Buildings and Grounds Building (009)

1304 "O" Street, Sacramento, CA 95814

Facility Condition Assessment

June 2015

Prepared for the State of California Department of General Services

TABLE OF CONTENTS

EXECUTIVE SUMMARY **2**
BACKGROUND 2
OBJECTIVE 2
SCOPE OF ASSESSMENT 3
SURVEY FINDINGS 3
INTRODUCTION **6**
BUILDING BACKGROUND 6
BUILDING DESCRIPTION 6
FACILITY CONDITION ASSESSMENT 7
SCOPE OF ASSESSMENT 10
PRIORITY RANKING 10
CURRENT REPLACEMENT VALUE 15
FACILITY CONDITION INDEX 15
APPENDICES **18**
APPENDIX A: ACCESSIBILITY ISSUES 18
APPENDIX B: GENERAL ASSESSMENT INFORMATION 20
APPENDIX C: CERTIFICATION 48
APPENDIX D: PHOTOS 50
APPENDIX E: TERMINOLOGY AND ABBREVIATIONS 62
APPENDIX F: BUILDING FACT SHEET 68
APPENDIX G: COST TABLES 70
APPENDIX H: SUPPORTING DOCUMENTATION 72
APPENDIX I: PRE-SURVEY QUESTIONNAIRE 82
APPENDIX J: ELEVATOR REPORT 86

THIS PAGE INTENTIONALLY BLANK

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 Buildings and Grounds Headquarters (009).

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 Buildings and Grounds Headquarters (009) 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 Buildings and Grounds Headquarters (009) on February 6, 2015. 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	$18,142,109
Immediate Repair Costs (12 months)	$433,649
1-5 Year Capital Needs	$1,424,375
6-10 Year Capital Needs	$1,254,133
Total 10-Year Capital Reserve Needs	$3,112,156

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

Current Year FCI

$$\text{Current FCI} = \frac{\$433{,}649}{\$18{,}142{,}109}$$

Ten-Year FCI

$$\text{Ten-Year FCI} = \frac{\$3{,}112{,}156}{\$18{,}142{,}109}$$

Current Year FCI	Ten-Year FCI
2.39 %= *Good Condition*	**17.15 %= *Poor Condition***

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

- Built-up roofing replacement, including new flashings, is recommended.
- The existing condenser piping does not have isolation valves on the discharge side of the pumps. Isolation valves and new pumps should be installed.
- Conversion of lavatory and toilet flush valves to automatic valves is recommended to conserve water.

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

THIS PAGE INTENTIONALLY BLANK

INTRODUCTION

BUILDING BACKGROUND

The Building and Grounds Headquarters (009), formerly known as the Office of Buildings and Grounds, was designed by Niiya, Calpo, Hom and Dong Architects of Sacramento. Construction was completed in 1993. The building headquarters DGS's Building and Property Management Branch and is located at 1304 "O" Street, Sacramento. The building's Spanish Revival style was designed to be architecturally similar to the neighboring historic Westminster Presbyterian Church. The project was developed via a Joint Powers Authority agreement with Capitol Area Development Authority (CADA) on state-owned property and the building was known as the CADA Building.

The building has been continuously occupied by the Department of General Services and the Department of Transportation. The three-story building comprises a concrete and steel structural frame with stucco perimeter walls. Due to its classic styling, neighborhood scale, and the entry mural of the American River by international artist Jian Wang, Senator Ralph Dills pronounced it the most beautiful state building in downtown Sacramento. The gross area of the building is 48,473 SF with a net usable area of 40,439 SF. The ratio of net usable to gross building area is 83.4 percent. The occupancy capacity is 139. The building has 13 on-site parking spaces.

BUILDING DESCRIPTION

The building foundation is steel reinforced concrete slab-on-grade. The building structural system is conventional wood-framed structure on concrete. The roof structure is flat with a built-up membrane. The mansard roof is finished with clay tiles.

The exterior walls are finished with stucco.

The building interior has painted drywall walls, the floor finishes consist of ceramic tiles, commercial carpet tiles, and vinyl composition tiles. The interior ceiling is finished with acoustic ceiling tiles.

The facility is served by two hydraulic passenger elevators.

Domestic hot water is provided to the restrooms and break room areas by a commercial electric water heater located in the first floor electrical room.

Heating and cooling are provided by a boiler, a package unit, heat pumps, and a cooling tower.

Life safety systems include fire sprinklers, hydrants, smoke detectors, alarms, extinguishers and dry standpipes.

The building covers nearly the entire site and the only landscaping is perimeter planters. Landscaped areas are irrigated by an in-ground overhead spray sprinkler system.

The parking areas are paved with concrete. Four of the parking stalls are located in an open lot. Nine of the parking stalls are located under the cantilevered second story.

The sidewalks throughout the property are constructed of cast-in-place concrete.

Project Statistics

Item	Description
Project Name	Buildings and Grounds Headquarters
Building ID	009
Property Type	Administration
Year Built	1993
Number of Stories	3
Occupied	Yes
Land Area (acres)	0.59
Gross Square Feet (GSF)	48,473

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 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.

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

SCOPE OF ASSESSMENT

The evaluation team conducted a walk-through survey of Buildings and Grounds Headquarters (009) on February 6, 2015. 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.

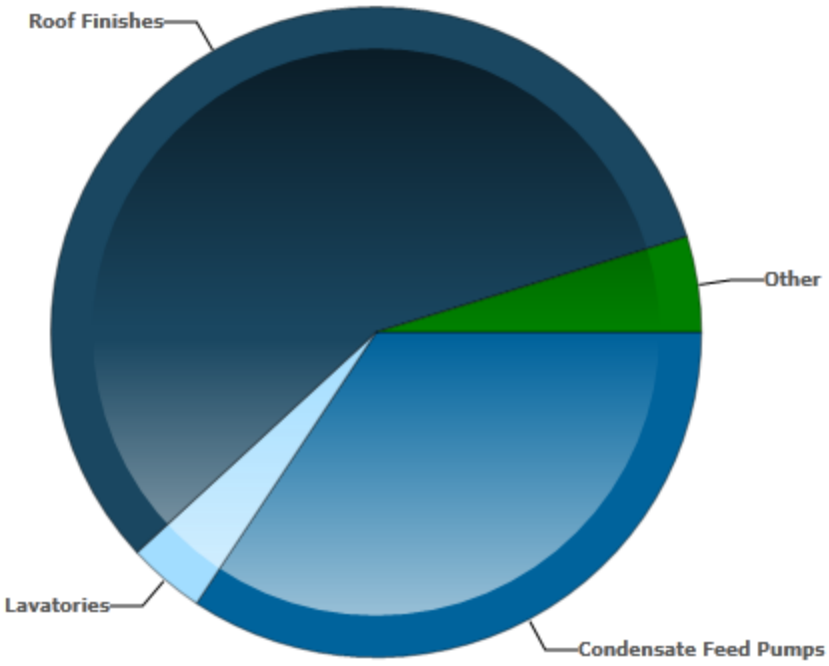
PRIORITY RATIO

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.

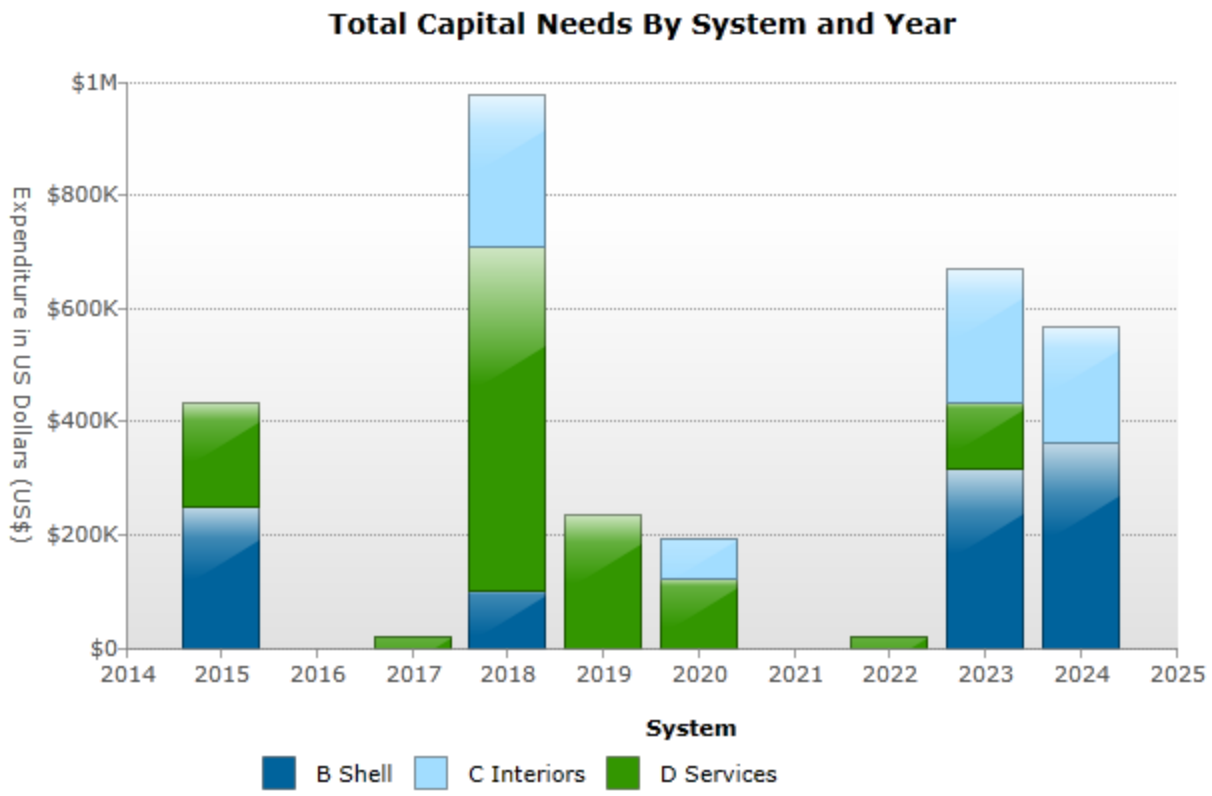
The physical condition of building systems and related components are typically defined as being in one of four conditions: Good, Fair, Poor, or Very Poor, or a combination thereof. For the purposes of this report, the following definitions are used:

