East End Complex Block 172 (052)

1500 Capitol Avenue, Sacramento, CA 95814

Facility Condition Assessment

June 2015

Prepared for the State of California Department of General Services

TABLE OF CONTENTS

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EXECUTIVE SUMMARY

BACKGROUND

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

The DGS portfolio comprises nearly 17 million gross square feet (GSF) of state-owned office facilities statewide, contained within 54 general-purpose state-owned office building sites. The FCA inventories and evaluates each of the DGS general purpose office buildings to benchmark current condition and establish a replacement value. This FCA assesses the infrastructure conditions for the East End Complex Block 172 (052).

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 East End Complex Block 172 (052) 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 East End Complex Block 172 (052) on January, 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	$74,282,473
Immediate Repair Costs (12 months)	$119,466
1-5 Year Capital Needs	$1,688,589
6-10 Year Capital Needs	$6,210,029
Total 10-Year Capital Reserve Needs	$8,018,084

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

Current Year FCI

$$\text{Current FCI} = \frac{\$119{,}466}{\$74{,}282{,}473}$$

Ten-Year FCI

$$\text{Ten-Year FCI} = \frac{\$8{,}018{,}084}{\$74{,}282{,}473}$$

Current Year FCI	Ten-Year FCI
0.16 %= *Good Condition*	**10.79 %= *Poor Condition***

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

- The stucco on the elevator equipment room and mechanical penthouse is developing cracks, causing leaks. Repairs are recommended.
- There are no isolation valves on the heating and cooling system to allow maintenance to be performed in one area, without shutting down the whole system. Installation of isolation valves is recommended.
- Repair and replace non-working panels in the rooftop photovoltaic system.
- A full infrared scan, cleaning, and tightening of wire attachments is recommended for the electrical switchgear and distribution panels.

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

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INTRODUCTION

BUILDING BACKGROUND

The East End Complex Block 172 (052) was designed and constructed by the design-build team of Clark Construction and Gruen Associates. Located at 1500 Capitol Avenue, Sacramento, the building is a component of the Capitol Area East End Complex, which consists of five buildings: 049, 051, 052, 053, and 054 (or Blocks 225, 171, 172, 173, and 174, respectively). The East End Complex is the largest state-built general-purpose office project in California's history. The five buildings consolidated the headquarters of two state departments: the California Department of Education (CDE) and the Department of Health Services (DHS). In July 2007, legislation (SB162) split the DHS into two separate departments, the Department of Health Care Services (DHCS) and the California Department of Public Health(CDPH). The complex provides office space to 6,226 employees.

In 1997, California Legislature authorized the development of the Capitol Area East End Complex through the sale of revenue bonds. The Joint Rules Committee viewed this development as a landmark effort in effective cooperation with local government and development and management of public facilities, as well as a successful implementation of sustainable design principles and urban infill.

The entire complex offers approximately 1.56 million GSF, approximately 1.16 million SF of net usable space, and more than 1,600 parking spaces for its tenants. All buildings in the complex were completed between 2002 and 2003. While architecturally integrated, no two buildings in the complex are the same. Amenities included within the complex are a landscaped rooftop patio, a landscaped courtyard, a child care center, a 300-seat auditorium with rear projection room and raised stage, lighted art displays, amphitheater with water feature, and a data center with a raised floor subsystem.

The East End Complex Block 172 (052) is occupied by the DHCS and the CDPH. The building includes ground floor retail with restaurant space and a basement parking garage. The building is approximately 177,992 GSF with 132,436 SF of net usable area. The ratio of net usable to gross building area is 74.4 percent. The occupant capacity is 723 and the garage includes 161 parking stalls.

BUILDING DESCRIPTION

The building construction is steel and concrete superstructure with concrete topped metal floor decks. The roof structure is flat with single-ply membrane roofing.

Exterior walls are finished with a veneer of granite and precast panels with aluminum fixed windows and curtain walls.

The interior walls are painted drywall, with granite and limestone wall facings in the lobby. The floor finishes are commercial carpet tiles, vinyl composition tile, and ceramic tiles in the restrooms. The ceilings are finished with acoustic tile.

The facility is served by five traction elevators. The machinery and controls are the originally installed systems and the equipment appears to be well maintained and functioning properly.

Domestic hot water is provided from the hot water loop, in which a separate heat exchanger and storage tank is utilized. A separate chiller dedicated for domestic drinking water is located in the mechanical room.

The building has an auditorium complete with a separate control room that is scheduled to be upgraded.

The HVAC system uses heated and chilled water supplied from the central plant located in building 173, through distribution pipes located in the basement parking areas. There are two rooftop air handling units, and two parking garage air handlers. The conditioned air from the air handling units supplies variable air volume boxes within the office spaces. The interior variable air volume boxes provide conditioned air and ventilation only, while the perimeter variable air volume boxes are additionally supplied with heating water for re-heat capability.

Most of the electrical infrastructure within the building is original.

The building is protected by a wet pipe sprinkler system, fire alarm system, and portable fire extinguishers. The fire sprinkler system water pressure is provided by one 1,500 gallon per minute electric fire pump located in the parking garage of the building. Sprinkler heads are current and all fire extinguishers were inspected October 2014.

The building covers nearly the entire site and the only landscaping is perimeter planters. The planter landscaping consists of trees, shrubs, and vines. Landscaped areas are irrigated by an in-ground drip irrigation system.

The subterranean garage provides parking that extends below Block 171 and Block 172. Based on a review of the available drawings, 387 parking spaces are provided below this building.

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

Project Statistics

Item	Description
Project Name	East End Complex Block 172
Building ID	052

Item	Description
Property Type	Administration
Year Built	2003
Number of Stories	6
Occupied	Yes
Land Area (acres)	1.64
Gross Square Feet (GSF)	177,992

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

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.

SCOPE OF ASSESSMENT

The evaluation team conducted a walk-through survey of East End Complex Block 172 (052) on January, 6, 2015. The survey included analysis and observation of the building's interior and exterior, including

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

the roofs. The evaluation team interviewed the building maintenance staff to inquire about the subject property's previous repairs and replacements and their costs, level of preventive maintenance exercised, pending repairs and improvements, and frequency of repairs and replacements. Opinions were developed based on the site evaluation, interviews with relevant maintenance providers and facilities managers, and previous experience with comparable properties. The evaluation team questioned those knowledgeable of the subject property's physical condition and operation (or knowledgeable of similar systems) to gain comparative information to use in evaluation of the subject property. In addition, the building staff provided documents and information to the evaluation team that were relevant to the subject property's physical improvements, extent, and type of use and assisted the team in identifying potential discrepancies between reported information and observed conditions.

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

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

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

PRIORITY RANKING

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

PRIORITY RANKING CATEGORIES

Building Mission Ranking

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

Remaining Useful Life Ranking

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

Asset Component Category

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

Functional Asset Categories

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

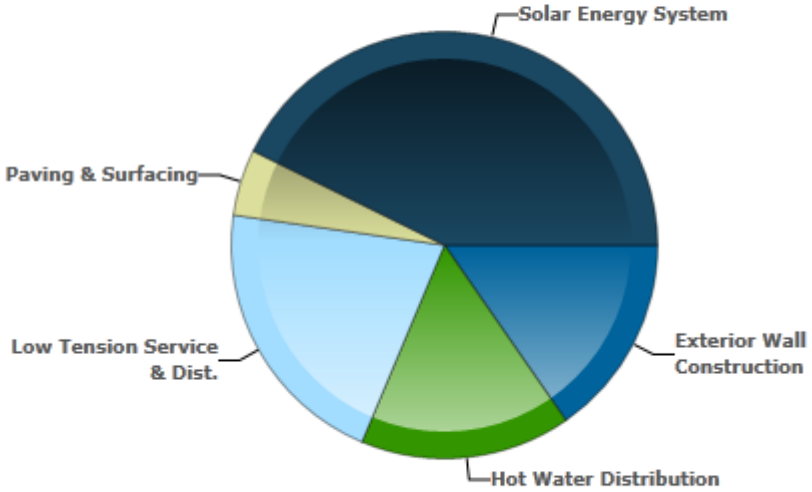
PRIORITY RATIO

The four categories above are assigned a numerical value and the values are multiplied together for each cost observation. The resulting number is then assigned a priority by the capital planning software with the lower range assigned Priority 1 and the higher range of numbers assigned among Priority 2, Priority 3, and Priority 4. Priority 5 is reserved for code issues that were permitted by the code at the time of construction but would be required only if a major renovation or code compliance project were to be undertaken.

