rooms/Closets	Replace D3063 AHU Dampers	40	0	42.00	EA	$3,794.40	IN - Reliability	Priority 1	$159,365	$0	$0	$0	$0	$0	$0	$0	$0	$0	$159,365	$0
D50	**ELECTRICAL SYSTEMS**																						
D5037	Fire Alarm Panel	D5037 Fire Alarm Panels	Fire Control Room with exterior entrance	Replace D5037 Fire Alarm Panels	15	7	3.00	EA	$16,482.24	CC - Life Safety	Priority 3	$0	$0	$0	$0	$0	$0	$0	$49,447	$0	$0	$0	$49,447
Services Subtotal												**$446,453**	**$0**	**$0**	**$0**	**$0**	**$1,901,102**	**$0**	**$49,447**	**$0**	**$0**	**$446,453**	**$1,950,549**
E. EQUIPMENT & FURNISHING																							
Equipment & Furnishing Subtotal												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
F. SPECIAL CONSTRUCTION AND DEMOLITION																							
Special Construction And Demolition Subtotal												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
G. BUILDING SITEWORK																							
G20	**SITE IMPROVEMENTS**																						
G2031	Concrete Sidewalk	G2031 Concrete Pavement	Site	Repair 90% of Asset: Concrete Pavement	20	1	450.00	SF	$22.67	CC - Life Safety	Priority 1	$0	$10,200	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,200
Building Sitework Subtotal												**$0**	**$10,200**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$10,200**
Z. GENERAL																							
General Subtotal												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
											Expenditure Totals per Year	**$793,031**	**$226,262**	**$150,369**	**$576,100**	**$0**	**$5,036,023**	**$0**	**$49,447**	**$0**	**$150,369**	**$793,031**	**$6,188,570**
											Total Cost (Inflated @ 5% per Yr.)	**$793,031**	**$237,575**	**$165,781**	**$666,908**	**$0**	**$6,427,384**	**$0**	**$69,577**	**$0**	**$233,271**	**Total ***	**$6,981,601**

*** - Present Value Currency**

Current Repl.Value **$196,655,641**

Footnotes

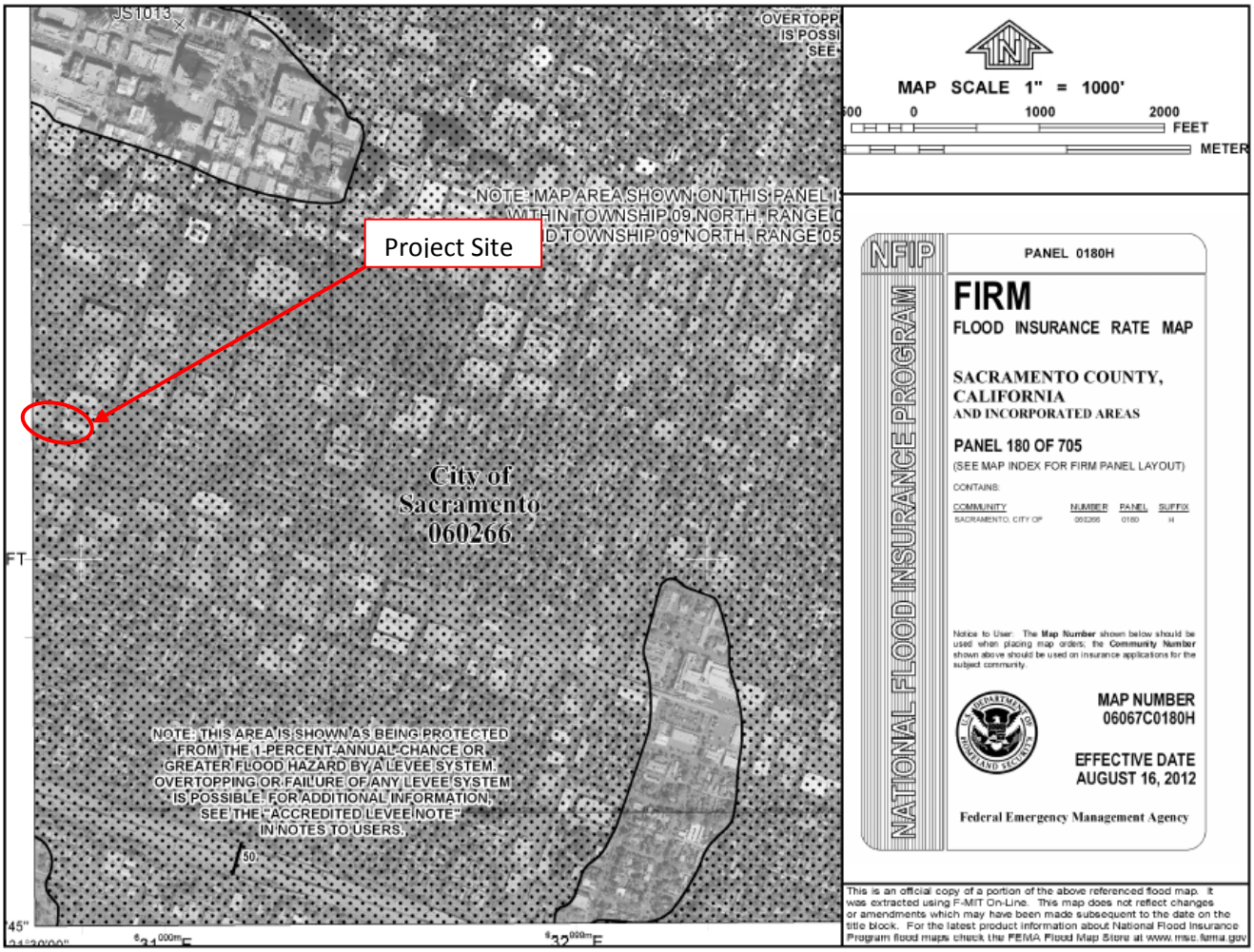
1 Detailed descriptions for Useful Life and Plan Type can be found in the Appendices of the Facility Condition

2 Detailed Descriptions of the Priorities can be found in the Appendices of the Facility Condition Assessment

APPENDIX H: SUPPORTING DOCUMENTATION

EMG	**Source:** The north arrow indicator is an approximation of 0° North.	**Project Number:** 11326.14R.013.305 **Project Name:** Office Building 9
N		**On-Site Date:** December 17 & 18, 2014

Flood Map



EMG	**SOURCE:** **FEMA**	**Project Number:** **111326.14R-013.305**
N		**Project Name:** **Office Building 9**
	Not drawn to scale. The north arrow indicator is an approximation of 0° North.	**On-Site Date:** **December 17, 2014**

Estimate of Structures Cost Using Marshall Cost Systems

Office Building 9 (045)

Site Calculation

Estimate of Unusual Land Improvements Cost (Estimators Data Cost Base):

Description	Cost	Estimated $/ SF	Unusual Land Total
			$0
Total			$0

Estimate of Unusual Land Improvements Cost (Estimators Cost Data Base):

Estimate of Structure Cost :

Building Type	Cost per SF	Number of SF	Building TypeTotal
main building	$509.18	308,975	$157,324,512
	$0.00	0	$0
	$0.00	0	$0
	$0.00	0	$0
	$0.00	0	$0
	Total	308,975	$157,324,512

Estimate of Adjustments for Fees:

Description	% increase
Soft Costs	25.00%
	0.00%
	0.00%

Total Fees/ Interest included in Marshall System	25.00%

Total Structure Estimate:

Description	Unit	Fee Adjust	Adjusted Totals
main building	$157,324,512	25.00%	$196,655,641
	$0	25.00%	$0
	$0	25.00%	$0
	$0	25.00%	$0
	$0	25.00%	$0
Cost Per SF	**$636.48**	**Total Estimate**	**$196,655,641**

Expected Useful Life (EUL) Table	
SITE SYSTEM ITEMS	
ROADWAYS/ PARKING/ WALKWAYS	
Asphalt pavement	25
Asphalt seal coat	5
Concrete pavement	50
Curbing, asphalt	25
Curbing, concrete	50
Parking, stall striping	5
Parking, gravel surfaced	15
Security gate- rolling gate	10
Security gate- lift arm	10
Sidewalk, asphalt	25
Sidewalk, brick paver	30
Sidewalk, concrete	50
STORM SEWER, DRAINAGE AND EROSION CONTROL	
Catch basins, inlets, culverts	50
Earthwork, grading and erosion control	50
Storm drain lines	40
LANDSCAPING, TOPOGRAPHY AND FENCING	
Fencing, chain-link (4' height)	40
Fencing, dumpster enclosure (wood)	12
Fencing, Tennis Court (10' height)-Chain link	40
Fencing, wood privacy (6' height)	15
Fencing, wrought iron (4-6' height and decorative)	50
Fencing, concrete masonry unit (CMU)	30
Irrigation System	30
Retaining walls, 80 lb block type	50
Retaining walls, concrete masonry unit (CMU) with brick face	40
Fencing, PVC (6' height)	25
Retaining walls, timber (railroad tie)	25
SITE SYSTEM ITEMS	
GENERAL SITE IMPROVEMENTS	
Lighting (pole mounted)	25
Mail kiosk	10
Pool deck	15
Pool/ spa plaster liner	8
Signage, monument	20
Signage, roadway/ parking	10
Tennis court / basketball court surface (paint markings)	5