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
B3011	Roof Finishes	$247,575
D1011	Passenger Elevators	$600
D2011	Water Closets	$11,736
D2013	Lavatories	$16,678
D3022	Condensate Feed Pumps	$148,800
D5092	Emergency Light & Power Systems	$8,260
	Total	**$433,649**



	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	$247,575	$0	$186,074	$0	$0	$0	**$433,649**
2017	$0	$0	$0	$20,237	$0	$0	$0	**$20,237**
2018	$0	$98,988	$267,791	$608,745	$0	$0	$0	**$975,523**
2019	$0	$0	$0	$236,000	$0	$0	$0	**$236,000**
2020	$0	$0	$72,459	$120,156	$0	$0	$0	**$192,615**
2022	$0	$0	$0	$20,060	$0	$0	$0	**$20,060**
2023	$0	$315,765	$236,583	$116,092	$0	$0	$0	**$668,439**
2024	$0	$363,771	$201,862	$0	$0	$0	$0	**$565,633**
Total	**$0**	**$1,026,098**	**$778,695**	**$1,307,363**	**$0**	**$0**	**$0**	**$3,112,156**

CURRENT REPLACEMENT VALUE

The Current Replacement Value has been determined as $18,142,109 for the Buildings and Grounds Headquarters Building (009). 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
48,473 GSF	$374	$18,142,109

FACILITY CONDITION INDEX

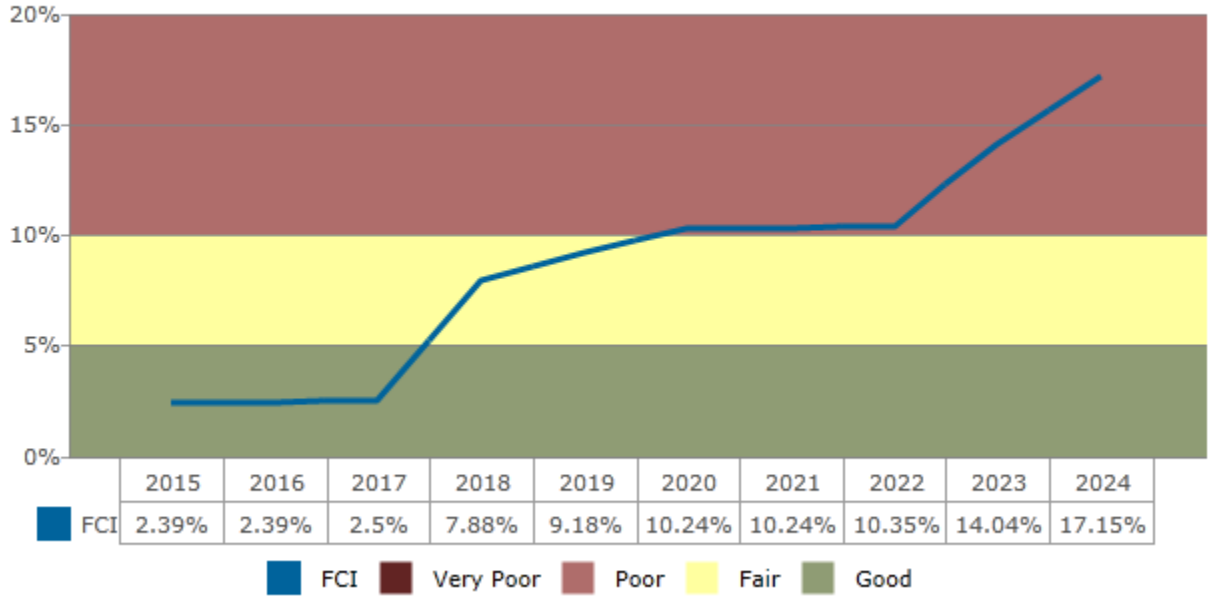
The FCI[1] is an indication of a building's current and future overall condition. According to industry standards an FCI ratio of 65 percent, or the "rule of two-thirds," is the threshold for identifying potential candidates for replacement or divestment.[2] Once the FCI ratio reaches 65 percent, or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

Cumulative Effects of FCI over the Study Period



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
FCI	2.39%	2.39%	2.5%	7.88%	9.18%	10.24%	10.24%	10.35%	14.04%	17.15%

THIS PAGE INTENTIONALLY BLANK

APPENDICES

APPENDIX A: ACCESSIBILITY ISSUES

THIS PAGE INTENTIONALLY BLANK

APPENDIX B: GENERAL ASSESSMENT INFORMATION

A Substructure Systems

A10 FOUNDATIONS

Item	Description
A1011 Wall Foundations	A1011 Wall Foundations
Condition	Fair - Good
Qty / UOM	350 / LF
RUL (years)	28
Location	Below grade

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
A1032 Structural Slab on Grade	A1032 Reinforced Concrete Slab on Grade
Condition	Good
Qty / UOM	2680 / SY
RUL (years)	18
Location	On grade

OBSERVATIONS/COMMENTS:

The floors appear to be level, with no cracking. No further action is recommended.

B Shell Systems

B10 SUPERSTRUCTURE

Item	Description
B1012 Upper Floors Construction	B1012 , 3/4" Plywood with 2" X 10" Joists
Condition	Good
Qty / UOM	31753 / SF
RUL (years)	28
Location	Second and third floors

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B1021 Flat Roof Construction	B1021 Wood Joists Supporting Exterior Grade Plywood
Condition	Fair - Good
Qty / UOM	16253 / SF
RUL (years)	30
Location	Roof

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B1033 Wood Frame Structure	B1033 Wood Frame
Condition	Good
Qty / UOM	34435 / SF
RUL (years)	30
Location	Exterior walls

OBSERVATIONS/COMMENTS:

The walls appear to be plumb and structurally sound. No further action is recommended.

B20 EXTERIOR ENCLOSURE

Item	Description
B2011 Exterior Wall Construction	B2011 Stucco and Lath
Condition	Fair
Qty / UOM	17562 / SF
RUL (years)	8
Location	Exterior walls

OBSERVATIONS/COMMENTS:

The exterior finish is cracking, and has damage at some of the corners. It also appears to have faded. Based on the esimated RUL, patching, painting and some stucco removal and replacement is recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2011	B2011 Patch and paint building exterior	17,562.0 - SF	2.6	IN - Appearance	Priority 3	2018	45,134
B2011	Replace B2011 Stucco and Lath	17,562.0 - SF	18.0	IN - Beyond Rated Life	Priority 4	2023	315,765

Item	Description
B2021 Windows	B2021 4' X 4' Aluminum Window Fixed
Condition	Fair
Qty / UOM	100 / EA
RUL (years)	9
Location	Second and third floors

OBSERVATIONS/COMMENTS:

The maintenance staff reported that there are no leaking windows. Based on RUL, window replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2021	Replace B2021 4' X 4' Aluminum Window Fixed	100.0 - EA	2304.5	IN - Beyond Rated Life	Priority 4	2024	230,447

Item	Description
B2023 Storefronts	B2023 Storefronts
Condition	Fair
Qty / UOM	1600 / SF
RUL (years)	9
Location	Exterior walls

OBSERVATIONS/COMMENTS:

According to the maintenance staff, there are no leaking windows. Based on RUL, replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2023	Replace B2023 Storefronts	1,600.0 - SF	83.3	IN - Beyond Rated Life	Priority 4	2024	133,325

Item	Description
B2031 Glazed Doors & Entrances	B2031 3'-0" X 7'-0" Steel, w/ Wire Glass, Ptd. Door
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	23
Location	Rear & side exits

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B2034 Overhead Doors	B2034 Steel coiling overhead door
Condition	Fair
Qty / UOM	3 / EA
RUL (years)	3
Location	Rear of building

OBSERVATIONS/COMMENTS:

Based on the remaining useful life (RUL), replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2034	Replace B2034 Steel coiling overhead door	3.0 - EA	16635.8	IN - Beyond Rated Life	Priority 2	2018	49,908

Item	Description
B2039 Other Doors & Entrances	B2039 Double Door, Automatic Aluminum Accessible w/ sidelights 3'-0" X 7'-0"
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	18
Location	Front entry

OBSERVATIONS/COMMENTS:

No further action is recommended.

COST SUMMARY:

Type	Year	Total Expenditures
B20 Exterior Enclosure	2018	$95,042
B20 Exterior Enclosure	2023	$315,765
B20 Exterior Enclosure	2024	$363,771

B30 ROOFING

Item	Description
B3011 Roof Finishes	B3011 Clay (Ceramic) roof tiles
Condition	Good
Qty / UOM	30 / SQ
RUL (years)	28
Location	Mansard & Clock tower roofs

OBSERVATIONS/COMMENTS:

There are clay roof tiles on the mansard and clock tower. No further action is recommended.