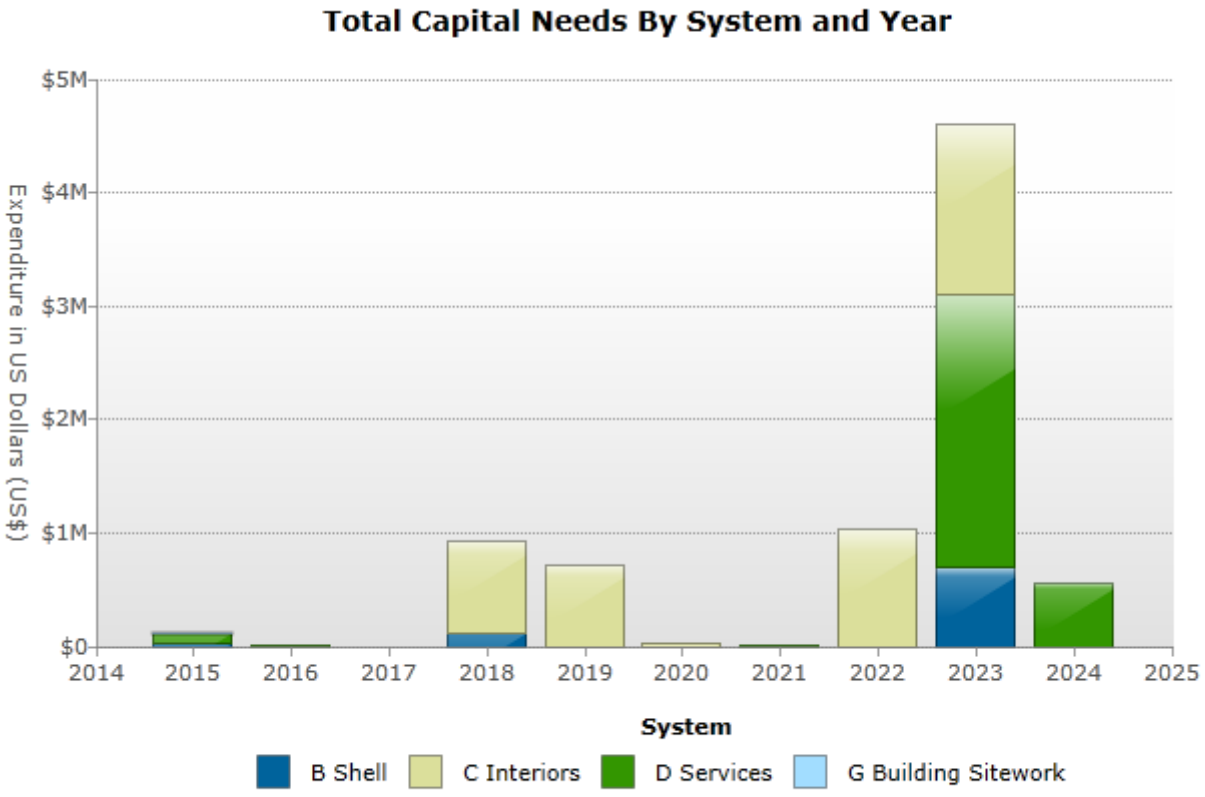
The physical condition of building systems and related components are typically defined as being in one of four conditions: Good, Fair, Poor, or Very Poor, or a combination thereof. For the purposes of this report, the following definitions are used:

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

Distribution of Immediate Needs by Building System



Level	Building System	Estimated Cost
B2011	Exterior Wall Construction	$18,327
D3016	Solar Energy System	$51,040
D3044	Hot Water Distribution	$19,097
D5012	Low Tension Service & Dist.	$25,000
G2031	Paving & Surfacing	$6,001
	Total	**$119,466**


Total Capital Needs By System and Year
$5M
$4M
$3M
$2M
$1M
$0
Expenditure in US Dollars (US$)
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
System
B Shell
C Interiors
D Services
G Building Sitework

	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	$18,327	$0	$95,137	$0	$0	$6,001	**$119,466**
2016	$0	$0	$0	$16,000	$0	$0	$0	**$16,000**
2018	$0	$111,115	$824,336	$0	$0	$0	$0	**$935,451**
2019	$0	$0	$710,347	$0	$0	$0	$0	**$710,347**
2020	$0	$0	$26,791	$0	$0	$0	$0	**$26,791**
2021	$0	$0	$0	$17,260	$0	$0	$0	**$17,260**
2022	$0	$0	$1,024,931	$0	$0	$0	$0	**$1,024,931**
2023	$0	$700,442	$1,511,516	$2,395,280	$0	$0	$0	**$4,607,239**
2024	$0	$0	$0	$560,600	$0	$0	$0	**$560,600**
Total	**$0**	**$829,884**	**$4,097,921**	**$3,084,277**	**$0**	**$0**	**$6,001**	**$8,018,084**

CURRENT REPLACEMENT VALUE

The Current Replacement Value has been determined as $74,282,473 for the East End Complex Block 172 Building (052). 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.

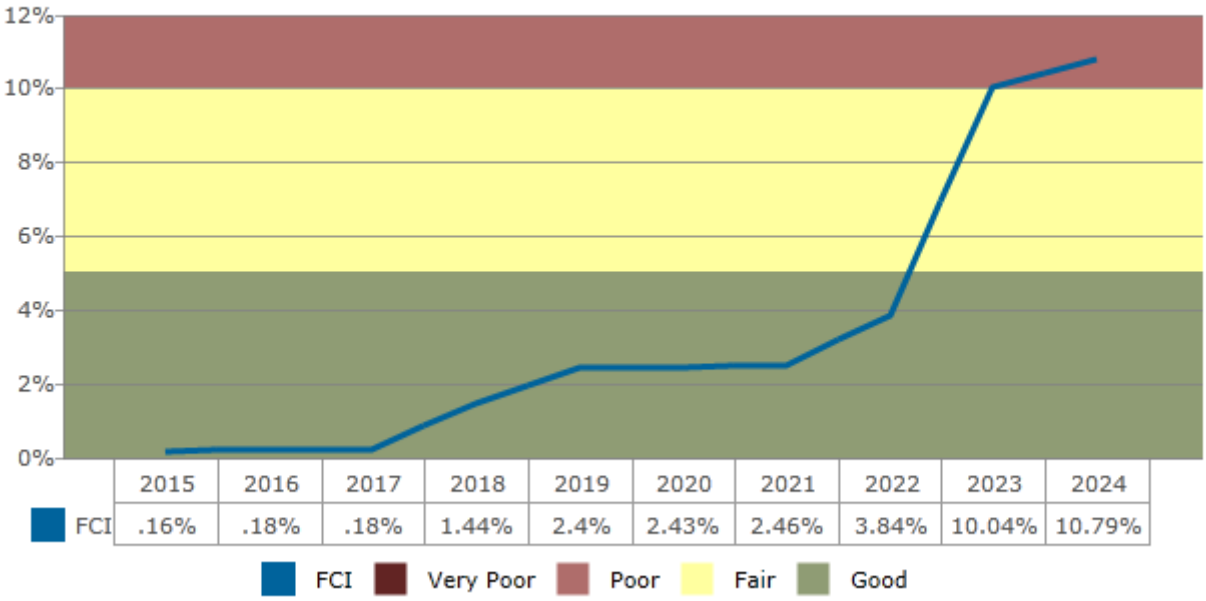
Building Area	Cost/SF	Current Replacement Value
177,992 GSF	$264	$74,282,473

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%

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



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APPENDICES

APPENDIX A: ACCESSIBILITY ISSUES

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APPENDIX B: GENERAL ASSESSMENT INFORMATION

A Substructure Systems

A10 FOUNDATIONS

Item	Description
A1021 Pile Foundations	A1021 Pile Foundations
Condition	Good
Qty / UOM	29662 / SF
RUL (years)	86
Location	Below grade

OBSERVATIONS/COMMENTS:

No further action is recommended.

B Shell Systems

B10 SUPERSTRUCTURE

Item	Description
B10 Superstructure	B1032 Concrete Frame Structure, slab
Condition	Good
Qty / UOM	91610 / SF
RUL (years)	47
Location	Subterranean Parking Garage

OBSERVATIONS/COMMENTS:

Recommendations regarding the parking garage are under Block 171.

Item	Description
B10 Superstructure	B1032 Concrete Frame Structure, walls
Condition	Good
Qty / UOM	8474 / SF
RUL (years)	47
Location	Subterranean Parking Garage

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B10 Superstructure	B1010 Frame Structure, Beams
Condition	Good
Qty / UOM	9000 / LF
RUL (years)	47
Location	Subterranean Parking Garage

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B1012 Upper Floors Construction	B1012 Metal Decking with Concrete Topping
Condition	Good
Qty / UOM	189576 / SF
RUL (years)	40
Location	First through sixth floors

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B1021 Flat Roof Construction	B1021 Structural Steel Beams Supporting Corrugated Metal Roof Deck with Lightweight Concrete Topping
Condition	Good
Qty / UOM	35844 / SF
RUL (years)	57
Location	Roofs

OBSERVATIONS/COMMENTS:

No further action is recommended.