GENERAL SITE IMPROVEMENTS	
Tennis court Surface (acrylic emulsion)	10
Tot-lot (playground equipment)	10
SITE SANITARY AND WATER	
Domestic Hot Water (DHW) - supply / return	30
Lift station	50
Sanitary lines	50
Sanitary treatment	40
Water main	40
Water supply lines	50
Water tower	50
SITE MECHANICAL / ELECTRICAL	
Compactors	15
Dumpsters	10
Electrical distribution center	40
Electric main	40
Emergency Generator	25
Gas lines	40
Gas main	40
Heating supply/ return	40
Power distribution	40
Transformer	30
BUILDING ARCHITECTURAL ITEMS	
Wood Decks	20
Storage Sheds	30
Carports	40
Garages	50
Basement Stairs	50
Building mounted exterior lighting	10
Building mounted High Intensity Discharge (HID) lighting	10
Bulkhead	10
Canopy, concrete	50
Canopy, wood / metal	40
Ceilings, open or exterior	30
Chimney	40
Common area doors, interior (solid wood/ metal clad)	30
Common area floors, ceramic / quarry tile, terrazzo	50+
Common area floors, wood (strip or parquet)	30
Common area floors, resilient tile or sheet	15
Common area floors, carpet	8
Common area floors, concrete	50+

BUILDING ARCHITECTURAL ITEMS	
Common area railing	20
Common area ceiling, concrete	50+
Common area ceiling, acoustic tile (drop ceiling),	15
Common area countertop and sink	20
Common area dishwasher	15
Common area disposal	5
Common area kitchen cabinets, wood	15
Common area wall coverings	15
Caps, copings (aluminum/ terra-cotta) - Parapet	25
Exterior common door, aluminum and glass	30
Exterior common door, solid core wood or metal clad	25
Exterior stairs, wood	15
Exterior stairs, metal pan- concrete filled	30
Exterior stairs, concrete	50
Exterior unit door, solid wood/ metal clad	25
EXTERIOR CLADDING	
Aluminum Siding	40
Brick or block	40
Brownstone or stone veneer	40
Exterior Insulation Finishing Systems (EIFS)	20
Glass block	40
Granite block	40
Metal/ glass curtain wall	30
Precast concrete panel (tilt-up)	40
Vinyl siding	25
Wood shingle/ clapboard/ plywood, stucco, composite wood	20
Cement-board siding (Hardi-plank)/ non integral color	45
Fire Escapes	40
Foundations	50+
Roof hatch	30
Roof skylight	30
Insulation, wall	50+
Interior lighting	15
Interior railings	20
Mail facility, interior	20
Parapet wall,	50+
Penthouse	50
Railing, roof	25

INTERIORS	
Public bathroom accessories	7
Public bathroom fixtures	15
Refrigerator, common area	10
BUILDING ARCHTECTURAL ITEMS	
ROOF COVERINGS	
Built-up roof - Ethylene Propylene Diene Monomer (EPDM) / Thermoplastic Polyolefin (TPO)	20
Asphalt shingle (3-tab)	20
Wood shingles (cedar shake)	25
Slate, clay, concrete tile	40
Metal	40
Roof drainage exterior (gutter/ downspout)	10
Roof drainage interior (drain covers)	30
Roof structure	50+
Slab	50+
Service door	25
Soffits (wood/ stucco)	20
Soffits (aluminum or vinyl)	25
Stair structures	50+
Storm/ screen doors	7
Storm/ screen windows	10
Waterproofing (foundations)	50+
Windows (frames and glazing), vinyl or aluminum	30
Wood floor frame	50+
BOILER ROOM EQUIPMENT	
Blowdown and Water Treatment	25
Boiler Room Pipe Insulation	Included in boiler
Boiler Room Piping	Included in boiler
Boiler Room Valves	15
Boiler Temperature Controls	Included in boiler
Oil-fired, sectional	22
Gas/ dual fuel, sectional	25
Oil/ gas/ dual fired, low MBH	30
BOILERS	
Oil/ gas/ dual fired, high MBH	40
Gas fired atmospheric	25
Electric	20

BUILDING HEATING WATER TEMPERATURE CONTROLS	
Common area	15
Buzzer/Intercom, central panel	20
Central Unit Exhaust, roof mounted	15
Chilled Water Distribution	50+
Chilling Plant	15
Cooling Tower	25
Combustion Air, Duct with fixed louvers	30
Combustion Air, Motor louver and duct	25
CONDENSATE, FEEDWATER, WATER	
Feedwater only (hydronic)	10
Cooling Tower	25
DHW Circulating Pumps	by size
Tank only, dedicated fuel	10
Exchanger in storage tank	15
Exchanger in boiler	15
External tankless	15
Instantaneous (tankless type)	10
Domestic Hot Water Storage Tanks, Small (up to 150 gallons)	15
Domestic Hot Water Storage Tanks, Large (over 150 gallons)	15
Domestic Cold Water Pumps	15
ELECTRICAL & ELEVATOR	
Electrical Switchgear	50+
Electrical Wiring	30
Elevator, Controller, dispatcher	15
Elevator, Cab	15
Elevator, Machinery	30
Elevator, Shaft-way Doors	20
Elevator, Shaft-way Hoist rails, cables, traveling	25
Elevator, Shaft-way Hydraulic piston and leveling	25
EMERGENCY ALARM AND FIRE PROTECTION	
Call station	10
Emergency Generator	25
Emergency Lights	8
Evaporative Cooler	15
Fire Extinguisher	10
Fire Pumps	20
Fire Suppression	50+
Flue Exhaust	w/boiler
Free Standing Chimney	50+
Fuel Oil Storage	25

EMERGENCY ALARM AND FIRE PROTECTION	
Fuel Transfer System	25
Gas Distribution	50+
Heat Sensors	15
Heat Exchanger	35
Heating Risers and Distribution	50+
MECHANICAL – ELECTRIC – PLUMBING ITEMS	
Heating Water Circulating Pumps	by size
Heating Water Controller	15
Hot and Cold Water Distribution	50
HVAC	
Pad/ roof condenser	20
A/C window unit or through wall	10
Fan coil unit, electric	20
Fan coil unit, hydronic	30
Furnace (electric heat with A/C)	20
Furnace (electric heat with A/C)	20
Furnace (gas heat with A/C)	20
Packaged terminal air conditioner (PTAC)	15
Packaged HVAC (roof top units)	20
Heat pump condensing component	20
Heater, electric baseboard	25
Heater, wall mounted electric or gas	20
Hydronic heat/ electric A/C	20
Line Dryers	15
Master TV System	10
Motorized Valves	12
Outdoor Temperature Sensor	10
Pneumatic lines and Controls	30
POWER VENTILATOR	
Purchased Steam Supply Station	50+
Sanitary Waste and Vent System	50+
Sewage Ejectors	50
Smoke and Fire Detection System, central panel	15
Solar Hot Water	20
SUMP PUMP	
Commercial Sump Pump	15
Water Softening and Filtration	15
Water Tower	50+

PLAN TYPE DEFINITION

Within the report text a Plan Type is assigned to the various cost categories. The following is a brief description of the Plan Types that may be used in the report.