Item	Description
B3011 Roof Finishes	B3011 Built-Up Roofing, Total Roof
Condition	Poor
Qty / UOM	133 / SQ
RUL (years)	0
Location	Flat roof

OBSERVATIONS/COMMENTS:

According to the Pre-survey Questionnaire, the built-up roof is original, and beginning to leak. Replacement is recommended in the near term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B3011	Replace B3011 Built-Up Roofing, Total Roof	133.0 - SQ	1861.5	IN - Beyond Rated Life	Priority 1	2015	247,575

Item	Description
B3022 Roof Hatches	B3022 Galvanized Steel Hatch
Condition	Fair
Qty / UOM	1 / EACH
RUL (years)	3
Location	Roof

OBSERVATIONS/COMMENTS:

Based on RUL, replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B3022	Replace B3022 Galvanized Steel Hatch	1.0 - EACH	3945.7	IN - Beyond Rated Life	Priority 2	2018	3,946

COST SUMMARY:

Type	Year	Total Expenditures
B30 Roofing	2015	$247,575
B30 Roofing	2018	$3,946

C Interiors Systems

C10 Interior Construction

Item	Description
C1011 Fixed Partitions	C1011 Toilet Room Partitions
Condition	Fair - Good
Qty / UOM	15 / EA
RUL (years)	5
Location	Restrooms

OBSERVATIONS/COMMENTS:

Based on RUL, replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C1011	C1011 Replace toilet partitions	15.0 - EA	2555.6	IN - Beyond Rated Life	Priority 4	2020	38,335

Item	Description
C1021 Interior Doors	C1021 Interior Doors
Condition	Fair - Good
Qty / UOM	84 / EA
RUL (years)	9
Location	Interiors

OBSERVATIONS/COMMENTS:

Based on RUL, replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C1021	Replace C1021 Interior Doors	84.0 - EA	2403.1	IN - Beyond Rated Life	Priority 4	2024	201,862

COST SUMMARY:

Type	Year	Total Expenditures
C10 Interior Construction	2020	$38,335
C10 Interior Construction	2024	$201,862

C30 INTERIOR FINISHES

Item	Description
C3012 Wall Finishes to Interior Walls	C3012 Paint Interior Walls, Drywall
Condition	Fair
Qty / UOM	16000 / SF
RUL (years)	5
Location	Interiors

OBSERVATIONS/COMMENTS:

Based on RUL, the interior walls will require repainting during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3012	C3012 Paint interior walls	16,000.0 - SF	2.1	IN - Appearance	Priority 4	2020	34,125

Item	Description
C3024 Flooring	C3204 2X2 Ceramic Tile
Condition	Good
Qty / UOM	30 / SF
RUL (years)	20
Location	Restrooms

OBSERVATIONS/COMMENTS:

Periodic replacement will be required.

Item	Description
C3024 Flooring	C3024 Vinyl Tile
Condition	Fair
Qty / UOM	778 / SY
RUL (years)	8
Location	Break rooms and first floor

OBSERVATIONS/COMMENTS:

Based on RUL, vinyl tile replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3024	C3024 Replace vinyl tile	778.0 - SY	125.8	IN - Appearance	Priority 4	2023	97,857

Item	Description
C3024 Flooring	C3024 6 x 6 Ceramic Tile
Condition	Good
Qty / UOM	100 / SF
RUL (years)	12
Location	Entrance lobby and stairway

OBSERVATIONS/COMMENTS:

Periodic replacement will be required.

Item	Description
C3025 Carpeting	C3025 Carpet Tiles - Standard
Condition	Fair
Qty / UOM	2772 / SY
RUL (years)	3
Location	First and third floors

OBSERVATIONS/COMMENTS:

Based on RUL and condition, carpet tile replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3025	C3025 Replace carpet tile	2,772.0 - SY	96.6	IN - Appearance	Priority 3	2018	267,791

Item	Description
C3025 Carpeting	C3025 Carpet Tiles - Standard
Condition	Fair - Good
Qty / UOM	1436 / SY
RUL (years)	8
Location	Second floor

OBSERVATIONS/COMMENTS:

Based on RUL, carpet tile replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3025	C3025 Replace carpet tile	1,436.0 - SY	96.6	IN - Appearance	Priority 4	2023	138,726

Item	Description
C3032 Suspended Ceilings	C3032 Acoustical Ceiling Tile
Condition	Fair
Qty / UOM	320 / CSF
RUL (years)	10
Location	Throughout Building

OBSERVATIONS/COMMENTS:

Replace damaged tiles in the regular course of maintenance.

COST SUMMARY:

Type	Year	Total Expenditures
C30 Interior Finishes	2018	$267,791
C30 Interior Finishes	2020	$34,125
C30 Interior Finishes	2023	$236,583

D Services Systems

D10 Conveying Systems

Item	Description
D1011 Passenger Elevators	D1011 Hydraulic Elevators, 3500 LB
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	15
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The facility is served by two hydraulic elevators. The machinery and controls are the originally installed systems, and the equipment appears to be well maintained and functioning properly. Reference the elevator report in the appendices for recommendations.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D1011	D1011 Replace in-car stop switches with keyed switches	2.0 - EA	300.0	IN - Reliability	Priority 1	2015	600
D1011	D1011 Modernize with new car controllers, signal fixtures, door operators and seismic rupture valve	2.0 - EA	95000.0	IN - Reliability	Priority 3	2019	190,000
D1011	D1011 New Cab interiors during modernization	2.0 - EA	23000.0	IN - Reliability	Priority 3	2019	46,000

COST SUMMARY:

Type	Year	Total Expenditures
D10 Conveying Systems	2015	$600
D10 Conveying Systems	2019	$236,000

D20 PLUMBING

Item	Description
D2011 Water Closets	D2011 Water Closet, 1.6 GPF Unit - Auto
Condition	Fair - Good
Qty / UOM	18 / EA
RUL (years)	15
Location	Throughout Facility
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

The water closets are functional, and have been fitted with automatic flush valves. Install valves where they are required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2011	D2011 Install automatic flush valves on toilets	9.0 - EA	1304.0	OP - Energy	Priority 2	2015	11,736

Item	Description
D2012 Urinals	D2012 Urinal - Auto
Condition	Fair - Good
Qty / UOM	3 / EA
RUL (years)	15
Location	Throughout Facility
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

The urinals are functional, and have been fitted with automatic flush valves.

Item	Description
D2013 Lavatories	D2013 Counter Top Sink and Faucet - Auto
Condition	Fair - Good
Qty / UOM	20 / EA
RUL (years)	15
Location	Restrooms

OBSERVATIONS/COMMENTS:

The sink faucets have been fitted with automatic sensors to conserve water. Additional sensors are recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2013	D2013 Install automatic faucets with motion sensors	10.0 - EA	1667.8	OP - Energy	Priority 2	2015	16,678

Item	Description
D2022 Hot Water Service	D2020 Domestic Gas Hot Water Heater
Condition	Good
Qty / UOM	1 / EA
RUL (years)	7
Location	Boiler Room

OBSERVATIONS/COMMENTS:

There is a 75-gallon gas-fired water heater in the boiler room. The water heater appears to be in good condition, and reportedly operating properly. Based on RUL, replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2022	Replace D2020 Domestic Gas Hot Water Heater	1.0 - EA	20060.0	IN - Beyond Rated Life	Priority 4	2022	20,060

COST SUMMARY:

Type	Year	Total Expenditures
D20 Plumbing	2015	$28,414
D20 Plumbing	2022	$20,060

D30 HVAC

Energy Supply	
Item	**Description**
Fuel Oil Type	N/A
Fuel Gas Type	N/A
Solid Fuel Type	N/A
District Heat Type	N/A
District Cooling Type	N/A
Solar Thermal	N/A
Fuel Tank Type	N/A
Fuel Tank Size (gallons)	N/A
Fuel Tank Location	N/A
Gas Meter Location	N/A
Electrical Meter Location	Main Electrical Room - 1st Floor
Water Meter Location	Outside of building on S.E. corner - Domestic water is above ground and irrigation water is located in an underground vault; both in a fenced in area.

Item	Description
D3021 Boilers	D3020 Water Boiler, Gas 1,4 m MBH
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	13
Location	Rooftop

OBSERVATIONS/COMMENTS:

The main HVAC heating boiler is mounted on the roof, and is original to the 1993 construction. It is reportedly functioning properly.

Item	Description
D3022.1 Circulating Pumps	D3022 HVAC Heating Water Circulation Pumps 20 HP
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	20
Location	Boiler Room

OBSERVATIONS/COMMENTS:

The Building and Grounds Building has two new non-VFD motors and pumps in the warehouse. Installation of VFDs is expected to take place in 2015, according to the maintenance staff.

Item	Description
D3022.2 Condensate Feed Pumps	D3022.2 Condensate Feed Pumps
Condition	Poor
Qty / UOM	1 / LS
RUL (years)	0
Location	Roof

OBSERVATIONS/COMMENTS:

The existing condenser piping does not have isolation valves on the discharge side of the pumps. Installation of a new pump is recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3022	Replace D3022.2 Condensate Feed Pumps	1.0 - LS	148800.0	IN - Reliability	Priority 1	2015	148,800

Item	Description
D3031.2 Cooling Towers	D3031 Cooling Tower, Galvanized Steel
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	5
Location	

OBSERVATIONS/COMMENTS:

The cooling towers are performing properly and appear to be well-maintained. Based on their age and continual use, replacement of the cooling towers is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3031	Replace D3031 Cooling Tower, Galvanized Steel	1.0 - EA	103561.5	IN - Beyond Rated Life	Priority 3	2020	103,561

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan 13,000 CFM
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	5
Location	Rooftop

OBSERVATIONS/COMMENTS:

The 13,000 CFM fan was installed to service the paint booth. It appears to be original to the 1993 construction, and is in working condition. Based on RUL, replacements are anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3042	Replace D3042 Exhaust Fan 13,000 CFM	1.0 - EA	16594.2	IN - Beyond Rated Life	Priority 3	2020	16,594

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan 2000 CFM
Condition	Fair - Good
Qty / UOM	3 / EA
RUL (years)	2
Location	Rooftop

OBSERVATIONS/COMMENTS:

Most of the rooftop exhaust fans are original to the 1993 construction, and appear to be in working condition. The fans are constant run fans, and operate all the time. Replacements are anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3042	Replace D3042 Exhaust Fan 2000 CFM	3.0 - EA	6745.6	IN - Beyond Rated Life	Priority 2	2017	20,237

Item	Description
D3051.1 Terminal Heat Pumps	D3051 Ceiling Mounted Heat Pumps
Condition	Fair
Qty / UOM	35 / EA
RUL (years)	3
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by variable chilled water heat pumps, and hot water is supplied by a rooftop boiler. Based on the age of the units, replacements are recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3051	Replace D3051 Ceiling Mounted Heat Pumps	35.0 - EA	11502.1	IN - Beyond Rated Life	Priority 2	2018	402,573