B20 EXTERIOR ENCLOSURE

Item	Description
B2011 Exterior Wall Construction	B2011 Granite Veneer
Condition	Good
Qty / UOM	5000 / SF
RUL (years)	28
Location	Exteriors

OBSERVATIONS/COMMENTS:

Based on normal deterioration, sealant replacement will be required in the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2011	Replace exterior sealant	1,000.0 - LF	15.7	OP - Maintenance	Priority 3	2018	15,650

Item	Description
B2011 Exterior Wall Construction	B2011 Stucco and Lath
Condition	Fair
Qty / UOM	1000 / SF
RUL (years)	0
Location	Elevator machine room

OBSERVATIONS/COMMENTS:

The stucco is developing cracks and leaks. Removing the existing stucco and installing new is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2011	Replace B2011 Stucco and Lath	1,000.0 - SF	18.3	IN - Reliability	Priority 1	2015	18,327

Item	Description
B2011 Exterior Wall Construction	B2011 Precast veneer panels
Condition	Good
Qty / UOM	16500 / SF
RUL (years)	25
Location	First through sixth floors

OBSERVATIONS/COMMENTS:

Based on normal deterioration, sealant replacement will be required during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2011	Replace exterior sealant	4,000.0 - LF	15.7	OP - Maintenance	Priority 3	2018	62,600

Item	Description
B2021 Windows	B2021 Windows
Condition	Fair - Good
Qty / UOM	350 / SF
RUL (years)	27
Location	Exteriors

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B2022 Curtain Walls	B2022 Curtain Wall Glazing
Condition	Fair - Good
Qty / UOM	5000 / SF
RUL (years)	20
Location	Exteriors

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B2031 Glazed Doors & Entrances	B2031 Aluminum 3'-0" X 7'-0"
Condition	Fair - Good
Qty / UOM	6 / EA
RUL (years)	18
Location	Exteriors

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B2031 Glazed Doors & Entrances	B2031 Glazed Entrance Doors
Condition	Fair
Qty / UOM	4 / EA
RUL (years)	18
Location	Lobby

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B2032 Solid Exterior Doors	B2032 3'-0" X 9'-0" Steel, Insulated Core, Ptd. Door
Condition	Fair
Qty / UOM	9 / EA
RUL (years)	32
Location	Exteriors

OBSERVATIONS/COMMENTS:

No further action is recommended.

COST SUMMARY:

Type	Year	Total Expenditures
B20 Exterior Enclosure	2015	$18,327
B20 Exterior Enclosure	2018	$78,250

B30 ROOFING

Item	Description
B3010 Roof Coverings	B3011 Liquid Applied Waterproofing
Condition	Fair
Qty / UOM	358 / SQ
RUL (years)	8
Location	Roof

OBSERVATIONS/COMMENTS:

Based on its condition and RUL, roof replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B3010	Replace B3011 Liquid Applied Waterproofing	358.0 - SQ	1806.4	IN - Beyond Rated Life	Priority 4	2023	646,676
B3010	Pressure wash roof	35,844.0 - SF	1.5	IN - Reliability	Priority 4	2023	53,766

Item	Description
B3014 Flashings & Trim	B3014 Coping
Condition	Good
Qty / UOM	10000 / LF
RUL (years)	37
Location	Coping at parapets

OBSERVATIONS/COMMENTS:

The sealant between the coping is failing due to birds pecking at it. Patching the sealant will remain a constant maintenance item, until the sealant is replaced by a material that is not attractive to birds. Replacement is required during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B3014	Replace sealant at coping	2,100.0 - LF	15.7	OP - Maintenance	Priority 3	2018	32,865

COST SUMMARY:

Type	Year	Total Expenditures
B30 Roofing	2018	$32,865
B30 Roofing	2023	$700,442

C Interiors Systems

C10 Interior Construction

Item	Description
C1021 Interior Doors	C1021 Interior Doors
Condition	Fair - Good
Qty / UOM	220 / EA
RUL (years)	8
Location	Complete building

OBSERVATIONS/COMMENTS:

Approximately 25 percent of the doors show physical damage, attributed to impact from carts. Replacements are anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C1021	Replace C1021 Interior Doors	220.0 - EA	2403.1	IN - Appearance	Priority 4	2023	528,686

Item	Description
C1021 Interior Doors	C1021 Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware
Condition	Fair
Qty / UOM	130 / EA
RUL (years)	12
Location	Doors to corridors, offices

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
C1031 Fabricated Toilet Partitions	C1031 Fabricated Toilet Partitions
Condition	Fair
Qty / UOM	96 / EA
RUL (years)	8
Location	Restrooms

OBSERVATIONS/COMMENTS:

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

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C1031	Replace toilet partitions	96.0 - EA	1601.6	IN - Beyond Rated Life	Priority 4	2023	153,754

COST SUMMARY:

Type	Year	Total Expenditures
C10 Interior Construction	2023	$682,440

C20 STAIRS

Item	Description
C2014 Stair Handrails and Balustrades	C2014 Steel stairs
Condition	Good
Qty / UOM	6 / EA
RUL (years)	15
Location	Six stair wells

OBSERVATIONS/COMMENTS:

There are six sets of interior steel stairs. Paint maintenance will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C2014	Prep and paint steel stairway parts	28,800.0 - SF	1.6	OP - Maintenance	Priority 3	2019	44,928

COST SUMMARY:

Type	Year	Total Expenditures
C20 Stairs	2019	$44,928

C30 INTERIOR FINISHES

Item	Description
C3011 Wall Finishes to Inside Exterior Walls	C3011 Wall Finishes to Inside Exterior Walls
Condition	Good
Qty / UOM	1500 / SF
RUL (years)	39
Location	Lobby

OBSERVATIONS/COMMENTS:

The granite and limestone wall facings require no further action.

Item	Description
C3012 Wall Finishes to Interior Walls	C3012 Paint Interior Walls, Drywall
Condition	Fair - Good
Qty / UOM	70000 / SF
RUL (years)	6
Location	Fourth through sixth floors

OBSERVATIONS/COMMENTS:

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

Item	Description
C3012 Wall Finishes to Interior Walls	C3012 Paint Interior Walls, Drywall
Condition	Fair - Good
Qty / UOM	60000 / SF
RUL (years)	6
Location	First through third floors

OBSERVATIONS/COMMENTS:

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

Item	Description
C3024 Flooring	C3024 Vinyl Tile
Condition	Fair
Qty / UOM	213 / SY
RUL (years)	5
Location	Break & copy rooms

OBSERVATIONS/COMMENTS:

Based on the 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	Replace C3024 Vinyl Tile	213.0 - SY	125.8	IN - Appearance	Priority 4	2020	26,791

Item	Description
C3024 Flooring	C3024 4X4 Ceramic Tile
Condition	Good
Qty / UOM	14 / CSF
RUL (years)	18
Location	Restrooms

OBSERVATIONS/COMMENTS:

No further action is required.

Item	Description
C3025 Carpeting	C3025 Carpet Tiles - Standard
Condition	Fair
Qty / UOM	6888 / SY
RUL (years)	4
Location	First, second & third floors

OBSERVATIONS/COMMENTS:

Based on the 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	Replace C3025 Carpet Tiles - Standard	6,888.0 - SY	96.6	IN - Appearance	Priority 3	2019	665,419

Item	Description
C3025 Carpeting	C3025 Carpet Tiles - Standard
Condition	Fair
Qty / UOM	8533 / SY
RUL (years)	3
Location	Fourth, fifth & sixth floors

OBSERVATIONS/COMMENTS:

Based on the 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	Replace C3025 Carpet Tiles - Standard	8,533.0 - SY	96.6	IN - Appearance	Priority 3	2018	824,336

Item	Description
C3032 Suspended Ceilings	C3032 Acoustical Ceiling Tile
Condition	Fair - Good
Qty / UOM	853 / CSF
RUL (years)	7
Location	Ceilings,fourth, fifth and sixth floors

OBSERVATIONS/COMMENTS:

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

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3032	Replace C3032 Acoustical Ceiling Tile	853.0 - CSF	1201.6	IN - Appearance	Priority 4	2022	1,024,931

Item	Description
C3032 Suspended Ceilings	C3032 Acoustical Ceiling Tile
Condition	Fair - Good
Qty / UOM	690 / CSF
RUL (years)	8
Location	Ceilings first, second and third floors

OBSERVATIONS/COMMENTS:

Based on the RUL, replacement of acoustic ceiling tile is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3032	Replace C3032 Acoustical Ceiling Tile	690.0 - CSF	1201.6	IN - Appearance	Priority 4	2023	829,076

COST SUMMARY:

Type	Year	Total Expenditures
C30 Interior Finishes	2018	$824,336
C30 Interior Finishes	2019	$665,419
C30 Interior Finishes	2020	$26,791
C30 Interior Finishes	2022	$1,024,931
C30 Interior Finishes	2023	$829,076

D Services Systems

D10 Conveying Systems

Item	Description
D1011 Passenger Elevators	D1011 Traction Elevator Machinery and Controls
Condition	Good
Qty / UOM	4 / EA
RUL (years)	18
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
D1012 Freight Elevators	D1011 Traction Elevator Machinery and Controls
Condition	Good
Qty / UOM	1 / EA
RUL (years)	18
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

No further action is required.

D20 PLUMBING

Item	Description
D2011 Water Closets	D2011 Water Closets
Condition	Good
Qty / UOM	45 / EA
RUL (years)	14
Location	Floors 1-6

OBSERVATIONS/COMMENTS:

Automatic flush valves were observed on the plumbing fixtures. No further action required.

Item	Description
D2011 Water Closets	D2011 Water Closets Auto
Condition	Good
Qty / UOM	8 / EA
RUL (years)	14
Location	Floors 1-6

OBSERVATIONS/COMMENTS:

Automatic flush valves were observed on the plumbing fixtures. No further action is required.