Code Compliance (CC)

- Accessibility: Conditions that are not in conformance with the American Disabilities Act Accessibility Guidelines
- Building Code: Conditions that are not in conformance with the Building codes
- Life Safety: Conditions that are not in conformance with the NFPA 101 Life Safety Code

Operations (OP)

- Energy: Conditions that adversely affect energy use or will decrease water or energy usage
- Maintenance: Components or systems that can usually be accomplished by the current maintenance staff
- Security: Conditions that compromise the protection of the asset or its occupants

Environmental (EN)

- Air/ Water Quality: Conditions that affect air or water quality
- Asbestos: Reported or suspected asbestos-containing material(ACM)
- Lead: Reported lead based paint
- PCB: Reported PCB containing equipment

Functionality (FN)

- Mission: Components which do not meet the mission of the organization
- Modernization: Conditions that need to be upgraded in appearance or function
- Plant Adaptation: Components or systems that must change to fit a new or adapted use
- Obsolescence: Components or systems that are or are becoming obsolete
- Capacity: Components or system which cannot meet demand load

Integrity (IN)

- Appearance: Problems with the material or system appearance that are not functional in nature
- Reliability: Components or systems which cannot be depended on to function as designed
- Beyond Rated Life: A component or system that has exceeded its rated life

ADA Checklist

Property Name: Office Building 9
Date: 12/17/2014
Project Number: 111326.14R-013.305

EMG Abbreviated Accessibility Checklist					
	Building History	**Yes**	**No**	**N/A**	**Comments**
1.	Has the management previously completed an ADA review?	✓			
2.	Have any ADA improvements been made to the property?	✓			
3.	Does a Barrier Removal Plan exist for the property?		✓		
4.	Has the Barrier Removal Plan been reviewed/approved by an arms-length third party such as an engineering firm, architectural firm, building department, other agencies, etc.?	✓			In follow up to the 2009 ADA accessibility Compliance Survey, ADA upgrades have been proposed as part of DGS ten year ADA Compliance with total of $9,506,700.
5.	Has building ownership or management received any ADA related complaints that have not been resolved?		✓		
6.	Is any litigation pending related to ADA issues?			✓	
	Parking	**Yes**	**No**	**N/A**	**Comments**
1.	Are there sufficient parking spaces with respect to the total number of reported spaces?		✓		
2.	Are there sufficient van-accessible parking spaces available (96” wide/ 96” aisle for van)?			✓	
3.	Are accessible spaces marked with the International Symbol of Accessibility? Are there signs reading “Van Accessible” at van spaces?			✓	
4.	Is there at least one accessible route provided within the boundary of the site from public transportation stops, accessible parking spaces, passenger loading zones, if provided, and public streets and sidewalks?			✓	
5.	Do curbs on the accessible route have depressed, ramped curb cuts at drives, paths, and drop-offs?			✓	
6.	Does signage exist directing you to accessible parking and an accessible building entrance?			✓	

EMG Abbreviated Accessibility Checklist					
	Ramps	**Yes**	**No**	**N/A**	**Comments**
1.	If there is a ramp from parking to an accessible building entrance, does it meet slope requirements? (1:12)			✓	
2.	Are ramps longer than 6 ft complete with railings on both sides?	✓			
3.	Is the width between railings at least 36 inches?	✓			
4.	Is there a level landing for every 30 ft horizontal length of ramp, at the top and at the bottom of ramps and switchbacks?	✓			
	Entrances/Exits	**Yes**	**No**	**N/A**	**Comments**
1.	Is the main accessible entrance doorway at least 32 inches wide?	✓			
2.	If the main entrance is inaccessible, are there alternate accessible entrances?			✓	
3.	Can the alternate accessible entrance be used independently?			✓	
4.	Is the door hardware easy to operate (lever/push type hardware, no twisting required, and not higher than 48 inches above the floor)?	✓			
5.	Are main entry doors other than revolving door available?	✓			
6.	If there are two main doors in series, is the minimum space between the doors 48 inches plus the width of any door swinging into the space?	✓			
	Paths of Travel	**Yes**	**No**	**N/A**	**Comments**
1.	Is the main path of travel free of obstruction and wide enough for a wheelchair (at least 36 inches wide)?	✓			
2.	Does a visual scan of the main path reveal any obstacles (phones, fountains, etc.) that protrude more than 4 inches into walkways or corridors?		✓		
3.	Are floor surfaces firm, stable, and slip resistant (carpets wheelchair friendly)?	✓			
4.	Is at least one wheelchair-accessible public telephone available?			✓	
5.	Are wheelchair-accessible facilities (toilet rooms, exits, etc.) identified with signage?		✓		
6.	Is there a path of travel that does not require the use of stairs?		✓		
7.	If audible fire alarms are present, are visual alarms (strobe light alarms) also installed in all common areas?	✓			

EMG Abbreviated Accessibility Checklist					
	Elevators	**Yes**	**No**	**N/A**	**Comments**
1.	Do the call buttons have visual signals to indicate when a call is registered and answered?		✓		
2.	Are there visual and audible signals inside cars indicating floor change?		✓		
3.	Are there standard raised and Braille marking on both jambs of each host way entrance?	✓			
4.	Do elevator doors have a reopening device that will stop and reopen a car door if an object or a person obstructs the door?	✓			
5.	Do elevator lobbies have visual and audible indicators of car arrival?		✓		
6.	Does the elevator interior provide sufficient wheelchair turning area (51” x 68”)?	✓			
7.	Are elevator controls low enough to be reached from a wheelchair (48 inches front approach/54 inches side approach)?	✓			
8.	Are elevator control buttons designated by Braille and by raised standard alphabet characters (mounted to the left of the button)?	✓			
9.	If a two-way emergency communication system is provided within the elevator cab, is it usable without voice communication?	✓			
	Restrooms	**Yes**	**No**	**N/A**	**Comments**
1.	Are common area public restrooms located on an accessible route?	✓			
2.	Are pull handles push/pull or lever type?	✓			
3.	Are there audible and visual fire alarm devices in the toilet rooms?	✓			
4.	Are corridor access doors wheelchair-accessible (at least 32 inches wide)?	✓			
5.	Are public restrooms large enough to accommodate a wheelchair turnaround (60” turning diameter)?	✓			
6.	In unisex toilet rooms, are there safety alarms with pull cords?			✓	
7.	Are stall doors wheelchair accessible (at least 32” wide)?	✓			
8.	Are grab bars provided in toilet stalls?	✓			
9.	Are sinks provided with clearance for a wheelchair to roll under (29” clearance)?	✓			
10.	Are sink handles operable with one hand without grasping, pinching or twisting?	✓			

EMG Abbreviated Accessibility Checklist					
11.	Are exposed pipes under sink sufficiently insulated against contact?	✓			
12.	Are soap dispensers, towel, etc. reachable (48” from floor for frontal approach, 54” for side approach)?	✓			
13.	Is the base of the mirror no more than 40” from the floor?	✓			

APPENDIX I: PRE-SURVEY QUESTIONNAIRE

Property Condition Assessment: Pre-Survey Questionnaire

This questionnaire should be completed by someone knowledgeable about the subject property. The completed form should be presented to EMG's Field Observer on the day of the site visit. If the form is not completed, EMG's Project Manager will require additional time during the on-site visit with such a knowledgeable person in order to complete the questionnaire. During the site visit, EMG's Field Observer may ask for details associated with selected questions. This questionnaire will be utilized as an exhibit in EMG's final Property Condition Report.

Name of person completing questionnaire: Bob Huggett

Building name: Office Building 8 (039) & Office Building 9 (045)

What is your association with this property? Chief Engineer

What is the length of your association with this property? On and off since 1988

Phone number: 916-657-2130

Please provide information about inspections relating to the following items

Inspections	Date Last Inspected	List Name & Contact for Maintenance Contractor, if any.
1. Elevators	weekly	Tyssenkrump Elevator
2. HVAC, Mechanical, Electric, Plumbing	weekly	in house
3. Life-Safety/Fire	quarterly	Sentinel Fire
4. Roofs	monthly	in house

5. List any major capital improvements within the last three years.

new sewage ejector pump. selected replacement of fan variable frequency drives

6. Are there any other major capital expenditures planned in the near term?

new loading dock ramps.

7. What is the age of the roof(s)?

5-10 years

8. What building systems (HVAC, roof, interior/exterior finishes, paving etc.) are the responsibilities of contractors to repair or replace?

generators

Mark the column corresponding to the appropriate response. Please provide additional details in the Comments column, or backup documentation for any Yes responses. Note: N/A indicates "Not Applicable", Unk indicates "Unknown"

Question	Y	N	N/A	Unk	Comments
9. Are there any unresolved building, or fire code issues?		x			
10. Are there any "down" or unusable units?		x			
11. Are there any problems with erosion, storm-water drainage or areas of paving that do not drain?		x			

Question	Y	N	N/A	Unk	Comments
12. Is the property served by a private water well?		x			
13. Is the property served by a private septic system or other waste treatment systems?		x			
14. Are there any problems with foundations or structures?		x			
15. Is there any water infiltration in basements or crawl spaces?	x				some leakage in elevator sump, OB9 high rise
16. Are there any wall, or window leaks?	x				OB9, 14th floor south
17. Are there any roof leaks?		x			
18. Is the roofing covered by a warranty or bond?	x				
19. Are there any poorly insulated areas?		x			
20. Is Fire Retardant Treated (FRT) plywood used?				x	
21. Is exterior insulation and finish system (EIFS) or a synthetic stucco finish used?				x	
22. Are there any problems with the utilities, such as inadequate capacities?		x			
23. Are there any problems with the landscape irrigation systems?		x			
24. Has a termite/wood boring insect inspection been performed within the last year?		x			
25. Do any of the HVAC systems use R-11, 12, or 22 refrigerants?		x			
26. Has any part of the property ever contained visible suspect mold growth?	x				
27. Is there a mold Operations and Maintenance Plan?				x	
28. Have there been indoor air quality or mold related complaints from tenants?	x				