Item	Description
D3067 Energy Monitoring & Control	D3068 Thermostat Controls
Condition	Fair
Qty / UOM	12 / SF
RUL (years)	3
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The building is controlled by zonal thermostats that correspond to a specific zoned heat pump. A central DDC system is recommended for efficiency and control. Installation costs for DDC system are included during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3067	Replace D3068 Thermostat Controls	12.0 - SF	2529.6	IN - Beyond Rated Life	Priority 2	2018	30,355

COST SUMMARY:

Type	Year	Total Expenditures
D30 HVAC	2015	$148,800
D30 HVAC	2017	$20,237
D30 HVAC	2018	$432,928
D30 HVAC	2020	$120,156

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	N/A
Smoke Detectors Power Supply	Hardwired Electric with Battery Backup
Carbon Monoxide Detectors	Yes
Heat Detector	N/A
Central Fire Alarm Panel Location	Electrical Room
Annunciator Panel Location	N/A
Fire Extinguishers	N/A
Fire Extinguisher Inspection Date	October 1, 2014
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	Masonry
Stairwell Discharge	N/A
Stairwell Pressurized	N/A
Fire-Rated Doors Observed	N/A
Location of Fire-Rated Doors	Office entrances
Fire Alarm Service Company	N/A
Date of Last Fire Alarm Service	N/A
Are the individual office unit fire alarm systems monitored?	Yes
Are the common area fire alarm systems monitored?	Yes
Types of Common Areas Monitored	N/A
Fire Alarm Monitoring Company	N/A

Item	Description
D4011 Sprinkler Water Supply	D4011 Sprinkler System
Condition	Fair
Qty / UOM	48227 / SF
RUL (years)	8
Location	Throughout Facility
Date of Last Sprinkler Inspection	Month dd, 2013

OBSERVATIONS/COMMENTS:

The fire sprinkler system was installed in 1993. Based on the age, it is recommended that the sprinkler heads and any worn components are replaced during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D4011	Replace D4011 Sprinkler System	48,227.0 - SF	2.4	CC - Life Safety	Priority 3	2023	116,092

COST SUMMARY:

Type	Year	Total Expenditures
D40 Fire Protection Systems	2023	$116,092

D50 ELECTRICAL SYSTEMS

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

OBSERVATIONS/COMMENTS:

The majority of the electrical panels in the building are Square D brand, and are original to the building. No further action is required at this time.

Item	Description
D5012 Low Tension Service & Dist.	D5010 Switchgear, Mainframe, 1600 Amps
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	15
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The main switchgear is original 1993 Square D equipment. No further action is required at this time.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Secondary Dry Transformer 45 kVA
Condition	Fair
Qty / UOM	4 / EA
RUL (years)	15
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

The majority of the step-down transformers are original. No further action is required at this time.

Item	Description
D5037 Fire Alarm Systems	D5037 Fire Alarm Panel
Condition	Fair
Qty / UOM	48227 / SF
RUL (years)	3
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The fire alarm panel and system is original to the 1993 construction. It does not have the functions found in modern fire alarm systems, such as identifying and addressing individual pull stations, alarms, strobes, and audible alarms. A complete upgrade and modernization of the fire alarm system is recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D5037	Replace D5037 Fire Alarm Panel	48,227.0 - SF	3.6	CC - Life Safety	Priority 1	2018	175,816

Item	Description
D5092 Emergency Light & Power Systems	D5092 Emergency Generator 100 kW
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	15
Location	Pad-Mounted on the exterior

OBSERVATIONS/COMMENTS:

The emergency diesel generator is located on a pad on the exterior of the building, and is original to the building. It appears to be in working condition, with relatively limited use over the years. Improvements to secondary containment for the day tank are recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D5092	D5092 Add/improve secondary containment for day tank	1.0 - EA	8260.0	EN - Air/ Water Quality	Priority 1	2015	8,260

Item	Description
D5092 Emergency Light & Power Systems	D5092 Emergency Transfer Switch
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	15
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

The transfer switch associated with the emergency generator is reported to be functioning properly. The transfer switch is original equipment, and replacement is recommended in conjunction with the generator replacement.

COST SUMMARY:

Type	Year	Total Expenditures
D50 Electrical Systems	2015	$8,260
D50 Electrical Systems	2018	$175,816

G Building Sitework Systems

G20 Site Improvements

Site Information	
Item	**Description**
Main Ingress and Egress	The main entrance is at the corner of O Street and 13 th Street
Access from	NW
Additional Entrances	Opera Alley
Access from	S
Parking Count: Open lot	3
Parking Count: Sheltered by carports	9
Parking Count: Private garages	N/A
Parking Count: Subterranean garage	N/A
Parking Count: Freestanding parking structure	N/A
Number of ADA Compliant Spaces	1
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	Yes
Building Identification Sign	N/A
Illuminated Sign	N/A
Location of Property ID Sign	Front elevation of building
Trees Present	Yes
Shrubs Present	Yes
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
G2022 Paving & Surfacing	G2020 Concrete Parking Lot
Condition	Good
Qty / UOM	4510 / SF
RUL (years)	12
Location	Courtyard

OBSERVATIONS/COMMENTS:

Pavement striping can be completed as part of routine maintenance at the parking area.

Item	Description
G2055 Planting	G2050 Landscaping
Condition	Good
Qty / UOM	480 / SF
RUL (years)	12
Location	Southeeast corner of property

OBSERVATIONS/COMMENTS:

There is a small amount of planting including ground cover and shrubs facing Opera Alley.

The weather at the time of the assessment was:

Item	Description
Approximate Outdoor Temperature (degrees F)	60
Weather Conditions	Clear
Snow Covering Ground	No
Wind Conditions	Little to no wind

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

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

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: Kay van der Have, Field Observer

Reviewed By:

Matt Anderson, Program Manager

APPENDIX D: PHOTOS

:- O Street and front entry elevation

:- 13 th Street Elevation

:- Opera Alley elevation

:- Side and partial O Street elevation

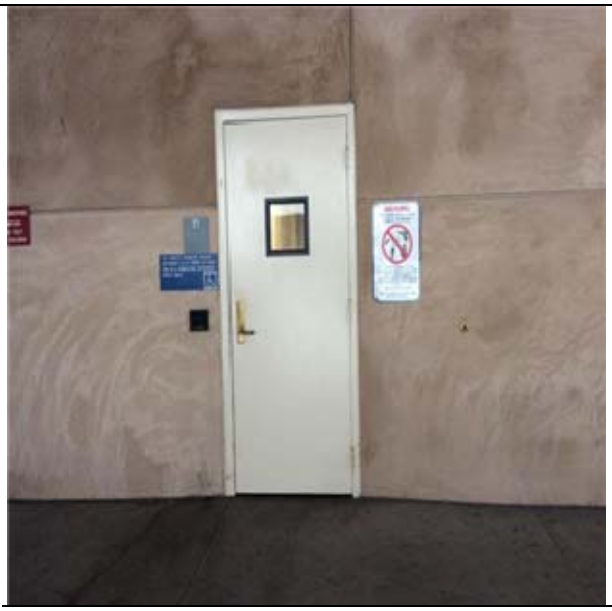
B1021 Wood Joists Supporting Exterior Grade Plywood

B2011 Stucco and Lath

B2011 Stucco and Lath

B2021 4' X 4' Aluminum Window Fixed

B2023 Storefronts



B2031 3'-0" X 7'-0" Steel, w/ Wire Glass, Ptd. Door

B2034 Steel coiling overhead door

B2039 Double Door, Automatic Aluminum Accessible w/ sidelights 3'-0" X 7'-0"