Item	Description
D2012 Urinals	D2012 Urinal - Auto
Condition	Good
Qty / UOM	2 / EA
RUL (years)	23
Location	Floors 1-6

OBSERVATIONS/COMMENTS:

The first floor men's restrooms are fitted with auto-flush urinals.

Item	Description
D2012 Urinals	D2012 Urinal
Condition	Good
Qty / UOM	10 / EA
RUL (years)	23
Location	Floors 1-6

OBSERVATIONS/COMMENTS:

First floor rest rooms are equipped with auto-flush valves. No further action is required.

Item	Description
D2013 Lavatories	D2013 Counter Top Sink and Faucet
Condition	Good
Qty / UOM	40 / EA
RUL (years)	23
Location	Restrooms

OBSERVATIONS/COMMENTS:

Manual and automatic faucets were observed in the restrooms. Automatic faucets are recommended for all sinks, to improve hygiene, as an accessibility improvement, and to save water.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2013	Install automatic faucets with motion sensors	40.0 - EA	400.0	OP - Energy	Priority 2	2016	16,000

Item	Description
D2013 Lavatories	D2013 Counter Top Sink and Faucet - Auto
Condition	Good
Qty / UOM	8 / EA
RUL (years)	23
Location	Restrooms

OBSERVATIONS/COMMENTS:

No further action is required.

Item	Description
D2018 Drinking Fountains and Coolers	D2018 Drinking Fountain
Condition	Good
Qty / UOM	6 / EA
RUL (years)	6
Location	Floors 1-6

OBSERVATIONS/COMMENTS:

Drinking fountains are supplied with dedicated chilled and filtered water. Based on the RUL, replacements are anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2018	Replace D2018 Drinking Fountain	6.0 - EA	2876.6	IN - Beyond Rated Life	Priority 3	2021	17,260

COST SUMMARY:

Type	Year	Total Expenditures
D20 Plumbing	2016	$16,000
D20 Plumbing	2021	$17,260

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	N/A
Water Meter Location	N/A

Item	Description
D3016 Solar Energy System	D3016 Solar Panels 2' x 4'
Condition	Poor - Fair
Qty / UOM	128 / EA
RUL (years)	13
Location	Rooftop

OBSERVATIONS/COMMENTS:

Replace failed solar panels as needed.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3016	Replace faulty solar panels as needed	40.0 - EA	1276.0	IN - Reliability	Priority 1	2015	51,040

Item	Description
D3022.1 Circulating Pumps	D3022 HVAC Chill Water Circulation Pump 30 HP
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	8
Location	Mechanical Room - Loading Dock
Pump HP	30

OBSERVATIONS/COMMENTS:

The 30-hp heating water distribution pump appears to be original and functional, and is equipped with VFD motor. Based on RUL, replacement is anticipated late term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3022	Replace D3022 HVAC Chill Water Circulation Pump 30 HP	1.0 - EA	26054.9	IN - Beyond Rated Life	Priority 4	2023	26,055

Item	Description
D3025 Fuel Fired Heaters	D3025 Gas Fired Heater
Condition	Good
Qty / UOM	2 / EA
RUL (years)	8
Location	Loading Dock

OBSERVATIONS/COMMENTS:

The fuel-fired suspended heating units are original equipment. Replacements are anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3025	Replace D3025 Gas Fired Heater	2.0 - EA	4032.2	IN - Beyond Rated Life	Priority 4	2023	8,064

Item	Description
D3041.1 Air Handling Units	D3041 Ventilation AHU - 800 - 2000 CFM
Condition	Good
Qty / UOM	2 / EA
RUL (years)	13
Location	Parking Garage
Air Handling Unit Outdoor Air	Damper Controlled
Air Handling Unit Manufacturer	Mammoth

OBSERVATIONS/COMMENTS:

AHUs are located in parking garage. No further action required.

Item	Description
D3041.1 Air Handling Units	D3041 Ventilation AHU - VAU
Condition	Good
Qty / UOM	2 / EA
RUL (years)	13
Location	Rooftop
Air Handling Unit Outdoor Air	Damper Controlled
Air Handling Unit Manufacturer	Mammoth

OBSERVATIONS/COMMENTS:

The rooftop ventilation air handlers are functional and original to the 2003 construction. No further action required.

Item	Description
D3041.1 Air Handling Units	D3041 Rooftop AHU 70,000 CFM
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	13

Item	Description
Location	Rooftop
Air Handling Unit Sub Type	Variable Volume Multi-Zone
Air Handling Unit Heat Type	Hot Water
Air Handling Unit Duct Heat Type	Hot Water
Air Handling Unit Cooling Type	Chilled Water Coil
Air Handling Unit Outdoor Air	Damper Controlled
Air Handling Unit Manufacturer	Mammoth

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by air handling units; two on the north roof and two on the south roof, which feed VAV boxes located in each space. The AHUs are provided with heated and chilled water from the central system, and are rated at 70,000 CFM nominal capacity. Units appear to be well maintained. No further action is required.

Item	Description
D3041.2 Terminal Units VAV	D3041 Terminal Units VAV
Condition	Good
Qty / UOM	162 / EA
RUL (years)	9
Location	Floors 1-6

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by VAVs supplied with conditioned air from the central system air handlers. The maintenance staff reports that the majority of VAVs are original to the 2003 construction. Based on age of the units, replacements are recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3041	Replace D3041 Terminal Units VAV	162.0 - EA	3460.5	IN - Beyond Rated Life	Priority 4	2024	560,600

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan 35000 CFM
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	15
Location	Parking Garage

OBSERVATIONS/COMMENTS:

Exhaust fans are located in parking garage; two directly outside, and four located in fan rooms. No further action required.

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan 12000 CFM
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	15
Location	Rooftop

OBSERVATIONS/COMMENTS:

Most of the rooftop exhaust fans are original to the 2003 construction, and appear to be in working condition. No further action is required.

Item	Description
D3044 Hot Water Distribution	D3044 Isolation Valve HVAC Water Supply
Condition	Poor
Qty / UOM	4 / EA
RUL (years)	0
Location	Parking Garage

OBSERVATIONS/COMMENTS:

Maintenance requested the addition of isolation valves for chilled water and hot water supply, allowing separation of zones during maintenance.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3044	Replace D3044 Isolation Valve HVAC Water Supply	4.0 - EA	4774.3	IN - Beyond Rated Life	Priority 1	2015	19,097

Item	Description
D3051.1 Terminal Heat Pumps	D3051 Heat Pump Air to Air 3-Ton
Condition	Good
Qty / UOM	1 / EA
RUL (years)	8
Location	Rooftop

OBSERVATIONS/COMMENTS:

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

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3051	Replace D3051 Heat Pump Air to Air 3-Ton	1.0 - EA	10447.2	IN - Beyond Rated Life	Priority 4	2023	10,447

Item	Description
D3051.1 Terminal Heat Pumps	D3051 Heat Pump Air to Air 15-Ton
Condition	Good
Qty / UOM	1 / EA
RUL (years)	8
Location	Rooftop

OBSERVATIONS/COMMENTS:

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

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3051	Replace D3051 Heat Pump Air to Air 15-Ton	1.0 - EA	35540.9	IN - Beyond Rated Life	Priority 4	2023	35,541

Item	Description
D3068 Building Automation Systems	D3068 DDC Controls
Condition	Fair - Good
Qty / UOM	281186 / SF
RUL (years)	8
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

A Honeywell DDC system is in place with no reported issues. Based on the RUL, an upgrade is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3068	Replace D3068 DDC Controls	281,186.0 - SF	8.2	IN - Beyond Rated Life	Priority 4	2023	2,315,173

COST SUMMARY:

Type	Year	Total Expenditures
D30 HVAC	2015	$70,137
D30 HVAC	2023	$2,395,280
D30 HVAC	2024	$560,600

D40 FIRE PROTECTION SYSTEMS

Fire and Life Safety System	
Item	**Description**
Fire Alarm System Components Present	
Smoke detectors	Yes
Pull stations	Yes
Audible alarms	Yes
Strobe lights	Yes
Central fire alarm panel	Yes
Annunciator panel	Yes
Smoke Detectors Power Supply	Hardwired Electric with Battery Backup
Carbon Monoxide Detectors	N/A
Heat Detector	N/A
Central Fire Alarm Panel Location	Electrical Room
Annunciator Panel Location	In grade level room with exterior access.
Fire Extinguishers	Yes
Fire Extinguisher Inspection Date	December 1, 2014
Distance to Nearest Fire Hydrant (ft)	50
Illuminated Exit Signs	Yes
Kitchen Suppression Systems	N/A
Halon Gas Systems	N/A
Smoke Evacuation Systems	N/A
Fire-rated Stairwells	Yes
Fire-rated Stairwell Finish	XXXX
Stairwell Discharge	Exterior of the building at Grade
Stairwell Pressurized	No
Fire-Rated Doors Observed	Yes
Location of Fire-Rated Doors	Stairwells
Fire Alarm Service Company	Allwest
Date of Last Fire Alarm Service	October 15, 2015
Are the individual office unit fire alarm systems monitored?	N/A
Are the common area fire alarm systems monitored?	Yes
Types of Common Areas Monitored	Hallway floor, lobby

Fire and Life Safety System	
Item	**Description**
Fire Alarm Monitoring Company	Allwest

Item	Description
D4011 Sprinkler Water Supply	D4011 Sprinkler Heads
Condition	Good
Qty / UOM	433360 / SF
RUL (years)	15
Location	Throughout Facility
Fire Sprinkler Type	Wet Sprinkler
Fire Sprinkler Pipe Material	Steel
Recalled Sprinkler Heads (Omega or Central brands)	No
Date of Last Sprinkler Inspection	Month dd, 2013

OBSERVATIONS/COMMENTS:

The fire sprinkler maintenance company reported that all sprinkler heads have been serviced and meet code.