Question	Y	N	N/A	Unk	Comments
29. Is polybutylene piping used?		x			
30. Are there any plumbing leaks or water pressure problems?		x			
31. Are there any leaks or pressure problems with natural gas service?		x			
32. Does any part of the electrical system use aluminum wiring?				x	maybe in the main switchgear - unknown
33. Are there transformers inside the building?	x				
34. Do any Commercial units have less than 200-Amp service?		x			
35. Are there any recalled fire sprinkler heads (Star, GEM, Central, Omega)?				x	
36. Is there any pending litigation concerning the property?				x	
37. Has the State previously completed an ADA or 'Title 24 review?	x				
38. Have any ADA or Title 24 improvements been made to the property?	x				
39. Does a Barrier Removal Plan exist for the property?				x	
40. Has the Barrier Removal Plan been approved by a credentialed third party?				x	
41. Have there been any ADA or Title 24 related complaints?		x			
42. Have there been any complaints about the elevators or wait times?		x			
43. Are there any problems with exterior lighting?		x			
44. Are there any other significant issues/hazards with the property?				x	
45. Are there any unresolved construction defects at the property?		x			

APPENDIX J: ELEVATOR REPORT

Office Building 8 and 9
714 and 744 P Street
Sacramento, CA

Due Diligence
Elevator Report

February 9, 2015

Prepared for:

Ms. Karla Rodriquez
EMG Corporation
Hunt Valley, MD 21212

Prepared by:

Mr. Bob Nicholson
President
Architectural Elevator Consulting, LLC
1326 5th Ave., Suite 630
Seattle, WA 98101

ARCHITECTURAL ELEVATOR CONSULTING, LLC

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Appendix A - Americans with Disability Act (ADA) and California T24

Appendix B - A17.3 Retro-active Code Requirements

Appendix C – Maintenance and Performance

Section I: Executive Summary

A. Introduction

On February 2, 2015 Bob Nicholson and Russell Holt of Architectural Elevator Consulting, LLC (AEC) surveyed all the vertical transportation systems at the Office Buildings 8 and 9, 714 and 744 P Street, Sacramento, CA. There are eight (8) traction elevators per building. The elevators provide vertical transportation to the office floors on levels 1-17, the basement and one penthouse level. The purpose of the survey was to review the major components, to identify upgrades needed over the next ten years and check for compliance with various codes. In addition to reviewing the major components of the elevators we checked the performance parameters of the equipment and tested safety devices such as door restrictors, electric edges and emergency phones.

All the traction elevators were manufactured and installed by Otis Elevator Company during the original building construction in 1968. The main passenger elevators, Cars 1-6, in each building were modernized by Millar Elevator service in 1997. The service elevators, Car 7, and the two stop penthouse elevators, Car 8, were modernized in 2007 with solid state drives and new controllers.

During our survey we noted that the elevators were being well maintained by ThyssenKrupp Elevator (TKE) with a few areas that need work. Housekeeping in the machine rooms was good, and most car tops and pits also clean. Car and door performance is below average and should be improved. The performance needs to be adjusted to achieve the designed times and speeds. None of the elevators have test tags for an annual or a five year full load. It is possible these have not been tested since installed in 1968. Because they were installed under Group II they are exempt from having the tests performed, however, Cars 7 and 8 should have been tested when they were modernized in 2007/2008 as the code in effect at that time required them to be tested. We recommend confirming with the service company to see if they have been tested in the last five years, if not they should be tested. We also recommend door restrictors be added to all cars, as none are present.

B. Elevator Layout

Each office tower has a high and low-rise bank of elevators and one dedicated service car that serves all the landings. A two stop penthouse elevator provides service to the 18th floor. Low-rise elevators, Cars 1-3, provide service from floors B, 1-10, while the high-rise elevators, Cars 4-6, provide service from B and l, to 10 through 17. The service elevator, Car 7, provides access to all office floors and the basement. All the elevators have fast and efficient center opening doors. The number, speed and size of the elevators appear to be adequate to provide satisfactory service for each building. However, it is imperative that the elevators be operating at peak design as the buildings are very busy.

Elevator Summary				
Elevator Bank	**Elevator Speed**	**Floors Served**	**Capacity**	**Door Type**
Low-rise (Cars 1-3)	500 FPM	B, 1-10	3,500 lbs.	Center
High-rise (Cars 4-6)	1,000 FPM	B, 1, 10-17	3,500 lbs.	Center
Service (Car 7)	400 FPM	B, 1-17	7,000 lbs.	Center
Penthouse (Car 8)	100 FPM	17-PH	3,000 lbs.	Center

C. Condition/Components

Most the major components of the elevators were found to be in good condition. The main passenger elevators that were modernized in 1997 have solid state controllers that are non-proprietary, but they use motor generators that are dated technology. Passenger elevators 1-6 in each building should be modernized in the next 4 to 6 years. The machines, car equipment and door operators are in fair condition. The service and penthouse elevators, Cars 7 & 8, were modernized with solid-state drives and the motor generators sets were eliminated. These cars do not need modernized for another 15 years or more. In ***Section II*** of this report we provide an in-depth review of each of the major components of the elevators with photographs.

D. Maintenance/Performance

The elevators are currently being maintained by ThyssenKrupp Elevator Company. The level of maintenance was good in most areas, but needed some attention in other areas. The performance was observed to be below the designed times and speeds. This needs to be remedied. The hoist ropes on Car 2 at 744 P failed to meet minimum safety standards and should be replaced immediately. In ***Appendix C*** of this report we provide a summary of the performance times for each elevator followed by a maintenance deficiency list. We recommend this list be provided to the elevator service provider so they can correct these items.

E. Code Review:

During our survey we reviewed the elevators for compliance to the following codes; Americans with Disabilities Act (ADA)/California T24, and compliance with the National Elevator Code for Existing Elevators, A17.3.

1. **Americans with Disability Act (ADA)/California T24:** In 1990 the federal government enacted ADA to make public spaces more accessible to disabled persons. California has a few specific accessibility requirements in addition to ADA. All of the elevators meet most ADA and California Title 24 requirements. The sizes of the passenger elevators meet ADA for new and existing elevators. All the cars had proper hall lanterns and gongs. ***Appendix A*** provides a complete listing of the ADA/T24 requirements. The following is a list of which items need to be corrected to meet ADA:

    a. The car push buttons in the high-rise and service cars have the floor numbers of out sequence. ADA requires that all numbers start at the bottom and go left to right. Starting at floor 10 the numbers are right to left. These should be changed.

2. **Retro Active Codes for Existing Elevators:** We reviewed the elevators for compliance to A17.3 Code, the national safety code for existing elevators. This code requires all elevators, no matter age or installation date, to meet a minimum level of safety. A17.3 is not adopted in California, thus not required by the State, but highly recommended. A complete check list for this retro-active code is included in ***Appendix B*** of this report. The elevators have been retro-actively upgraded for most of these codes. The following is a list of items that are not in compliance:

a. **Door restrictors:** We believe they should have been installed when TKE changed the door operators on Cars 6 and 7 during the modernization and more recently when TKE upgraded the door operators on Cars 1-6. These should be added immediately.
b. **Fire Service:** None of the elevators have "hold" feature on phase II and thus do not comply with A17.3. We recommend this be added when the elevators are modernized.

3. **Seismic:** The elevators were installed in 1968 prior to adoption of seismic code. Seismic features were added when the passenger elevators were modernized by Millar in 1997 and more recently by TKE on the service and shuttle car. All the elevators have a seismic switch, ring and string derailment, and seismic retainers on the counterweights. The fishplates on the car and counterweight rails are non-seismic, but do not need to be updated unless meeting the most stringent code is desired.

F. Recommendation:

We recommend further research to determine the last time the five year full load tests were performed. None of the governors had the code required test tags and appear to have been last tested when the elevators were installed in 1968. The State of California exempts older elevators from being tested, but we believe this is a major oversight by the State. In addition we recommend door restrictors be installed on all the elevators as soon as possible. The passenger elevators, Cars 1-6 should be modernized in the next 4 to 6 years. Elevator performance can and should be improved to provide the highest level of service.

Section II : Component Review

A. MACHINE ROOM:

Controllers:

The controllers for Cars 1-6 were manufactured by MCE and installed locally by Millar when the elevators were modernized in 1997. The controllers utilize motor generator sets. The newer controllers for Cars 7 and 8 have solid state drives.

Gearless Machines:

All the low, high-rise and service cars have Otis gearless machines that were installed in 1968 when the elevators were new. The shuttle cars have geared Otis machines with the original 2 speed AC motors.

Motor Generator Sets:

All the passenger elevators, Cars 1-6, had motor generators installed when last modernized in 1997. These are worn out, noisy and not very energy efficient. We recommend these be removed as part of the modernization.

B. HOISTWAY:

Hoistway Construction:

The hoistway (elevator shaft) is the main area where the elevators go up and down. The hoistways are mostly built of drywall and some concrete. There are some ledges in the hoistway that have been properly beveled.