B3011 Clay (Ceramic) roof tiles

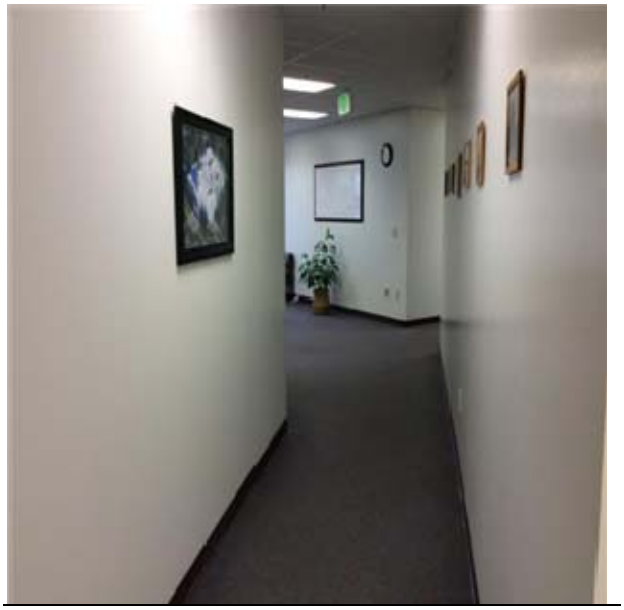
B3011 Built-Up Roofing, Total Roof

B3011 Built-Up Roofing, Total Roof

B3011 Built-Up Roofing, Total Roof

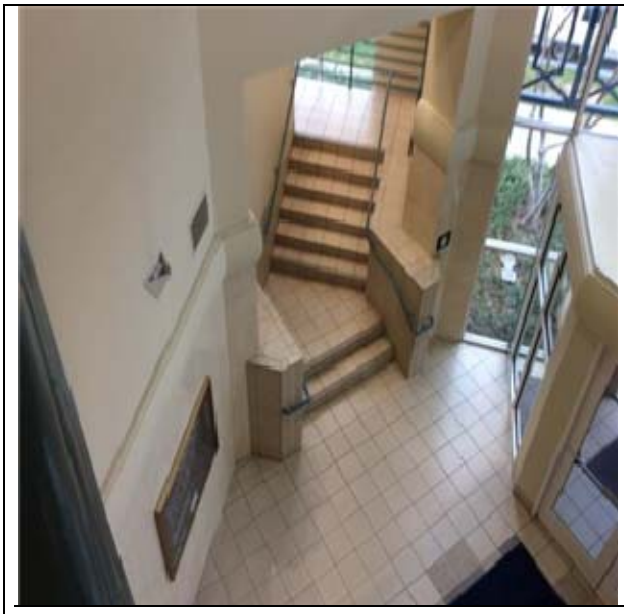
C1011 Toilet Room Partitions

C1021 Interior Doors



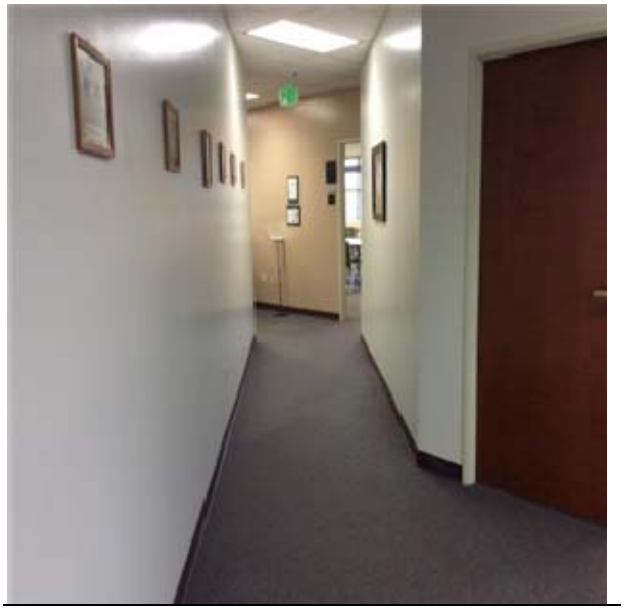
C3012 Paint Interior Walls, Drywall

C3204 2X2 Ceramic Tile



C3024 6 x 6 Ceramic Tile

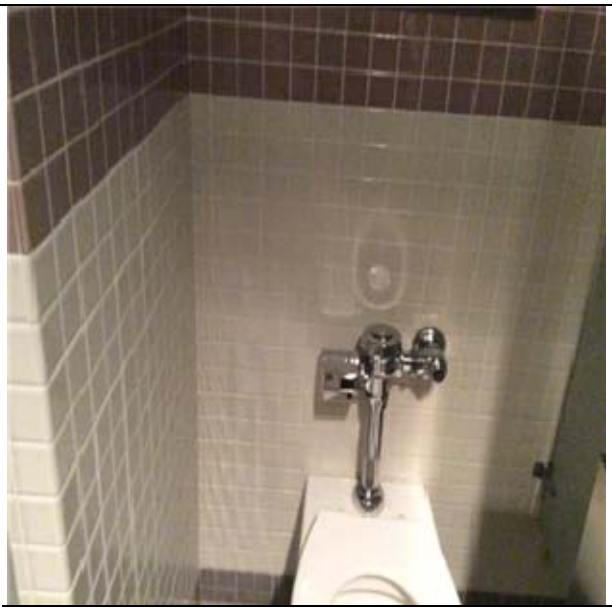
C3024 Vinyl Tile



C3025 Carpet Tiles - Standard

C3025 Carpet Tiles - Standard

C3032 Acoustical Ceiling Tile



D2011 Water Closet, 1.6 GPF Unit - Auto

D2012 Urinal - Auto

D2013 Counter Top Sink and Faucet - Auto

D2020 Domestic Gas Hot Water Heater

D3020 Water Boiler, Gas 1,4 m MBH

D3022 HVAC Heating Water Circulation Pumps 20 HP

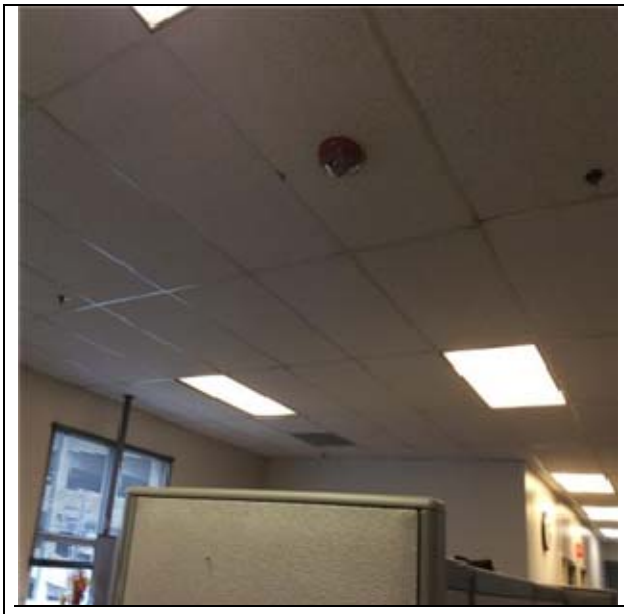
D3031 Cooling Tower, Galvanized Steel

D3042 Exhaust Fan 13,000 CFM

D3042 Exhaust Fan 2000 CFM

D3051 Ceiling Mounted Heat Pumps

D3068 Thermostat Controls



D4011 Sprinkler System

D5012 Secondary Dry Transformer 45 kVA

D5010 Switchgear, Mainframe, 1600 Amps

D5012 Breaker Panel 225 Amps, 30 Circuits

D5037 Fire Alarm Panel

D5092 Emergency Transfer Switch

D5092 Emergency Transfer Switch

D5092 Emergency Generator 100 kW

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

BUILDINGS AND GROUNDS BUILDING FACT SHEET

1304 O Street
Sacramento
Sacramento County
Category 4 - Low Priority - Special Repairs and Maintenance

BUILDING INFORMATION

- Age: 21 years (completed in 1993)
- Size:* 3-story
  48,473 GSF 40,439 NUSF 40,439 Assigned SF
  0.59 Acre Parcel
  9 covered parking spaces.
  Capacity - 139 occupants
- Financial: No Encumbrances
  BRA Rate - $1.64/month per SF, FY 2013-14 (DGS Price Book)
  $1.69/month per SF, FY 2014-15(DGS Price Book)
  Original bond amount $7,245,000. Matured and paid in full 4/1/12.
  Bond was paid directly by CADA.

SPI Structure #:	4299
Real Property #:	9883
BPM #:	009

- LEED Status: Not pursued
- Tenants: 2 Agencies: Department of Transportation (18,695 SF) and the Department of General Services (21,744 SF)

COMPLETED STUDIES AND SIGNIFICANT FINDINGS

A. 2010 American Disability Act Accessibility Compliance Survey

This building was built in 1993 using adopted standards for that time; however, access barriers still remain. As a result, this building has accessibility deficiencies.

B. 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

No known building issues.

CURRENT UTILIZATION PROJECTS

None

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 is required for this building at this time.