Item	Description
D4090 Other Fire Protection Systems	D4012 Fire Pump Electric 1500 Gpm
Condition	Good
Qty / UOM	1 / EA
RUL (years)	28
Location	Parking Garage
Fire Pump Delivery Rate (GPM)	1500
Check Valve	Yes

OBSERVATIONS/COMMENTS:

The fire pump appears to be original, and has been serviced as required. No further action is recommended.

D50 ELECTRICAL SYSTEMS

Item	Description
D5012 Low Tension Service & Dist.	D5012 Switchgear, Mainframe, 1200 Amps
Condition	Good
Qty / UOM	2 / EA
RUL (years)	26
Location	Main Electrical Room
Service Size (Amperage)	1200
Service Voltage	277/480
Service Voltage Type	Three-Phase Four-Wire Alternating Current (Ac)
Step Down Transformers	Yes
Electrical Distribution Panel Type	Circuit Breakers
Main Electrical Distribution Lines	Underground
Site Electrical Transformer Location	Pad-Mounted
Electrical Wiring Material	Solid Copper
Electrical Wiring in Metal Conduit	Yes

OBSERVATIONS/COMMENTS:

The main switchgear is original 2003 Square D equipment. The electrical service is reportedly adequate for the facility's needs, and the switchgear is in working condition. A full infrared scan, cleaning, and tightening effort is scheduled for 2015.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D5012	A full infrared scan, cleaning, and tightening effort is scheduled for 2015.	1.0 - Each	25000.1	IN - Reliability	Priority 1	2015	25,000

Item	Description
D5012 Low Tension Service & Dist.	D5012 Panel 225 Amps, 30 Circuits
Condition	Good
Qty / UOM	52 / EA
RUL (years)	28
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

The vast majority of the electrical panels are original 2003 Square D panels. No further action is required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Secondary Dry Transformer 45 kVA
Condition	Good
Qty / UOM	4 / EA
RUL (years)	18
Location	Utility Areas/Closets
Electrical Wiring Material	Solid Copper
Electrical Wiring in Metal Conduit	Yes

OBSERVATIONS/COMMENTS:

The step-down transformers are original. No further action is required.

Item	Description
D5012 Low Tension Service & Dist.	D5011 Main Dry Transformer 300kVA
Condition	Good
Qty / UOM	1 / EA
RUL (years)	18
Location	Floors 1-6

OBSERVATIONS/COMMENTS:

No further action is required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Transformer, 300 kVA
Condition	Good
Qty / UOM	1 / EA
RUL (years)	18
Location	Floors 1-6

OBSERVATIONS/COMMENTS:

The step-down transformers appear to be original. No further action is required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Secondary Dry Transformer 75 kVA
Condition	Good
Qty / UOM	2 / EA
RUL (years)	18
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

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

Item	Description
D5037 Fire Alarm Systems	D5037 Fire Alarm Panel
Condition	Good
Qty / UOM	1 / EA
RUL (years)	10
Location	Fire Panel Room

OBSERVATIONS/COMMENTS:

The fire alarm panel was recently serviced. The system appears adequate and comprehensive with strobes and an adequate number of modern devices placed throughout the spaces. No further action is required.

Item	Description
D5037 Fire Alarm Systems	D5037 Fire Alarm System
Condition	Good
Qty / UOM	281186 / SF
RUL (years)	15
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The fire alarm system appears adequate and comprehensive, with strobes and an adequate number of modern devices placed throughout the spaces. No further action is required.

COST SUMMARY:

Type	Year	Total Expenditures
D50 Electrical Systems	2015	$25,000

G Building Sitework Systems

G20 Site Improvements

Site Information	
Item	**Description**
Main Ingress and Egress	Capitol Avenue
Access from	N
Additional Entrances	N/A
Access from	N/A
Parking Count: Open lot	N/A
Parking Count: Sheltered by carports	N/A
Parking Count: Private garages	N/A
Parking Count: Subterranean garage	N/A
Parking Count: Freestanding parking structure	N/A
Number of ADA Compliant Spaces	N/A
Number of ADA Compliant Spaces for Vans	N/A
Method of obtaining parking count	Site plan
Property Identification Sign-Primary	Monument Sign
Property Identification Sign- Secondary	N/A
Illuminated Identification Signage	No
Building Identification Sign	No
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
G2031 Paving & Surfacing	G2031 Paving & Surfacing
Condition	Poor - Fair
Qty / UOM	60 / SF
RUL (years)	0
Location	Near building entrance

OBSERVATIONS/COMMENTS:

Near the main entry, small round rocks set into concrete, adjacent to the pedestrian walkway, cause a trip hazard. Replacement with a pedestrian safe material is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
G2031	Replace G2031 Paving & Surfacing	60.0 - SF	100.0	CC - Life Safety	Priority 1	2015	6,001

COST SUMMARY:

Type	Year	Total Expenditures
G20 Site Improvements	2015	$6,001

The weather at the time of the assessment was:

Item	Description
Approximate Outdoor Temperature (degrees F)	58
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	No
Floor Plan Reviewed	Yes
Construction Drawings Reviewed	No
Termite Inspection Report Reviewed	No
Boiler Certificates Reviewed	No
Document Year Built Information Obtained From	Construction documents

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

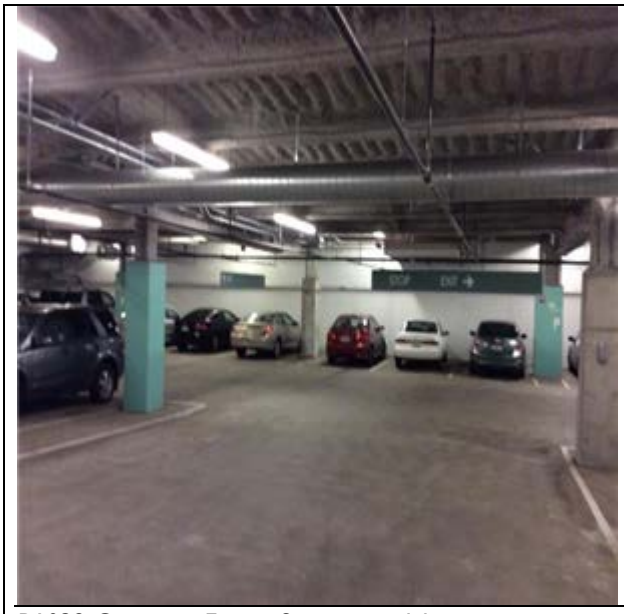
APPENDIX D: PHOTOS

:- Elevation along Capitol Avenue

:- Elevation along 16th Street

:- Rear elevation

:- Elevation along 15th Street



B1032 Concrete Frame Structure, slab

B2011 Stucco and Lath

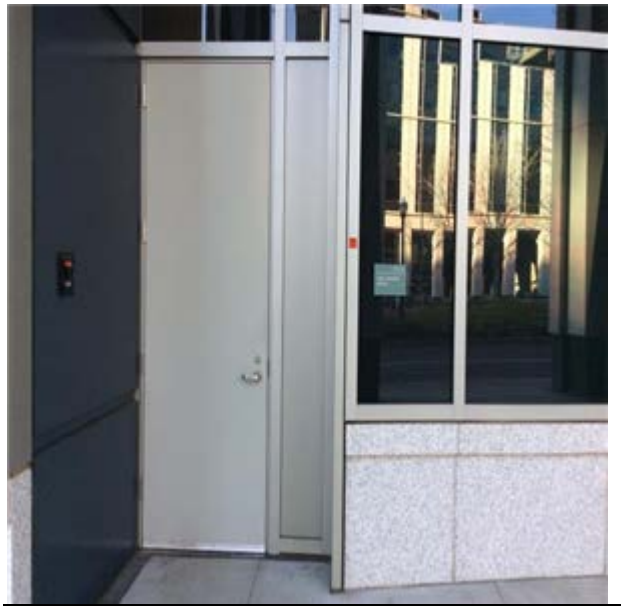
B2011 Granite Veneer

B2011 Precast veneer panels

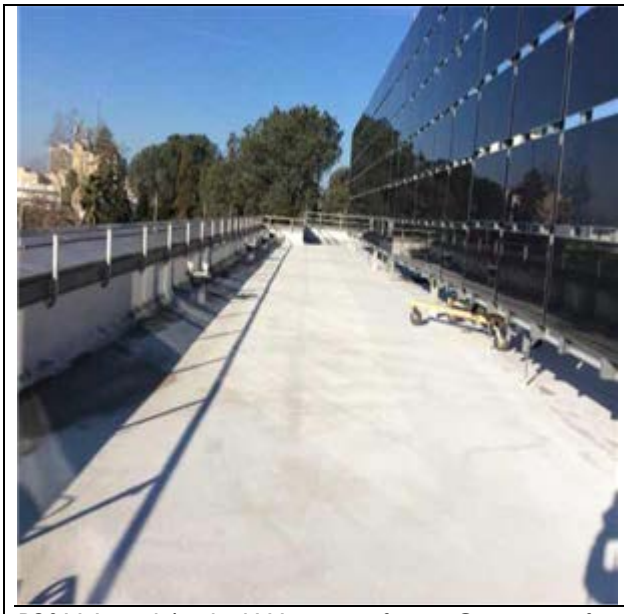
B2022 Curtain Wall Glazing

B2031 Aluminum 3'-0" X 7'-0"