Car Guide Rails:

The car rails are in good condition but do not have seismic fish plates. Upgrading the guide rails to current seismic standards is voluntary.

Pits:

The pits for are poured concrete with sump areas and metal grating. The pits were found to be dry and mostly clean condition.

C. CAR TOP:

Door Operator:

The door operators for Cars 1-6 are the original Otis 6970 that have been recently updated with closed loop kits by TKE. The door operators for the service and shuttle elevators were upgraded with GAL and are closed loop and known to be of high quality. The only work on the door operators is to add door restrictors which are not present on any of the elevators.

Car Roller/Slide Guides:

On both sides of the elevators and on the top and bottom roller guides keep the elevators riding up and down the steel guide rails. The existing ride quality was noted to be good on some cars and needing improvement on others. High quality ELSCO rollers were installed on the passenger cars.

D. SIGNAL FIXTURES:

Car Operating Panels:

All the elevators have newer Car Operating Panels (COP's) that were installed during the elevator modernizations. The panels are in good condition and meet most ADA and T24 but a few buttons are missing the raised cap. In addition the layout for the buttons in the high-rise and service cars has the buttons on floors 10 to 17 backwards. ADA requires them to be left to right. All the even floors for 10 to 16 should be on the left so it is easier for blind persons to find the buttons.

Hall Lanterns:

Hall lanterns inform persons waiting in the hall of which direction the elevator is about to travel in next. ADA requires that the hall lanterns illuminate and sound for the waiting passengers. The existing passenger elevators have hall lanterns for each car. The lanterns have the proper gong for up and down. The service car has a car riding lantern.

Hall Call Pushbuttons:

At each floor hall call push buttons are located so that users can call the elevator. The hall call stations have raised operation buttons which meet ADA and California Title 24. These were all noted to be in good condition, buy a few of the raised button caps were noted to be missing.

E. CAB INTERIOR:

Wall Finish:

The existing cab interiors were updated with new plastic laminate in 1997 and now look dated. The back wall has the code required handrail. The railing heights are in compliance with Title 24 California code.

Ceilings:

The passenger elevators have down light ceilings with incandescent light fixtures. The light fixtures could be updated with energy efficient LED's and/or the entire ceiling could be replaced.

F. Miscellaneous:

The hoist ropes for Car 2 in OB 9 failed to meet minimum size requirements and should be replaced immediately.

Vertical Transportation

OB 8 - 714 P Street

Item No.	Recommendation	Rating	Quantity	Unit	Unit Cost	Immediate Code Items	Immediate - Repair	Years 1-3	Years 4-6	Years 7-10	Totals
1	Install door restrictors on all cars.	1	8	EA	$3,000.00	$24,000					$24,000
2	Perform five year full load tests. Elevators are not required to have tests and it appears they have not since 1968 when installed.	1	8	EA	$3,000.00	$24,000					$24,000
3	Re-order the car push buttons in the high-rise cars so they meet ADA	1	3	EA	$2,000.00	$6,000					$6,000
4	Adjust cars for proper operation and complete deferred maintenance items listed in Appendix C.	2	8	EA	$1,000.00		$8,000				$8,000
5	Modernize Cars 1-6 with new controllers, SCR drives and updated fire service.	4	6	EA	$300,000.00				$1,800,000		$1,800,000
6											$0
7											$0
8											$0
9											$0
10											$0
11											
12											
	Subtotal					$54,000	$8,000	$0	$1,800,000	$0	$1,862,000

1	$54,000	Code and Safety
2	$8,000	Deferred Maintenance & Repair
3	$0	Capital Expenditure
4	$1,800,000	Modernization / Improvements
5	$1,862,000	Total

Rating:
1 - Code and Safety
2 - Repair and Maintenance
3 - Capital Expenditure
4 - Modernization / Improvements
5 - Total

Vertical Transportation

OB 9 - 744 P Street

Item No.	Recommendation	Rating	Quantity	Unit	Unit Cost	Immediate Code Items	Immediate - Repair	Years 1-3	Years 4-6	Years 7-10	Totals
1	Install door restrictors on all cars.	1	8	EA	$3,000.00	$24,000					$24,000
2	Perform five year full load tests. Elevators are not required to have tests and it appears they have not since 1968 when installed.	1	8	EA	$3,000.00	$24,000					$24,000
3	Re-order the car push buttons in the high-rise cars so they meet ADA	1	3	EA	$2,000.00	$6,000					$6,000
4	Adjust cars for proper operation and complete deferred maintenance items listed in Appendix C.	2	8	EA	$1,000.00		$8,000				$8,000
5	Replace hoist ropes on Car 2.	1	1	EA	$15,000.00		$15,000				$15,000
6	Modernize Cars 1-6 in both towers with new controllers, SCR drives and updated fire service.	4	8	EA	$300,000.00				$1,800,000		$1,800,000
7											$0
8											$0
9											$0
10											$0
11											
12											
	Subtotal					$54,000	$23,000	$0	$1,800,000	$0	$1,877,000

1	$54,000	Code and Safety
2	$23,000	Deferred Maintenance & Repair
3	$0	Capital Expenditure
4	$1,800,000	Modernization / Improvements
5	$1,877,000	Total

Rating:
1 - Code and Safety
2 - Repair and Maintenance
3 - Capital Expenditure
4 - Modernization / Improvements
5 - Total

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		Cars 1-8
	GENERAL	
4.10.1	Elevator must comply with ASME A17.1-1990. Freight elevators are not acceptable unless only elevator provided, and is permitted to carry passengers, both public and employees.	Yes
	AUTOMATIC OPERATION	
4.10.2	Elevators must be Automatic.	Yes
4.10.2	Self-leveling to within 1/2 in.	Yes
	HALL CALL BUTTONS	
4.10.3	Buttons centered at 42 in. above the floor.	Yes
4.10.3	Buttons to illuminate when call is entered and extinguish when answered.	Yes
4.10.3	Buttons to be at least 3/4 in. in the smallest dimension.	Yes
4.10.3	Up button located above down button.	Yes
4.10.3	Buttons raised or flushed. **(T24 must be raised)**	Yes
4.10.3	Objects mounted beneath hall buttons not to project into the lobby more than 4 in.	Yes
	HALL or CAR LANTERNS	
4.10.4	Visible and audible signals at each hoistway entrance to indicate which car is responding to the call.	Yes – Hall
4.10.4	Audible signals to sound once for up and twice for “down” or may verbal announcement stating “up” “down.”	Yes
4.10.4	Hall directional lantern centered 72 in. above floor.	Yes
4.10.4	Directional lantern visible elements minimum of 2-½ in. in the smallest dimension.	Yes
4.10.4	Directional lanterns must be visible from the vicinity of the hall call button.	Yes
4.10.4	In car lanterns, meeting the requirements above are acceptable in lieu of hall directional lanterns.	N/A
	HOISTWAY ENTRANCES	
4.10.5	Raised and Braille floor designations are required on both door jambs. Permanently applied plates are acceptable. **(T24 must be to the left)**	Yes
4.10.5	Centerline of floor designation characters 60 in. above floor.	Yes
4.30.4	Characters must be 2 in. high, raised 1/32 in. upper sans serif (block letters) or simple serif type.	Yes
4.30.4	Grade II Braille to accompany raised characters.	Yes
	DOOR PROTECTIVE & REOPENING DEVICES	
4.10.6	Doors must open and close automatically.	Yes
4.10.6	Non-contact door reopening device at 5 in. and 29 in. above the floor.	Yes
4.1.6(3)(c)	If safety edges are provided on existing elevators, the non-contact door reopening devices may be omitted.	Yes
4.10.6	Reopening device to remain operational for at least 20 seconds.	Yes

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		Cars 1-8
	DOOR AND SIGNAL TIMING	
4.10.7	Minimum acceptable door open time from notification car is answering a hall call until the car doors begin to close: *T=D/(1.5ft/s*, where *T* is the total time in and *D* is the distance from a point in the lobby or corridor 60 in. directly in front of the farthest button controlling that car to centerline of its hoistway door.	Yes
4.10.7	Minimum acceptable notification time 5.0 seconds.	Yes
	DOOR DELAY FOR CAR CALLS	
4.10.8	Doors to remain open for a minimum of 3.0 seconds in response to car calls.	Yes
	FLOOR PLAN NEW ELEVATOR	
4.10.9	At least 36” wide door. Side Open Door: Cab must be 5’-8” wide x 4’-3” deep Center Open Door: Cab must be 6’-8” wide by 4’-3” deep	Yes
	FLOOR PLAN EXISTING ELEVATOR	
4.1.6	Minimum of 48” x 48”	Yes
4.10.9	Clearance between car platform sill and edge of hoistway landing sill no greater than 1-¼ in.	Yes
	Handrails Circular Square Dia.____Top of Handrail _____ Height Side Back **(T24 must be 32”)**	Yes
	FLOOR SURFACES	
4.10.10	Surfaces to be stable, firm and slip resistant.	Yes
4.5.3	Carpeting if installed must have firm cushion, pad or backing, or no cushion or pad. Carpeting must have level loop, textured loop, level pile texture. Carpeting pile thickness not to exceed 1/2 in. Carpeting must have exposed edges fastened to the floor surface. Exposed edges of carpets must be trimmed.	Yes
	ILLUMINATION LEVELS	
4.10.11	Five foot-candles of illumination to be provided at car controls, platform and at sill.	Yes
	CAR CONTROLS	
4.10.12	Buttons to be at least 3/4 in. in their smallest dimension.	Yes
4.10.12	Buttons must be flush or raised. **(T24 must be raised)**	No some missing caps
4.10.12	Buttons must be designated by raised characters and Braille or symbols complying with ASME A17.1 Rule 210.13.	Yes
4.10.12	Characters must be a minimum of 5/8 in. high, upper case sans (block letters) or simple serif type.	Yes
4.10.12	Grade II Braille to accompany raised character of symbol.	Yes
4.10.12	Raised designations must be to the immediate left of the button to which they apply.	Yes