* Source: Statewide Property Inventory

APPENDIX G: COST TABLES

10 YEAR EXPENDITURE FORECAST

Buildings and Grounds Headquarters
1304 O 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 Stucco and Lath	Exterior walls	B2011 Patch and paint building exterior	10	3	17,562.00	SF	$2.57	IN - Appearance	Priority 3	$0	$0	$0	$45,134	$0	$0	$0	$0	$0	$0	$0	$45,134
	Stucco and Lath	B2011 Stucco and Lath	Exterior walls	Replace B2011 Stucco and Lath	30	8	17,562.00	SF	$17.98	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$315,765	$0	$0	$315,765
B2021	B2021 Windows	B2021 4' X 4' Aluminum Window Fixed	Second and third floors	Replace B2021 4' X 4' Aluminum Window Fixed	25	9	100.00	EA	$2,304.47	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$230,447	$0	$230,447
B2023	B2023 Storefronts	B2023 Storefronts	Exterior walls	Replace B2023 Storefronts	25	9	1,600.00	SF	$83.33	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$133,325	$0	$133,325
B2034	B2034 Overhead Doors	B2034 Steel coiling overhead door	Rear of building	Replace B2034 Steel coiling overhead door	25	3	3.00	EA	$16,635.84	IN - Beyond Rated Life	Priority 2	$0	$0	$0	$49,908	$0	$0	$0	$0	$0	$0	$0	$49,908
B30	**ROOFING**																						
B3011	Built-Up Roofing, Total Roof	B3011 Built-Up Roofing, Total Roof	Flat roof	Replace B3011 Built-Up Roofing, Total Roof	20	0	133.00	SQ	$1,861.46	IN - Beyond Rated Life	Priority 1	$247,575	$0	$0	$0	$0	$0	$0	$0	$0	$0	$247,575	$0
B3022	Galvanized Steel Hatch	B3022 Galvanized Steel Hatch	Roof	Replace B3022 Galvanized Steel Hatch	25	3	1.00	EACH	$3,945.68	IN - Beyond Rated Life	Priority 2	$0	$0	$0	$3,946	$0	$0	$0	$0	$0	$0	$0	$3,946
Shell Subtotal												**$247,575**	**$0**	**$0**	**$98,988**	**$0**	**$0**	**$0**	**$0**	**$315,765**	**$363,771**	**$247,575**	**$778,524**
C. INTERIORS																							
C10	**INTERIOR CONSTRUCTION**																						
C1011	Toilet Room Partitions Overhead Braced	C1011 Toilet Room Partitions	Restrooms	C1011 Replace toilet partitions	10	5	15.00	EA	$2,555.64	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$38,335	$0	$0	$0	$0	$0	$38,335
C1021	Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware	C1021 Interior Doors	Interiors	Replace C1021 Interior Doors	25	9	84.00	EA	$2,403.12	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$201,862	$0	$201,862
C30	**INTERIOR FINISHES**																						
C3012	Paint Interior Walls, Drywall	C3012 Paint Interior Walls, Drywall	Interiors	C3012 Paint interior walls	10	5	16,000.00	SF	$2.13	IN - Appearance	Priority 4	$0	$0	$0	$0	$0	$34,125	$0	$0	$0	$0	$0	$34,125
C3024	Vinyl Tile	C3024 Vinyl Tile	Break rooms and first floor	C3024 Replace vinyl tile	18	8	778.00	SY	$125.78	IN - Appearance	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$97,857	$0	$0	$97,857
C3025	Carpet Tiles - Standard	C3025 Carpet Tiles - Standard	First and third floors	C3025 Replace carpet tile	10	3	2,772.00	SY	$96.61	IN - Appearance	Priority 3	$0	$0	$0	$267,791	$0	$0	$0	$0	$0	$0	$0	$267,791
C3025	Carpet Tiles - Standard	C3025 Carpet Tiles - Standard	Second floor	C3025 Replace carpet tile	10	8	1,436.00	SY	$96.61	IN - Appearance	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$138,726	$0	$0	$138,726
Interiors Subtotal												**$0**	**$0**	**$0**	**$267,791**	**$0**	**$72,459**	**$0**	**$0**	**$236,583**	**$201,862**	**$0**	**$778,695**
D. SERVICES																							
D10	**CONVEYING SYSTEMS**																						
D1011	Elevator Hydraulic System, 3,500 Lb Capacity	D1011 Hydraulic Elevators, 3500 LB	Throughout Facility	D1011 Modernize with new car controllers, signal fixtures, door operators and seismic rupture valve	15	4	2.00	EA	$95,000.00	IN - Reliability	Priority 3	$0	$0	$0	$0	$190,000	$0	$0	$0	$0	$0	$0	$190,000
	Elevator Hydraulic System, 3,500 Lb Capacity	D1011 Hydraulic Elevators, 3500 LB	Throughout Facility	D1011 New Cab interiors during modernization	20	4	2.00	EA	$23,000.00	IN - Reliability	Priority 3	$0	$0	$0	$0	$46,000	$0	$0	$0	$0	$0	$0	$46,000
	Elevator Hydraulic System, 3,500 Lb Capacity	D1011 Hydraulic Elevators, 3500 LB	Throughout Facility	D1011 Replace in-car stop switches with keyed switches	15	0	2.00	EA	$300.00	IN - Reliability	Priority 1	$600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$600	$0
D20	**PLUMBING**																						
D2011	Commercial Grade Water Closet With 1.6 Gpf Unit	D2011 Water Closet, 1.6 GPF Unit - Auto	Throughout Facility	D2011 Install automatic flush valves on toilets	20	0	9.00	EA	$1,303.95	OP - Energy	Priority 2	$11,736	$0	$0	$0	$0	$0	$0	$0	$0	$0	$11,736	$0
D2013	Counter Top Sink and Faucet	D2013 Counter Top Sink and Faucet - Auto	Restrooms	D2013 Install automatic faucets with motion sensors	20	0	10.00	EA	$1,667.84	OP - Energy	Priority 2	$16,678	$0	$0	$0	$0	$0	$0	$0	$0	$0	$16,678	$0
D2022	Domestic Hot Water Heater - Gas	D2020 Domestic Gas Hot Water Heater	Boiler Room	Replace D2020 Domestic Gas Hot Water Heater	20	7	1.00	EA	$20,060.00	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$20,060	$0	$0	$0	$20,060
D30	**HVAC**																						
D3022.2	D3022.2 Condensate Feed Pumps	D3022.2 Condensate Feed Pumps	Roof	Replace D3022.2 Condensate Feed Pumps	22	0	1.00	LS	$148,800.00	IN - Reliability	Priority 1	$148,800	$0	$0	$0	$0	$0	$0	$0	$0	$0	$148,800	$0
D3031.2	Cooling Tower, Galvanized Steel, 254 Ton	D3031 Cooling Tower, Galvanized Steel		Replace D3031 Cooling Tower, Galvanized Steel	25	5	1.00	EA	$103,561.48	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$0	$103,561	$0	$0	$0	$0	$0	$103,561
D3042	Exhaust Fan, Sidewall 11,250 CFM	D3042 Exhaust Fan 13,000 CFM	Rooftop	Replace D3042 Exhaust Fan 13,000 CFM	20	5	1.00	EA	$16,594.18	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$0	$16,594	$0	$0	$0	$0	$0	$16,594
D3042	Exhaust Fan 2000 CFM	D3042 Exhaust Fan 2000 CFM	Rooftop	Replace D3042 Exhaust Fan 2000 CFM	10	2	3.00	EA	$6,745.60	IN - Beyond Rated Life	Priority 2	$0	$0	$20,237	$0	$0	$0	$0	$0	$0	$0	$0	$20,237
D3051.1	Heat Pump Water Source, 3-Ton	D3051 Ceiling Mounted Heat Pumps	Throughout Facility	Replace D3051 Ceiling Mounted Heat Pumps	25	3	35.00	EA	$11,502.09	IN - Beyond Rated Life	Priority 2	$0	$0	$0	$402,573	$0	$0	$0	$0	$0	$0	$0	$402,573
D3067	D3067 Energy Monitoring & Control	D3068 Thermostat Controls	Throughout Facility	Replace D3068 Thermostat Controls	25	3	12.00	SF	$2,529.60	IN - Beyond Rated Life	Priority 2	$0	$0	$0	$30,355	$0	$0	$0	$0	$0	$0	$0	$30,355
D40	**FIRE PROTECTION SYSTEMS**																						
D4011	Sprinkler Heads	D4011 Sprinkler System	Throughout Facility	Replace D4011 Sprinkler System	25	8	48,227.00	SF	$2.41	CC - Life Safety	Priority 3	$0	$0	$0	$0	$0	$0	$0	$0	$116,092	$0	$0	$116,092
D50	**ELECTRICAL SYSTEMS**																						
D5037	Fire Alarm Panel	D5037 Fire Alarm Panel	Main Electrical Room	Replace D5037 Fire Alarm Panel	15	3	48,227.00	SF	$3.65	CC - Life Safety	Priority 1	$0	$0	$0	$175,816	$0	$0	$0	$0	$0	$0	$0	$175,816
D5092	Diesel Generator 50 kW	D5092 Emergency Generator 100 kW	Pad-Mounted on the exterior	D5092 Add/improve secondary containment for day tank	15	0	1.00	EA	$8,260.00	EN - Air/ Water Quality	Priority 1	$8,260	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,260	$0
Services Subtotal												**$186,074**	**$0**	**$20,237**	**$608,745**	**$236,000**	**$120,156**	**$0**	**$20,060**	**$116,092**	**$0**	**$186,074**	**$1,121,289**
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																							
Building Sitework Subtotal												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Z. GENERAL																							
General Subtotal												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
											Expenditure Totals per Year	**$433,649**	**$0**	**$20,237**	**$975,523**	**$236,000**	**$192,615**	**$0**	**$20,060**	**$668,439**	**$565,633**	**$433,649**	**$2,678,508**
											Total Cost (Inflated @ 5% per Yr.)	**$433,649**	**$0**	**$22,311**	**$1,129,290**	**$286,859**	**$245,831**	**$0**	**$28,226**	**$987,589**	**$877,483**	**Total ***	**$3,112,156**