B2031 Glazed Entrance Doors

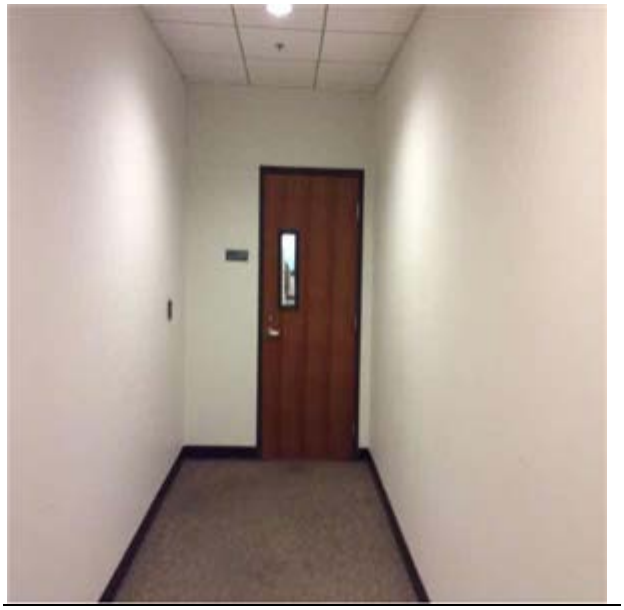


B2032 3'-0" X 9'-0" Steel, Insulated Core, Ptd. Door



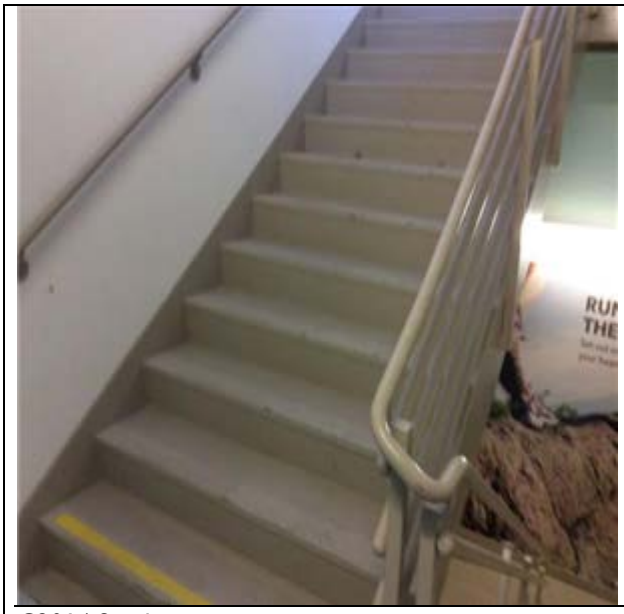
B3011 Liquid Applied Waterproofing :- Overview of roof

B3014 Coping

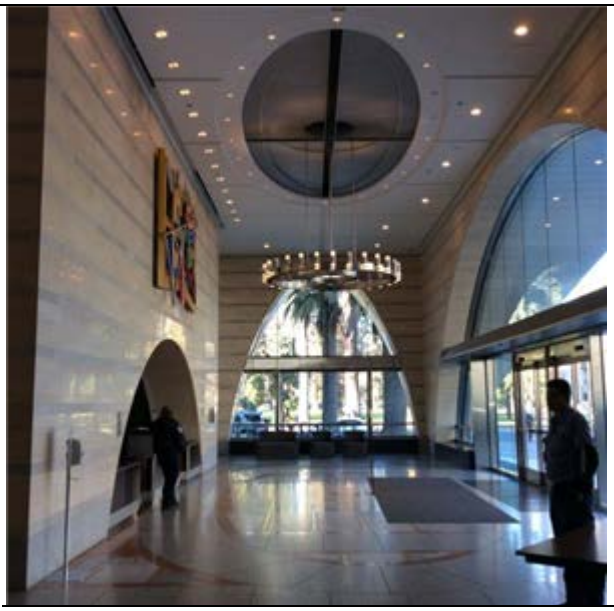


C1021 Interior Doors :- Door to suite

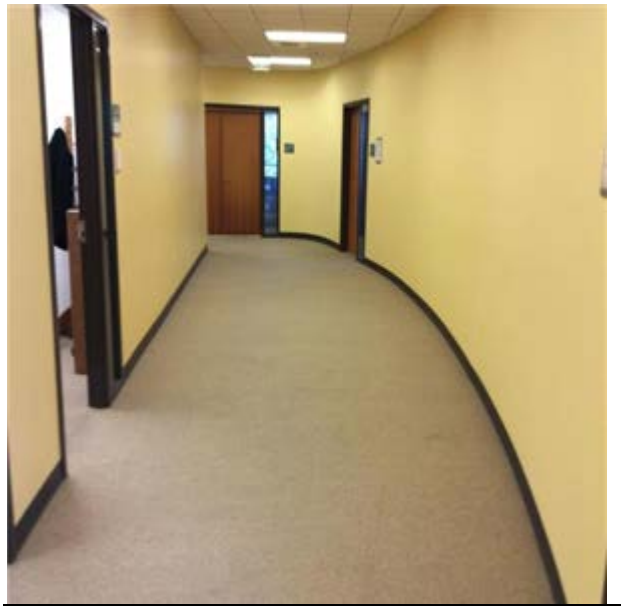
C1031 Fabricated Toilet Partitions



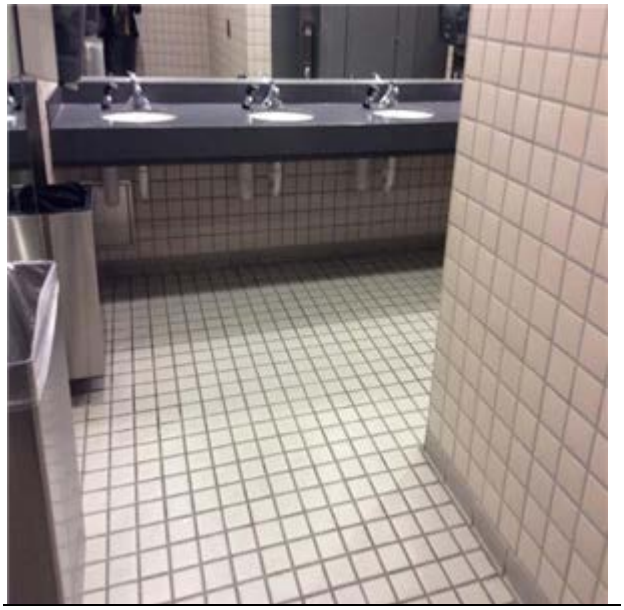
C2014 Steel stairs



C3011 Wall Finishes to Inside Exterior Walls

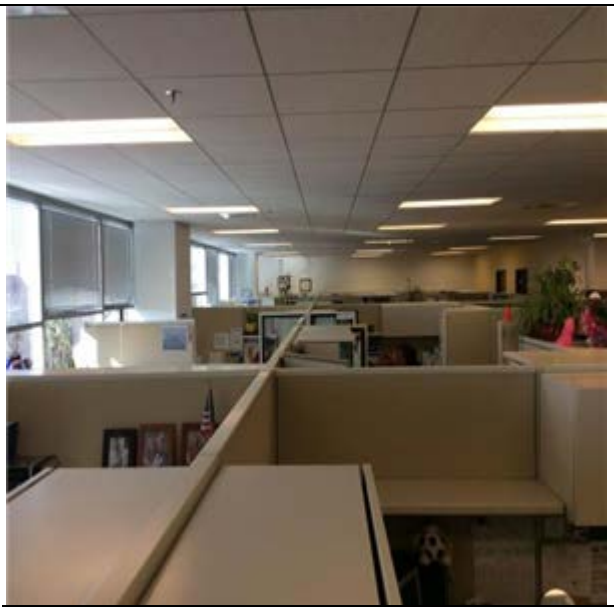


C3012 Paint Interior Walls, Drywall



C3024 4X4 Ceramic Tile

C3025 Carpet Tiles - Standard :- Existing carpet



C3032 Acoustical Ceiling Tile

D2011 Water Closets Auto

D2012 Urinal - Auto

D2013 Counter Top Sink and Faucet

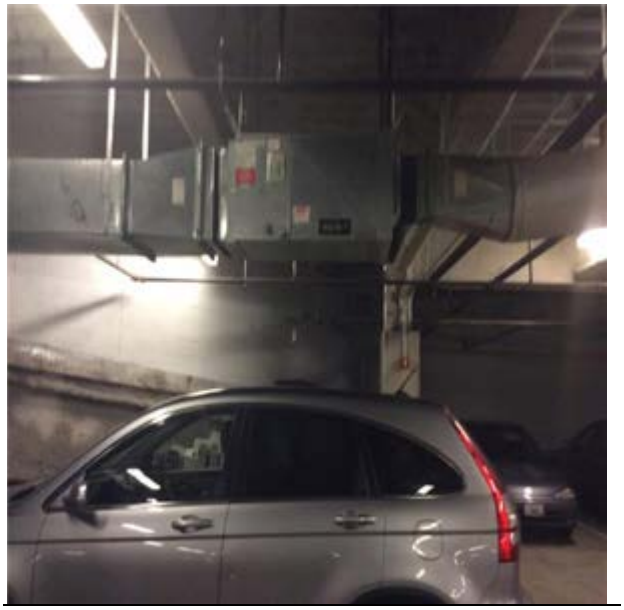
D2018 Drinking Fountain

D3016 Solar Panels 2' x 4'