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		Cars 1-8
4.10.12	Call button illuminates when call is entered and extinguish when answered.	Yes
4.10.12	Floor buttons must be no higher then 48 in. when located in front return. Buttons must be no higher than 54 in. when a side approach provided.	Yes
4.10.12	Emergency controls, including emergency alarm and emergency stop (if provided) must be grouped at the bottom of the panel and have centerlines no less than 35 in. above the finished floor.	Yes
4.10.12	Controls must be on the front return wall with center-opening doors. They may be on the front return or strike jamb sidewall with side doors.	Yes
	CAR POSITION INDICATORS	
4.10.13	Visual car position indicator must be provided above control panel or over door.	Yes
4.10.13	Car position indicator numerals must be a minimum of 1/2 in. high.	Yes
4.10.13	Audible signal to sound as the car passes or stops at a floor and a corresponding floor designation must illuminate. Audible signal must be at least 20 dB with a frequency no higher than 1,500 Hz.	Yes
4.10.13	A button to activate audible signal only for desired trip may be provided.	N/A
4.10.13	An automatic verbal announcement the floor at which a car stops may be substituted for the audible signal.	N/A
	EMERGENCY COMMUNICATIONS	
4.10.14	If provided, emergency two-way communication systems between the elevator and a point outside the hoistway must comply with ASME A17.1-1990, Rule 211.1.	Yes
4.10.14	The highest operable part must be a maximum of 48 in. from the car floor.	Yes
4.10.14	Emergency communication identification must be provided and located adjacent to the device. Characters must be a minimum of 5/8 in. high raised 1/32 in., upper case serif (block letters) or simple serif type, and accompanied by Grade II Braille.	Yes
4.10.13	If a handset is provided the cord must be at least 29 in. long.	N/A
4.27.4	If located in a closed compartment, the door must be operable with one hand. It must not require tight grasping, pinching or twisting of the wrist. The force required to open the door must not exceed 5 lb/f.	N/A
4.10.13	The system must not require voice communication.	Yes

Appendix "B"

A17.3 Code for Existing Traction Elevators

A17.3	Code Item	Cars: 1-8
2.1	**HOISTWAYS**	
2.1.1	Hoistway Construction (Enclosed & Fire rated per local code or ANSI/NFPA No. 101)	Yes
2.1.2	Windows in Hoistway Enclosures: (If provided are they guarded properly.)	Yes
2.1.3	Projections in Hoistway (Must be flush and level; Leveling zone +3"./ 60 to 75 deg bevel.)	Yes
2.1.4	Pipes Conveying Gases, Vapors, or Liquids. (If provided must be properly covered & securely fastened.)	Yes
2.1.5	Counterweight Guards (Start at 12" go to 84" above pit floor; not needed with comp rope/chain)	N/A
2.2	**MACHINE ROOMS AND MACHINERY SPACES**	
2.2.1	Enclosures – Designated Machine Room (No-non elevator equipment- existing can stay)	Yes
2.2.2	Access to Machine Rooms and Machinery Spaces (A permanent means to the machine room- locked door)	Yes
2.2.3	Lighting(Permanent lighting in all machine rooms)	Yes
2.2.4	Ventilation (Natural or mechanical to avoid overheating)	Yes
2.2.5	Pipes Conveying Gases, Vapors, or liquids (Existing pipes allowed if guarded to prevent discharge)	Yes
2.2.6	Protection From Weather	Yes
2.3	**PITS**	
2.3.1	Access to Pits (Means of access to all pits. If access door provide closer & keys onsite.)	Yes
2.3.2	Drains (Drains connected directly to the sewer are not permitted.)	Yes
2.3.3	Stop Switch (A stop switch shall be provided for every pit. Locate near access, color, etc.)	Yes
2.4	**CLEARANCES AND RUNBYS**	
2.4.1	Horizontal Car Clearances (Not more then 5" for horizontal doors; 7.5" for vertical doors)	Yes
2.4.2	Bottom Car Clearances (Car shall not strike any equipment when resting on fully compressed buffer.)	Yes
2.4.3	Bottom Car and Counterweight Runby (Shall not exceed 24" for cars; or 36" for cwt.)	Yes
2.4.4	Top Car Clearance (Car does not strike any overhead structure)	Yes
2.4.5	Landing Sill Clearance (At least ½" for side guides; at least ¾" for corner guides. Max cannot exceed 1 ½".)	Yes
2.5	**PROTECTION OF SPACES BELOW HOISTWAYS**	
2.5	Counterweight safeties required	N/A
2.6	**HOISTWAY ENTRANCES**	
2.6.1	Doors or Gates Required (Passenger Elevators – full width/height – no hand latches.) (Freight Elevators – at least 6-0" gate)	Yes
2.6.2	Closing of Hoistway Doors (Door closers required on cars except swinging portion of horizontal door)	Yes
2.6.3	Hoistway Door Vision Panels (Required on manually operated or self closing doors, location, Size, and type of glass)	N/A
2.6.4	Door Hangers (Prevent jumping, and stops, 4 times load)	Yes
2.6.5	Non-Shearing Astragals (For vertical bi-parting doors only)	N/A
2.6.6	Pull Straps (Must not be more than 6'-6" from floor when open)	N/A
2.7	**HOISTWAY DOOR LOCKING DEVICES, PARKING, DEVICES, AND ACCESS**	
2.7.1	Hoistway Door or Gate Locking Devices (Mechanical and electrical interlocks required)	Yes
2.7.2	Elevator Parking Device (For cars operated from within car only)	N/A
2.7.3	Access to Hoistway (Hoistway door unlocking devices and access switches)	Yes

Appendix "B"

A17.3 Code for Existing Traction Elevators

A17.3	Code Item	Cars: 1-8
2.7.4	Restricted Opening of Hoistway Doors and/or Car Doors on Passenger Elevators (Cannot open more then 4" outside unlocking zone +-18" max.)	**No - None**
2.7.5	Hoistway Emergency Door Contacts (Positively opened)	Yes
2.8	**POWER OPERATION OF DOORS AND GATES**	
2.8.1	Kinetic Energy and Force Limitations for Power-operated Horizontal Sliding Doors. (Shall not exceed 7ft/lbs. with re-opening device, without 2.5ft/lbs.; cannot exceed 30 ft/lbs)	Yes
2.8.2	Reopening Device for Power-Operated Car Doors or Gates (Can be rendered inoperative if less then 2.5ft/lb)	Yes
	Part III	
3.1	Buffers And Bumpers (Car and counterweight buffers are required)	Yes
3.2	Counterweights (The weights shall be protected so that they cannot be dislodged. The rod nuts shall be protected)	Yes
3.3	**CAR FRAMES AND PLATFORMS**	
3.3.1	Car Platforms(Cover entire area)	Yes
3.3.2	Platform Guards (Aprons) (Vertical face at least 21", 60-75deg, withstand 150#)	Yes
3.3.3	Hinged Platform Sills(Must have contacts & prevent operation unless within 2")	N/A
3.3.4	Floating (Movable) Platforms(Prohibited if car can move when door is not closed)	N/A
3.3.5	Protection of Platforms Against Fire (Must be covered with sheet metal or fire resistant material)	Yes
3.4	**CAR ENCLOSURES**	
3.4.1	Car Enclosures (Passenger – total enclosed; Frt maybe perforated, but not by the cwt.; Car top must withstand 300lbs on any 2sqft.)	Yes
3.4.2	Car Doors and Gates (Must have gate or door and electric contract)	Yes
3.4.3	Location of Car Doors and Gates (Hor, distance not more then 5 ½"., Swing door 4" max., space and site guard requirements.)	Yes
3.4.4	Emergency Exits (Cover hinged, single car blind shaft-every 36', side allowed)	Yes
3.4.5	Car Illumination (At least two lights, 5ftc; frt=2.5ftc; emerg. .2ftc for 4 hrs.)	Yes
3.4.6	Protection of Light Bulbs and Tubes (Guarded or coated to prevent breaks)	Yes
3.5	**SAFTIES**	
3.5.1	Car Safeties (Every car must have a safety)	Yes
3.5.2	Counterweight Safeties (If occupied space below)	Yes
3.5.3	Safeties to Stop Ascending Cars or Counterweights Prohibited (Cannot be provided)	Yes
3.5.4	Application and Release of Safeties (Must be mechanical can only release if car goes up)	Yes
3.5.5	Max. Permissible Movement of Gov. Rope to Oper. Safety (For type "B" Safties-200ft or less 42in.; 201 to 375fpm – 36in.; Over 375 FPM 30in. Cwt. = 42in all speeds.)	Yes
3.5.6	Rail Lubricants and Lubrication Plate (Plate on cross head stating type of lubricant or none at all.)	Yes
3.5.7	Overall Length of Guide Rails (Extended to prevent disengaging)	Yes
3.6	**SPEED GOVERNORS**	
3.6.1	Speed Governor Overspeed and Car Safety Mechanism Switches. (A switch shall be provided when speed is over 150FPM. For static control switch shall be for all speeds & both direct.)	Yes
3.6.2	Governor Ropes (Shall be of iron, steel, monel metal, phosphor bronze, or ss. At least 3/8" in diameter Tiller rope not allowed.)	Yes
3.7	**CAPACITY AND LOADING**	
3.7.1	Minimum Rated Load for Passenger Elevators (per table 3.7.1)	Yes
3.7.2	Use of Partitions for Reducing Inside Net Platform Area (Partitions must be permanent and symmetrical)	N/A
3.7.3	Min. Rated Load for Freight Elevators (Class A = Not more then ¼ of total cap.; Class B = Motor Veh.; Class C = loading with industrial truck, etc.)	N/A
3.7.4	Capacity Plates (Every car must have one with rated load; Frt : one piece loads, loading and unloading; ¼" high for pass, 1"	Yes