*** - Present Value Currency**

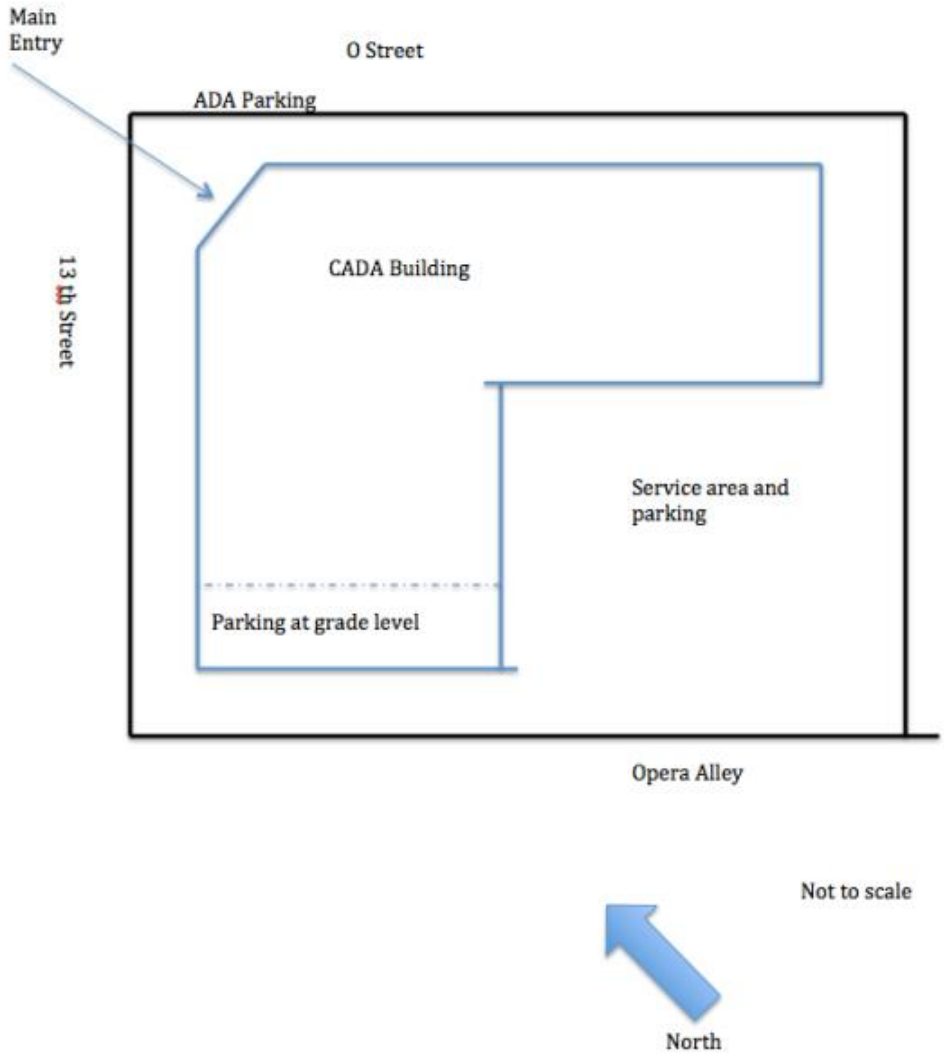
Footnotes

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

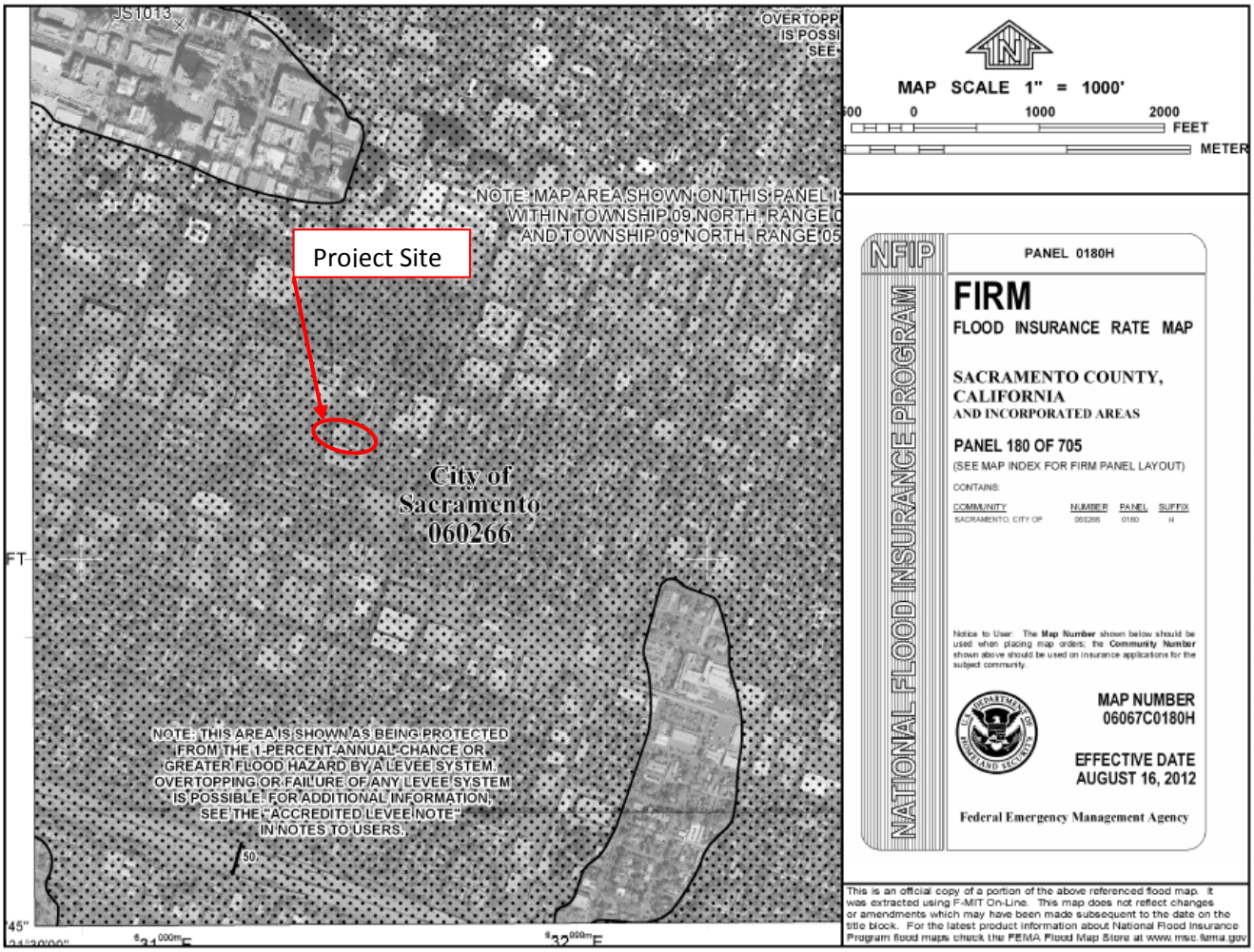
Current Repl.Value **$18,142,109**

APPENDIX H: SUPPORTING DOCUMENTATION



EMG	**Source:** The north arrow indicator is an approximation of 0° North.	**Project Number:** 111326.14R-027.305 **Project Name:** Buildings and Grounds Headquarters
		On-Site Date: February 6, 2015

Flood Map



EMG	**SOURCE:** **FEMA**	**Project Number:** **111326.14R-027.305**
N		**Project Name:** **Buildings and Grounds Headquarters**
	Not drawn to scale. The north arrow indicator is an approximation of 0° North.	**On-Site Date:** **January 23, 2015**

Estimate of Structures Cost Using Marshall Cost Systems

Buildings and Grounds Headquarters (009)

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	$299.42	48,473	$14,513,687
	$0.00	0	$0
	$0.00	0	$0
	$0.00	0	$0
	$0.00	0	$0
	Total	48,473	$14,513,687

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	$14,513,687	25.00%	$18,142,109
	$0	25.00%	$0
	$0	25.00%	$0
	$0	25.00%	$0
	$0	25.00%	$0
Cost Per SF	**$374.27**	**Total Estimate**	**$18,142,109**

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

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: Linda Brown

Building name: Buildings and Grounds Headquarters (009)

What is your association with this property? Office Building Manager III

What is the length of your association with this property? approximtely five years

Phone number: 916-322-4222

Please provide information about inspections relating to the following items

Inspections	Date Last Inspected	List Name & Contact for Maintenance Contractor, if any.
1. Elevators	1/26/2015	Thyssen Krup
2. HVAC, Mechanical, Electric, Plumbing	Daily and on 12/28/2014 for switch gear	DGS engineering, unified trades and JDI electrical contractor for switchgear
3. Life-Safety/Fire	2011	Siemens
4. Roofs	11/24/2104	DGS unified trades

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

none

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

none however a five year plan is in place

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

22 years old

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

depends on the size and nature of the project

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			
16. Are there any wall, or window leaks?		x			
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	
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				some complaints about the elevator not leveling. no complaints about wait times
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

CADA
1304 "O" Street
Sacramento, CA

Due Diligence
Elevator Report

February 16, 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

TABLE OF CONTENTS

Section I - Executive Summary

A. Introduction ____ **I.1**

B. Elevator Layout ____ **I.1**

C. Condition/Components ____ **I.1**

D. Maintenance and Performance ____ **I.1**

E. Code Review: ADA/Retro-active codes ____ **I.2**

F. Recommendation ____ **I.2**

Section II Component Review

A. Machine Room ____ **II.1**

B. Hoistway ____ **II.2**

C. Car top ____ **II.3**

D. Signal Fixtures ____ **II.3**

E. Cab Interiors ____ **II.4**

Section III – Budget Pricing ____ ***III***

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 3, 2015 Bob Nicholson and Russell Holt of Architectural Elevator Consulting, LLC (AEC) surveyed all the vertical transportation systems at CADA, 1304 "O" Street, Sacramento, CA. There are two (2) hydraulic passenger elevators. 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.

The elevators were manufactured and installed by Otis Elevator Company during the original building construction in November of 1992. The elevators have Otis power units, in-ground jacks, controllers, and Otis door equipment. The power units are equipped with Leroy Somers pumps and Maxton valves which are known to be good quality. The signal fixtures in the cars were also manufactured by Otis and appear to have been installed during the original installation.

During our survey we noted that the elevators were being well maintained by ThyssenKrupp Elevator. Housekeeping in the machine room, car tops and pits was noted to be good. Door and floor-to-floor performance was also noted to be good.

B. Elevator Layout

The office building has one set of elevators that are located side by side. Cars 1and 2 operate together as a duplex system with a common machine room. Both elevators serve all floors, levels 1-3. The elevators are rated at 125 Feet per Minute (FPM) and are designed with side opening doors. The elevators have 3,000 lbs. capacities. The number, speed and size of elevators appear to be adequate for the building.

Elevator Summary				
Elevator Bank	**Elevator Speed**	**Floors Served**	**Capacity**	**Door Type**
Passenger (Cars 1 & 2)	125 FPM	1-3	3,000 lbs.	Side

C. Condition

Most the major components of the elevators were found to be in fair condition. The cab interiors were dated but in reasonable good condition. A full modernization is recommended but not urgent. New cab interiors should be considered during the modernization. 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. The level of maintenance was noted to be good. The performance was observed to be within design parameters. In ***Appendix C*** of this report we provide a summary of the performance times for each elevator followed by a maintenance deficiency list.

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 all ADA and California Title 24 requirements. The size of the passenger elevators meets requirements for new and existing elevators. The cars have proper car lanterns and gongs. ***Appendix A*** provides a complete listing of the ADA/T24 requirements. The elevators are in full compliance with ADA.

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 comply with all A17.3 items except the following:

    a. **In- car Stop Switch:** Is not keyed. This should be converted to keyed type.

3. **Seismic:** The elevators were installed under a less stringent seismic code from the 1990's. Seismic rupture valves have not been installed. We recommend these be added when the elevators are modernized.

F. Recommendation:

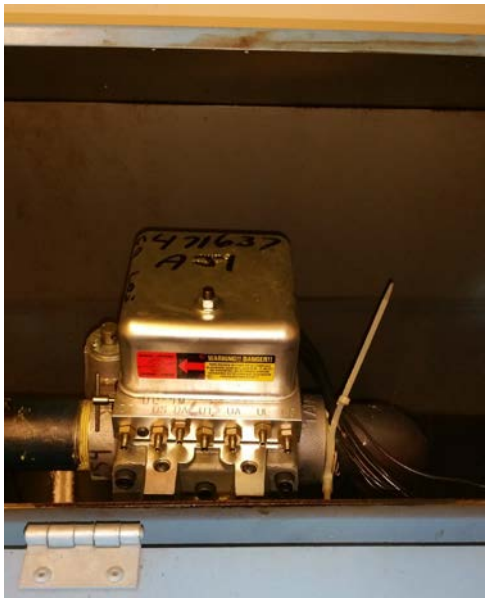
We recommend the elevators be fully modernized in the next 4-6 years. The performance of the existing controller is fairly good and with proper maintenance can last another 4-6 years. In the meantime the in-car stop switches should be converted to keyed type.