D3022 HVAC Chill Water Circulation Pump 30 HP

D3025 Gas Fired Heater

D3041 Ventilation AHU - VAU



D3041 Ventilation AHU - 800 - 2000 CFM

D3041 Rooftop AHU 70,000 CFM

D3041 Terminal Units VAV

D3042 Exhaust Fan 35000 CFM

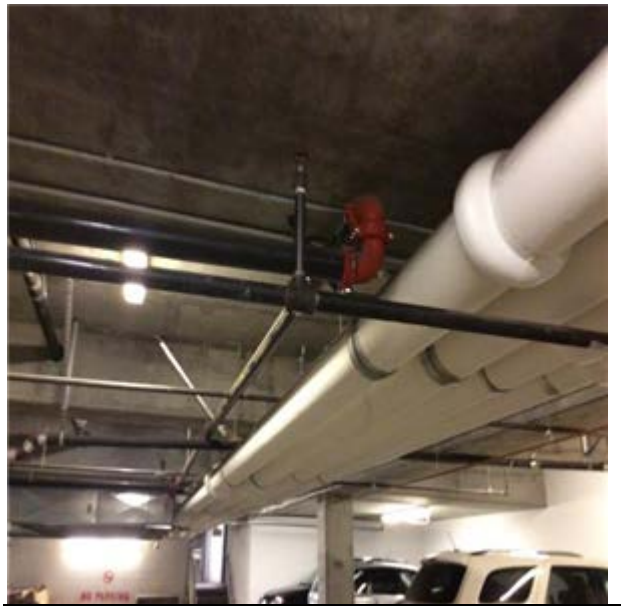
D3042 Exhaust Fan 12000 CFM

D3044 Isolation Valve HVAC Water Supply

D3051 Heat Pump Air to Air 3-Ton

D3051 Heat Pump Air to Air 15-Ton

D3068 DDC Controls



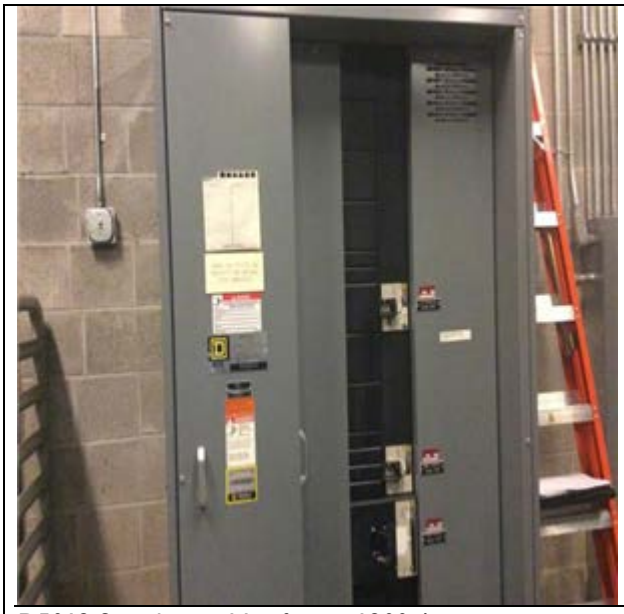
D4011 Sprinkler Heads

D4012 Fire Pump Electric 1500 Gpm

D5012 Secondary Dry Transformer 45 kVA

D5011 Main Dry Transformer 300kVA

D5012 Panel 225 Amps, 30 Circuits



D5012 Switchgear, Mainframe, 1200 Amps

D5037 Fire Alarm System

D5037 Fire Alarm Panel

G2031 Paving & Surfacing

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

EAST END 5-BUILDING COMPLEX FACT SHEET

Multiple in East Capitol Area - See Below
Sacramento
Sacramento County
Category 4 - Low Priority - Constructed in Last 20 Years, Special Repairs and Maintenance

BUILDING INFORMATION

- Age: 11-12 years (completed in 2002-03)
- Size:* Five 5-7-story structures in this complex
  2,178,825 GSF combined (Includes Garage)
  10.07 acre complex total
  1,609 parking structure spaces
  Capacity - 6,054 occupants
- Financial: State Public Works Board
  Lease-Revenue Bond 2002 Series A, matures December 2027
  Original Bond $455,165,000 - Balance as of 6/30/13 Real Property #: 10500
  $338,170,000
  IRR Rate - $3.49/month per SF, FY 2013-14 (DGS Price Book)
  $3.41/month per SF, FY 2014-15 (Proposed DGS Price Book)
- LEED Status: Certified Silver LEED-EB, 2010
- Tenants:

1430 N Street - Block 225 Completed in 2002 (11 years) SPI Structure #: 5155
Occupied by the Department of Education. SOLD retail tenants are KI Gifts, Yellowbill, Zia's Deli, Curry Club, and East End Child Care Center BPM #: 049
475,128 GSF 298,859 NSF 298,859 Assigned SF

1501 Capitol Avenue - Block 171 Completed in 2003 (10 years) SPI Structure #: 5157
Occupied by the Department of Public Health and Department of Health Care Services BPM #: 051
436,102 GSF 358,073 NSF 358,073 Assigned SF

1500 Capitol Avenue - Block 172 Completed in 2003 (10 years) SPI Structure #: 5156
Occupied by the Department of Health Care Services and the Department of Public Health BPM #: 052
177,992 GSF 132,436 NSF 132,436 Assigned SF

1615 Capitol Avenue - Block 173 Completed in 2003 (10 years) SPI Structure #: 5159
Occupied by the Department of Public Health, the Department of Health Care Services and a Department of Rehabilitation restaurant BPM #: 053
219,444 GSF 169,060 NSF 162,240 Assigned SF

1616 Capitol Avenue - Block 174 Completed in 2003 (10 years) SPI Structure #: 5160
Occupied by the Department of Public Health and the Mental Health Services Oversight Commission BPM #: 054
248,118 GSF 198,979 NSF 198,404 Assigned SF

COMPLETED STUDIES AND SIGNIFICANT FINDINGS

A. 2009 American Disability Act Accessibility Compliance Survey

This survey indicated various areas of inaccessibility, with a significant number involving potential major alterations in Blocks 171, 172, 173, 174, and 225. Items include room identification signage and exit stair signage in all buildings and in Block 173 corrections in the men's and women's showers in the locker rooms.

B. 2010 Marx/Okubo Property Condition Assessment (For Sale-Leaseback)

This report noted some probable future repairs. The recommendations include tuck point mortar and clean stone at the amphitheater between buildings at Blocks 173 and 174, and a reserve for corrections to inspect and certify the window washing system for Blocks 171-174. An additional recommendation is to include a reserve to apply non-slip elastomeric traffic coat at the top level of the parking garage deck.

* Source: Statewide Property Inventory

C 2012 Access Compliance Conceptual Budget/Evaluation

In follow up to the 2009 American Disability Act Accessibility Compliance Survey this report provides the Conceptual Cost and Path of Travel Plans. ADA upgrades have been proposed for these buildings as part of DGS's ten year ADA Compliance Upgrades and Deferred Special Repairs Program.

ADDITIONAL BUILDING ISSUES

As indicated in the Marx/Okubo report, mortar used at the amphitheater stone between 1615 and 1616 is beginning to deteriorate allowing water to intrude beneath the stone. Repairs using a flexible sealant and/or injected hydrophilic material are recommended.

CURRENT UTILIZATION PROJECTS

CDPH and DHCS are consolidating staff in the East End Complex to maximize the utilization of their space assignments.