A17.3	Code Item	Cars: 1-8
	for frt.)	
3.7.5	Signs on Freight Elevators (NOT A PASS ELEV…etc. ½" high letters)	N/A
3.8	**DRIVING MACHINES AND SHEAVES**	
3.8.1	General Requirements (Must be cast iron or steel, fin. Grooves no set screws)	Yes
3.8.2	Winding Drum Machines (Must have slack rope switch; Chain, belt, or rope-driven mechanisms shall not be used.)	N/A
3.8.3	Indirect-Drive Machines (Must be at least 3 belts, safety factor of 10)	Yes
3.8.4	Brakes (Must be released electrically and have spring or gravity and friction)	Yes
3.9	**TERMINAL STOPPING DEVICES**	
3.9.1	Normal and Terminal Stopping Devices (Locate at upper and lower terminals. If in machine room provide broken rope, tape or chain switch)	Yes
3.9.2	Final Terminal Stopping Devices (Winding drum machines- on machines and in hoistway; Traction – in the hoistway operated by the car.)	Yes
3.10	**OPERATING DEVICES AND CONTROL EQUIPMENT**	
3.10.1	Types of Operating Devices (Rope or rod devices shall not be used.)	Yes
3.10.2	Car-Switch Operation Elevators (If provided must return to stop position if released by hand)	Yes
3.10.3	Top-of-Car Operating Devices (Continuous pressure <150FPM; between crosshead & door)	Yes
3.10.4	Electrical Provisions	
	(a) Slack Rope Switch	N/A
	(b) Motor-Generator Running Switch	N/A
	(c) Compensating Rope Sheave Switch	N/A
	(d) Broken rope, tape or chain	Yes
	(e) Stop Switch – Top of Car- marked "stop" & "run"	Yes
	(f) Car-Safety Mechanism Switch	Yes
	(g) Speed Gov. Overspeed Switch	Yes
	(h) Final Terminal Stopping Devices	Yes
	(i) Emergency Terminal Stopping Devices (reduced stroke)	Yes
	(j) Motor Generator Overspeed Protection	N/A
	(k) Motor Field Sensing Means (not required w/ static drive)	Yes
	(m) Buffer Switches for Oil Buffers (type c safety)	N/A
	(n) Hoistway Door Interlocks or Hoistway Door Contacts	Yes
	(p) Car Door or Gate Electric Contacts	Yes
	(q) Normal Terminal Stopping Devices	Yes
	(r) Car Side Emergency Exit Electric Contact	N/A
	(s) Electric Contacts for Hinged Car Platform Sills	N/A
	(t) In-Car Stop Switch (Must be keyed, if provided)	Yes
	(u) Emergency Stop Switch (Must be provided for freight cars)	Yes
	(v) Stop Switch in Pit	Yes
	(w) Buffer Switches for Gas Spring Return Oil Buffers	N/A
3.10.5	Power Supply Line Disconnecting Means (Provided w/ overcurrent protection, within site, and numbered)	Yes
3.10.6	Phase Reversal and Failure Protection (Means to prevent starting if out of phase)	Yes
3.10.7	Devices for Making Hoistway Door Interlocks or Electric Contacts, or Car Door or Gate Electric Contacts Inoperative (These devices are prohibited)	Yes
3.10.8	Release and Application of Driving Machine Brakes (If ungrounded or if stop switch is pulled shall release brake)	Yes
3.10.9	Control and Operating Circuit Requirements (The failure of any single magnetically operated switch)	Yes
3.10.10	Absorption of Regenerated Power (Provide means to absorb energy during overhauling)	Yes

Appendix "B"

A17.3 Code for Existing Traction Elevators

A17.3	Code Item	Cars: 1-8
3.11	**EMERGENCY OPERATION AND SIGNALING DEVICES**	
3.11.1	Car Emergency Signaling Devices (Audible signal, two-way communication, on emerg. power)	Yes
3.11.2	Operations of Elevators Under Standby (Emergency) Power (If provided must be able to absorb regenerative power)	Yes
3.11.3	Firefighters' Service (A17.1-1987 Rules 211.3 through 211.8- appendix C; phase I and II switches shall be the same in each bldg)	No
3.12	**SUSPENSION MEANS AND THEIR CONNECTIONS**	
3.12.1	Suspension Means (Must be wire rope made of iron or steel- Elevator ropes only)	Yes
3.12.2	Rope Data Tag	Yes
3.12.3	Factor of Safety (f = SxN/W or table 3.12.3)	Yes
3.12.4	Minimum Number and Diameter of Suspension Ropes (3 for traction; 2 for drum; minimum diameter = 3/8")	Yes
3.12.5	Suspension Rope Equalizers (When provided shall be of the individual-compression spring type)	Yes
3.12.6	Securing of Suspension Wire Ropes to Winding Drums (rope must be secured by clamps or tapered babbitted sockets.)	N/A
3.12.7	Spare Turns on Winding Drums (Not less then one turn of the rope when car is on buffer)	N/A
3.12.8	Suspension Rope Fastenings (Spliced eyes by return loop may continue in service)	Yes
3.12.9	Auxiliary Rope Fastening Devices	N/A

Appendix "C"

Performance Review and Maintenance Deficiency List

Performance Review:

In this section we provide the results of randomly reviewing 50% or more of the performance of all elevators.

Part A: Definitions

A stopwatch, tachometer, and spring gauge are utilized to measure the performance of each elevator. Original equipment design, national and local codes and other factors govern these times. The following is an explanation of each item that was reviewed.

- Car Door Dwell Time: When an elevator is responding to a car call, the code requires the elevator doors to stay open a minimum of 3.0 seconds. This is to allow ample time for the passengers to exit.
- Hall Call Dwell Time: When an elevator is responding to a hall call, the code requires the elevator doors to stay open a minimum of 5.0 seconds. This is to allow ample time for the passengers to enter the elevator.
- Floor-To-Floor Time: This measures the time that it takes an elevator to go from one floor to the next floor. Door open and close times are calculated into this time to provide a meaningful measurement. The stopwatch is started when the doors start to close and is stopped when the elevator is level at the next floor with the doors ¾ open for center opening doors, and ½ open for side opening doors.
- Door Open Time: The door open time is measured when the doors start to open until they are fully open.
- Door Close Time: The door close time is measured when the doors start to close until they are fully closed.
- Full Speed: Full speed of an elevator is measured in the machine room utilizing a tachometer or in the car using an accelerometer.
- Door Closing Pressure: The force required to prevent the doors from closing. This pressure is measured with a spring gauge.
- Ride Quality: Acceleration, deceleration, side-to-side sway and noise level are evaluated in this section.

On the following page the results of the elevators checked are provided.