Section II : Component Review

A. MACHINE ROOM:

Controllers:

The controllers were manufactured and installed by Otis Elevator company during original building construction in 1992. The controllers utilize solid state control boards and some mechanical relays. If properly maintained they can last another 4 to 6 years.



Hydraulic Power Units:

Both the elevators have Otis power units equipped with Maxton valves and Leroy Somer pumps. The power units were installed in 1992 when the building was erected. They are in relatively good condition considering their age.

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 in good condition.

Car Guide Rails:

The car rails are in good condition but do not have seismic fish plates. During the proposed modernization, these could be installed.

Pits:

The pits are poured concrete and have in-ground jacks. The pits were found to be slightly dirty, but dry. The jack heads are in good condition. The pits are equipped with a manual shut off valves but no seismic rupture valve.

C. CAR TOP:

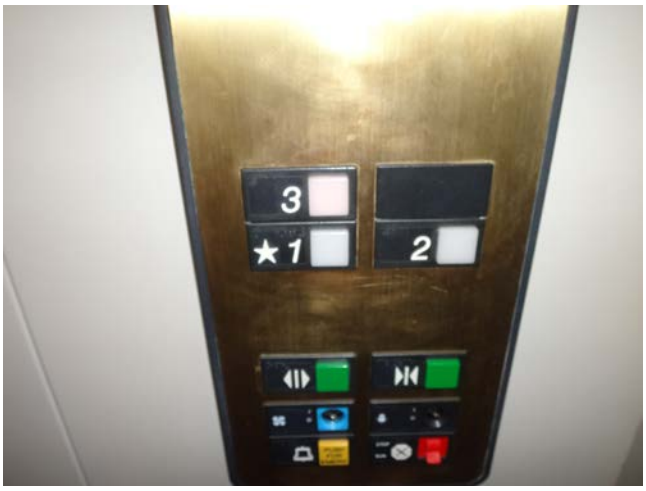
Door Operator:

The door operators were made by Otis and are in good condition. The door operation was noted to be fair with room for improvement. Both cars are equipped with door restrictors.

Car Roller/Slide Guides:

On both sides of the elevators and on the top and bottom slide guides keep the elevators riding up and down the steel guide rails. The existing ride quality was good. During the modernization upgrading to roller guides should be considered.

D. SIGNAL FIXTURES:



Car Operating Panels:

Both the elevators have the original equipment Car Operating Panels (COP's). These should be replaced during the proposed modernization. The panels are in good condition and the buttons had proper braille and are at the proper height for ADA and T24. However, they are starting to look dated and the stop switch is not keyed as required by code.

Hall/Car Lanterns:

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

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 are ADA and T24 compliant. During a modernization the fixture should be updated with a new fixture that has the fire exit sign installed.

E. CAB INTERIOR:

Wall Finish:

The existing cab interiors are likely original and looked dated but are in fair condition. The code required handrails are present.

Ceilings:

The cabs have down light ceilings that are in reasonable good condition.

Vertical Transporation

CADA - 1304 "O" Street

Item No.	Recommendation	Rating	Quantity	Unit	Unit Cost	Immediate Code Items	Immediate - Repair	Yers 1-3	Years 4-6	Years 7-10	Totals
1	Modernize with new car controllers, signal fixtures, door operators and seismic rupture valve	4	2	EA	$95,000.00				$190,000		$190,000
2	Replace in-car stop switches with keyed switches	1	2	EA	$300.00	$600					$600
3	New Cab interiors during modernization	4	2	EA	$23,000.00				$46,000		$46,000
4											$0
5											$0
6											$0
7											$0
8											$0
9											$0
10											$0
	Subtotal					$600	$0	$0	$236,000	$0	$236,600

1	$600	Code and Safety
2	$0	Deffered Maintenance & Repair
3	$0	Capital Expenditure
4	$236	Modernization / Improvements
5	$836	Total

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

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		Cars 1-2
	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 – Car
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.	Yes
	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 1-2
	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 34”)**	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)**	Yes
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
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

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		Cars 1-2
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.	Yes
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.	Yes
4.10.13	The system must not require voice communication.	Yes

Appendix "B"

A17.3

Code for Existing Hydraulic Elevators

A17.3		Cars 1-2 Complies Yes/No
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
2.2	**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
	Single Bottom Jack: (If single bottom oil must be monitored and tracked)	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	If space below pit is accessible it must meet certain rules.	Yes
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
2.6.7	Bottom Guides (gibs must be provided.)	Yes
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	Closed position of Hoistway Doors	Yes
2.7.3	Elevator Parking Device (For cars operated from within car only)	N/A
2.7.4	Access to Hoistway (Hoistway door unlocking devices and access switches)	Yes
2.7.5	Restricted Opening of Hoistway Doors and/or Car Doors on Passenger Elevators (Cannot open more then 4" outside unlocking zone +-18" max.)	Yes
2.7.6	Hoistway Emergency Door Contacts (Positively opened)	Yes
2.8	**POWER OPERATION OF DOORS AND GATES**	

Appendix "B"

A17.3

Code for Existing Hydraulic Elevators

A17.3		Cars 1-2 Complies Yes/No
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
	Mechanical Equipment	
3.1	Buffers And Bumpers (Car and counterweight buffers are required)	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" A17.3, 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 metal or fire resistant mat)	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
	Cab Lining Materials (Must have class 1 rating, flame spread of 25 or less.	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
3.7	**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)	Yes
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.)	Yes
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" for frt.)	Yes
3.7.5	Signs on Freight Elevators (NOT A PASS ELEV…etc. ½" high letters)	Yes
3.8 (4.3)	**DRIVING MACHINES AND SHEAVES**	
4.3.1	Connection to Driving Machine (capable of withstanding, without damage, plunger stop)	Yes
4.3.2	Plunger Stop (If greater then 100FPM provide ETS)	Yes
4.3.3	Hydraulic Elevators (In-ground jacks- single vs. double bottom)	Yes
4.4	**Valves, Supply Piping, and Fittings**	
4.4.1	Pump Relief Valve (Between pump & check valve, preset to open at 125% of working pressure, sized to allow proper capacity, must be sealed)	Yes
4.4.2	Check Valve (Will hold the elevator with rated load when pump stops.)	Yes
4.4.3	Mechanically Controlled Operating Valves (These types of valves are prohibited.)	Yes
4.4.4	Supply Piping and Fittings (Must be in sound condition and secured in place.)	Yes
		Yes
	Tanks	
4.5.1	Tanks General Requirements (Must be of adequate size and have an indicator.)	Yes
4.5.2	Pressure Tanks (Tanks subject to collapsing shall be provided with vacuum relief valves., pressure gage, inspectors gage, liquid level detector, hand holes, and manholes.)	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
3.10	**OPERATING DEVICES AND CONTROL EQUIP.**	
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

Appendix "B"

A17.3

Code for Existing Hydraulic Elevators

A17.3		**Cars 1-2 Complies Yes/No**
3.10.3	Top-of-Car Operating Devices (Continuous pressure <150FPM; bet. Crosshead and door.) (not needed on hydro's if less than 15' of travel)	Yes
3.10.4	Electrical Provisions	
	(e) Stop Switch – Top of Car- marked "stop" & "run"	Yes
	(h) Final Terminal Stopping Devices	Yes
	(i) Emergency Terminal Stopping Devices (reduced stroke)	N/A
	(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)(WAC does not require it to be keyed)	**No-not keyed**
	(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
3.10.9	Control and Operating Circuit Requirements (The failure of any single magnetically operated switch)	Yes
	Grounding and Overcurrent: Must comply with 620-61	Yes
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**
4.7.3	Anticreep leveling devices	Yes
4.8	Additional Requirements for Counterweighted Hydraulics (Do not require buffers)	N/A
4.9	Additional Requirements for Roped Hydraulic Elevators.	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

1304 "O" Street					
	PERFORMANCE TIMES	**Design**	**Car1**	**Car 2**	
7.1	Door Open Time	**2.3**	2.5	2.5	
7.2	Door Close Time	**4.0**	4.0	4.0	
7.3	Floor to Floor Up (18 to 19)	**15.5**	15.9	15.8	
9.6	Floor to Floor Down (19 to 18)	**15.5**	16.5	17.1	
7.5	Full Speed Up	**125 FPM**	131	130	
7.6	Full Speed Down	**125 FPM**	96	119	
7.7	Jerk Rate Up	**< 7.0**	16.3	10.4	
7.8	Jerk Rate Down	**< 7.0**	13.2	12.9	
7.9	Power Closing of Door (Pressure Gauge)	**<30lbs**	10 lbs	10 lbs	
7.10	Interrupted Ray	**.5sec**	1.0	1.0	
7.11	Car Dwell Time	**3.0**	3.2	3.2	
7.12	Hall Call Dwell Time	**5.0**	3.0	3.0	
7.13	Car Lantern Time	**8.0**	3.0	3.0	
7.14	Nudging	**20.0**	>40	>40	
7.15	Test Emergency Phone	**Yes**	Yes	Yes	

	Car 1
1.1	Increase hall call dwell time to over 5.0 seconds.
1.2	
	Car 2
2.1	Increase hall call dwell time to over 5.0 seconds.
2.2	

Prepared by

EMG
222 Schilling Circle, Suite 275
Hunt Valley, Maryland 21031
800.733.0660
410.785.6220 (fax)
www.emgcorp.com

EMG Contact

Matthew Anderson
Program Manager
800.799.0660

EMG Project No.

111326.14R.012.305

EMG
ENGINEERING PEACE OF MIND

Your partner in real estate lifecycle planning and management.
800.733.0660 | emgcorp.com