Appendix "C"

Performance Review and Maintenance Deficiency List

	OB 8 - Cars 1-6							
	PERFORMANCE TIMES	**Design 1-6**	**Car 1**	**Car 2**	**Car 3**	**Car 4**	**Car 5**	**Car 6**
7.1	Door Open Time	**1.7**	2.7	2.5	2.5	2.5	2.6	3.1
7.2	Door Close Time	**2.5**	3.2	3.3	3.2	3.2	3.3	3.2
7.3	Floor to Floor Up	**8.5**	11.5	10.4	10.2	12.5	11.3	10.1
9.6	Floor to Floor Down	**8.5**	9.5	11.1	11.4	11.4	11.5	12.0
7.5	Full Speed Up	**1-3: 500 4-6: 1,000**	504	498	477	970	985	993
7.6	Full Speed Down	**1-3: 500 4-6: 1,000**	502	499	477	954	966	990
7.7	Jerk Rate Up	**< 7.0**	3.5	3	3	3.4	3.9	3.2
7.8	Jerk Rate Down	**<7.0**	6.6	10.4	6	9.3	14.2	10.1
7.9	Power Closing of Door (Pressure Gauge)	**<30lbs**	24	26	23	17	17	27
7.10	Interrupted Ray	**.5sec**	Yes	Yes	Yes	Yes	Yes	Yes
7.11	Car Dwell Time	**3.0**	5.4	6.3	6.1	6.4	6.5	6.3
7.12	Hall Call Dwell Time	**5.0**	5.4	5.9	5.6	5.4	6.5	6.3
7.13	Hall/Car Lantern Time	**8.0**	4.4	4.5	5.3	8.4	9.4	8.5
	Nudging	**20.0**	>20	>20	>20	>20	>20	>20
	Test Emergency Phone	**Yes**	Yes	Yes	Yes	Yes	Yes	Yes

Items in Red do not comply and should be adjusted.

Car #	GENERAL MAINTENANCE DEFICIENCIES
	Car 1
1.1	8th floor button light panel does not have a number.
	Car 2
2.1	M.G. set has high bars.
2.2	Governor needs serviced.
	Car 3
3.1	M.G. set has high bars.
3.2	Governor needs serviced.
3.3	Right car station 8th floor is missing the number.

Appendix "C"

Performance Review and Maintenance Deficiency List

	Car 4
4.1	M.G. set has high bars.
	Car 5
5.1	Ride quality is rough. Adjust rollers.
	Car 6
	No Items

OB 8 Service and Shuttle Cars					
	PERFORMANCE TIMES	**Design 7**	**Car 7**	**Design Car 8**	**Car 8**
7.1	Door Open Time	**1.9**	4.2	**1.7**	2.6
7.2	Door Close Time	**2.9**	**4.1**	**2.5**	**3.8**
7.3	Floor to Floor Up (18 to 19)	**10.5**	**14.3**	**12.5**	**17.4**
9.6	Floor to Floor Down (19 to 18)	**10.5**	**13.6**	**12.5**	**17.7**
7.5	Full Speed Up	**400FPM**	390	**100 FPM**	99
7.6	Full Speed Down	**400 FPM**	393	**100 FPM**	100
7.7	Jerk Rate Up	**< 7.0**	6.3	**< 7.0**	2.3
7.8	Jerk Rate Down	**< 7.0**	5.2	**< 7.0**	4.2
7.9	Power Closing of Door (Pressure Gauge)	**<30lbs**	24	**<30lbs**	**27**
7.10	Interrupted Ray	**.5sec**	2.8	**.5sec**	5.5
7.11	Car Dwell Time	**3.0**	**2.2**	**3.0**	7.3
7.12	Hall Call Dwell Time	**5.0**	DNC	**5.0**	DNC
7.13	Hall/Car Lantern Time	**8.0**	DNC	**8.0**	DNC
7.14	Nudging	**20.0**	DNC	**20.0**	DNC
7.15	Test Emergency Phone	**Yes**	Yes	**Yes**	Yes

	Car 7
	No Items
	Car 8
8.1	New governor but no test.
8.2	Replace in-bound seal on the machine to stop oil leaking.
8.3	Hall lantern not working on 17th floor.

Appendix "C"

Performance Review and Maintenance Deficiency List

	OB 9 - Cars 1-6							
	PERFORMANCE TIMES	**Design 1-6**	**Car 1**	**Car 2**	**Car 3**	**Car 4**	**Car 5**	**Car 6**
7.1	Door Open Time	**1.7**	**2.6**	**2.6**	**2.7**	**3.0**	**3.0**	**2.8**
7.2	Door Close Time	**2.5**	3.0	3.1	3.2	3.5	3.4	**3.9**
7.3	Floor to Floor Up	**8.5**	**13.4**	**13.2**	**13.6**	**16.3**	**12.0**	**12.9**
9.6	Floor to Floor Down	**8.5**	**12.9**	**13.8**	**13.1**	**17.3**	**13.1**	**13.5**
7.5	Full Speed Up	**1-3: 500 4-6: 1,000**	492	500	492	963	944	993
7.6	Full Speed Down	**1-3: 500 4-6: 1,000**	495	497	494	983	941	993
7.7	Jerk Rate Up	**< 7.0**	5.6	3.4	5.7	**11.9**	8.5	3.1
7.8	Jerk Rate Down	**<7.0**	**12.6**	6.1	8.2	**11.4**	**12.8**	**12.2**
7.9	Power Closing of Door (Pressure Gauge)	**<30lbs**	19 lbs	22 lbs	21 lbs	23 lbs	24 lbs	21 lbs
7.10	Interrupted Ray	**.5sec**	2.6	2.1	2.1	2.4	2.3	2.8
7.11	Car Dwell Time	**3.0**	3.3	6.3	6.2	6.3	6.5	6.3
7.12	Hall Call Dwell Time	**5.0**	5.4	6.1	6.5	6.2	6.5	6.3
7.13	Hall/Car Lantern Time	**8.0**	13.6	14.5	13.9	19.2	16.4	9.5
	Nudging	**20.0**	DNC	DNC	DNC	DNC	DNC	DNC
	Test Emergency Phone	**Yes**	Yes	Yes	Yes	Yes	Yes	Yes

Items in Red do not comply and should be adjusted.

Car #	GENERAL MAINTENANCE DEFICIENCIES
	Car 1
1.1	Hall button at the 10th floor is flush, replace with raised button cap.
1.2	Ride quality is very rough.
1.3	Car has significant roll back.
1.4	Car jerks to a start.
1.5	Cab panels and shell have a major creaking sound when car moves up and down the shaft.
	Car 2
2.1	Hoist ropes have heavy rouge and are undersized. Replace immediately.
2.2	5th floor car button is cracked.
2.3	Doors are squeaky at the 7th floor.
	Car 3
	No items
	Car 4

Appendix "C"

Performance Review and Maintenance Deficiency List

4.1	Redo brushes on motor generator sets to reduce noise.
4.2	Plastic laminate in the cabs is chipped.
4.3	Acceleration is choppy and should be smoothed out.
4.4	Jerky acceleration rate in up direction.
	Car 5
5.1	Redo brushes on motor generator sets to reduce noise.
	Car 6
6.1	Car runs very loud, sounds like a freight train. Adjust car roller guides.
6.2	Plastic laminate cab panel on back wall is chipped.

OB 9 Service and Shuttle Cars					
	PERFORMANCE TIMES	**Design 7**	**Car 7**	**Design Car 8**	**Car 8**
7.1	Door Open Time	**1.9**	**4.2**	**1.7**	**2.6**
7.2	Door Close Time	**2.9**	**4.1**	**2.5**	**3.8**
7.3	Floor to Floor Up (18 to 19)	**10.5**	**14.3**	**12.5**	**17.4**
9.6	Floor to Floor Down (19 to 18)	**10.5**	**13.6**	**12.5**	**17.7**
7.5	Full Speed Up	**400FPM**	390	**100FPM**	99
7.6	Full Speed Down	**400 FPM**	393	**100 FPM**	100
7.7	Jerk Rate Up	**< 7.0**	6.3	**< 7.0**	2.3
7.8	Jerk Rate Down	**< 7.0**	5.2	**< 7.0**	4.2
7.9	Power Closing of Door (Pressure Gauge)	**<30lbs**	24	**<30lbs**	27
7.10	Interrupted Ray	**.5sec**	2.8	**.5sec**	5.5
7.11	Car Dwell Time	**3.0**	DNC	**3.0**	7.3
7.12	Hall Call Dwell Time	**5.0**	DNC	**5.0**	DNC
7.13	Hall/Car Lantern Time	**8.0**	DNC	**8.0**	DNC
7.14	Nudging	**20.0**	DNC	**20.0**	DNC
7.15	Test Emergency Phone	**Yes**	Yes	**Yes**	Yes

	Car 7
7.1	Phone works but no voice chip. Operator could not tell location.
	Car 8
8.1	Original capacity tag in the car by Otis says 3,500 lbs. Car top and newer COP say 3,000 lbs capacity. Remove original Otis sign.
8.2	Light dirt in the pit.

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