RECENTLY COMPLETED PROJECTS

Cost

TBD

ACTIVE PROJECTS

Cost

TBD

PLANNED SPECIAL REPAIRS BY FISCAL YEAR

Estimated Cost

TBD

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

APPENDIX G: COST TABLES

10 YEAR EXPENDITURE FORECAST

East End Complex Block 172
1500 Capitol Avenue
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	Elevator machine room	Replace B2011 Stucco and Lath	30	0	1,000.00	SF	$18.33	IN - Reliability	Priority 1	$18,327	$0	$0	$0	$0	$0	$0	$0	$0	$0	$18,327	$0
B2011	B2011 Exterior Wall Construction	B2011 Granite Veneer	Exteriors	Replace exterior sealant	18	3	1,000.00	LF	$15.65	OP - Maintenance	Priority 3	$0	$0	$0	$15,650	$0	$0	$0	$0	$0	$0	$0	$15,650
B2011	Stone Veneer - First Floor	B2011 Precast veneer panels	First through sixth floors	Replace exterior sealant	18	3	4,000.00	LF	$15.65	OP - Maintenance	Priority 3	$0	$0	$0	$62,600	$0	$0	$0	$0	$0	$0	$0	$62,600
B30	**ROOFING**																						
B3010	B3010 Roof Coverings	B3011 Liquid Applied Waterproofing	Roof	Pressure wash roof	15	8	35,844.00	SF	$1.50	IN - Reliability	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$53,766	$0	$0	$53,766
	B3010 Roof Coverings	B3011 Liquid Applied Waterproofing	Roof	Replace B3011 Liquid Applied Waterproofing	20	8	358.00	SQ	$1,806.36	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$646,676	$0	$0	$646,676
B3014	B3014 Flashings & Trim	B3014 Coping	Coping at parapets	Replace sealant at coping	15	3	2,100.00	LF	$15.65	OP - Maintenance	Priority 3	$0	$0	$0	$32,865	$0	$0	$0	$0	$0	$0	$0	$32,865
Shell Subtotal												**$18,327**	**$0**	**$0**	**$111,115**	**$0**	**$0**	**$0**	**$0**	**$700,442**	**$0**	**$18,327**	**$811,557**
C. INTERIORS																							
C10	**INTERIOR CONSTRUCTION**																						
C1021	Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware	C1021 Interior Doors	Complete building	Replace C1021 Interior Doors	30	8	220.00	EA	$2,403.12	IN - Appearance	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$528,686	$0	$0	$528,686
C1031	C1031 Fabricated Toilet Partitions	C1031 Fabricated Toilet Partitions	Restrooms	Replace toilet partitions	20	8	96.00	EA	$1,601.60	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$153,754	$0	$0	$153,754
C20	**STAIRS**																						
C2014	C2014 Stair Handrails and Balustrades	C2014 Steel stairs	Six stair wells	Prep and paint steel stairway parts	7	4	28,800.00	SF	$1.56	OP - Maintenance	Priority 3	$0	$0	$0	$0	$44,928	$0	$0	$0	$0	$0	$0	$44,928
C30	**INTERIOR FINISHES**																						
C3024	Vinyl Tile	C3024 Vinyl Tile	Break & copy rooms	Replace C3024 Vinyl Tile	18	5	213.00	SY	$125.78	IN - Appearance	Priority 4	$0	$0	$0	$0	$0	$26,791	$0	$0	$0	$0	$0	$26,791
C3025	Carpet Tiles - Standard	C3025 Carpet Tiles - Standard	First, second & third floors	Replace C3025 Carpet Tiles - Standard	10	4	6,888.00	SY	$96.61	IN - Appearance	Priority 3	$0	$0	$0	$0	$665,419	$0	$0	$0	$0	$0	$0	$665,419
C3025	Carpet Tiles - Standard	C3025 Carpet Tiles - Standard	Fourth, fifth & sixth floors	Replace C3025 Carpet Tiles - Standard	10	3	8,533.00	SY	$96.61	IN - Appearance	Priority 3	$0	$0	$0	$824,336	$0	$0	$0	$0	$0	$0	$0	$824,336
C3032	Acoustical Tile With Exposed Grid System	C3032 Acoustical Ceiling Tile	Ceilings first, second and third floors	Replace C3032 Acoustical Ceiling Tile	20	8	690.00	CSF	$1,201.56	IN - Appearance	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$829,076	$0	$0	$829,076
C3032	Acoustical Tile With Exposed Grid System	C3032 Acoustical Ceiling Tile	Ceilings,fourth, fifth and sixth floors	Replace C3032 Acoustical Ceiling Tile	20	7	853.00	CSF	$1,201.56	IN - Appearance	Priority 4	$0	$0	$0	$0	$0	$0	$0	$1,024,931	$0	$0	$0	$1,024,931
Interiors Subtotal												**$0**	**$0**	**$0**	**$824,336**	**$710,347**	**$26,791**	**$0**	**$1,024,931**	**$1,511,516**	**$0**	**$0**	**$4,097,921**
D. SERVICES																							
D20	**PLUMBING**																						
D2013	Counter Top Sink and Faucet	D2013 Counter Top Sink and Faucet	Restrooms	Install automatic faucets with motion sensors	20	1	40.00	EA	$400.00	OP - Energy	Priority 2	$0	$16,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$16,000
D2018	Drinking Fountain	D2018 Drinking Fountain	Floors 1-6	Replace D2018 Drinking Fountain	10	6	6.00	EA	$2,876.60	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$0	$0	$17,260	$0	$0	$0	$0	$17,260
D30	**HVAC**																						
D3016	Solar Panel 3' x 8'	D3016 Solar Panels 2' x 4'	Rooftop	Replace faulty solar panels as needed	15	0	40.00	EA	$1,276.00	IN - Reliability	Priority 1	$51,040	$0	$0	$0	$0	$0	$0	$0	$0	$0	$51,040	$0
D3022.1	Circulation Pump 30 HP	D3022 HVAC Chill Water Circulation Pump 30 HP	Mechanical Room - Loading Dock	Replace D3022 HVAC Chill Water Circulation Pump 30 HP	20	8	1.00	EA	$26,054.88	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$26,055	$0	$0	$26,055
D3025	Gas-Fired Unit Heater, Suspension Mounted, Propeller Fan, 150 - 180 MBH	D3025 Gas Fired Heater	Loading Dock	Replace D3025 Gas Fired Heater	20	8	2.00	EA	$4,032.18	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$8,064	$0	$0	$8,064
D3041.2	Vav Box , 600 to 1500 CFM	D3041 Terminal Units VAV	Floors 1-6	Replace D3041 Terminal Units VAV	30	9	162.00	EA	$3,460.49	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$560,600	$0	$560,600
D3044	Isolation Valve, Iron Body, Butterfly	D3044 Isolation Valve HVAC Water Supply	Parking Garage	Replace D3044 Isolation Valve HVAC Water Supply	20	0	4.00	EA	$4,774.32	IN - Beyond Rated Life	Priority 1	$19,097	$0	$0	$0	$0	$0	$0	$0	$0	$0	$19,097	$0
D3051.1	Heat Pump Air to Air 3-Ton	D3051 Heat Pump Air to Air 3-Ton	Rooftop	Replace D3051 Heat Pump Air to Air 3-Ton	20	8	1.00	EA	$10,447.25	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$10,447	$0	$0	$10,447
D3051.1	Heat Pump Air to Air 10-Ton	D3051 Heat Pump Air to Air 15-Ton	Rooftop	Replace D3051 Heat Pump Air to Air 15-Ton	20	8	1.00	EA	$35,540.88	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$35,541	$0	$0	$35,541
D3068	Direct Digital Controls (DDC) Extensive	D3068 DDC Controls	Throughout Facility	Replace D3068 DDC Controls	20	8	281,186.00	SF	$8.23	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$2,315,173	$0	$0	$2,315,173
D50	**ELECTRICAL SYSTEMS**																						
D5012	Switchgear, Mainframe, 1200 Amps	D5012 Switchgear, Mainframe, 1200 Amps	Main Electrical Room	A full infrared scan, cleaning, and tightening effort is scheduled for 2015.	15	0	1.00	Each	$25,000.10	IN - Reliability	Priority 1	$25,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$25,000	$0
Services Subtotal												**$95,137**	**$16,000**	**$0**	**$0**	**$0**	**$0**	**$17,260**	**$0**	**$2,395,280**	**$560,600**	**$95,137**	**$2,989,140**
E. EQUIPMENT & FURNISHING																							
Equipment & Furnishing Subtotal												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
F. SPECIAL CONSTRUCTION AND DEMOLITION																							
Special Construction And Demolition Subtotal												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
G. BUILDING SITEWORK																							
G20	**SITE IMPROVEMENTS**																						
G2031	G2031 Paving & Surfacing	G2031 Paving & Surfacing	Near building entrance	Replace G2031 Paving & Surfacing	40	0	60.00	SF	$100.02	CC - Life Safety	Priority 1	$6,001	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,001	$0
Building Sitework Subtotal												**$6,001**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$6,001**	**$0**
Z. GENERAL																							
General Subtotal												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
												Expenditure Totals per Year	**$119,466**	**$16,000**	**$0**	**$935,451**	**$710,347**	**$26,791**	**$17,260**	**$1,024,931**	**$4,607,239**	**$560,600**	**$119,466**	**$7,898,618**
												Total Cost (Inflated @ 5% per Yr.)	**$119,466**	**$16,800**	**$0**	**$1,082,901**	**$863,432**	**$34,193**	**$23,130**	**$1,442,180**	**$6,806,990**	**$869,674**	**Total ***	**$8,018,084**

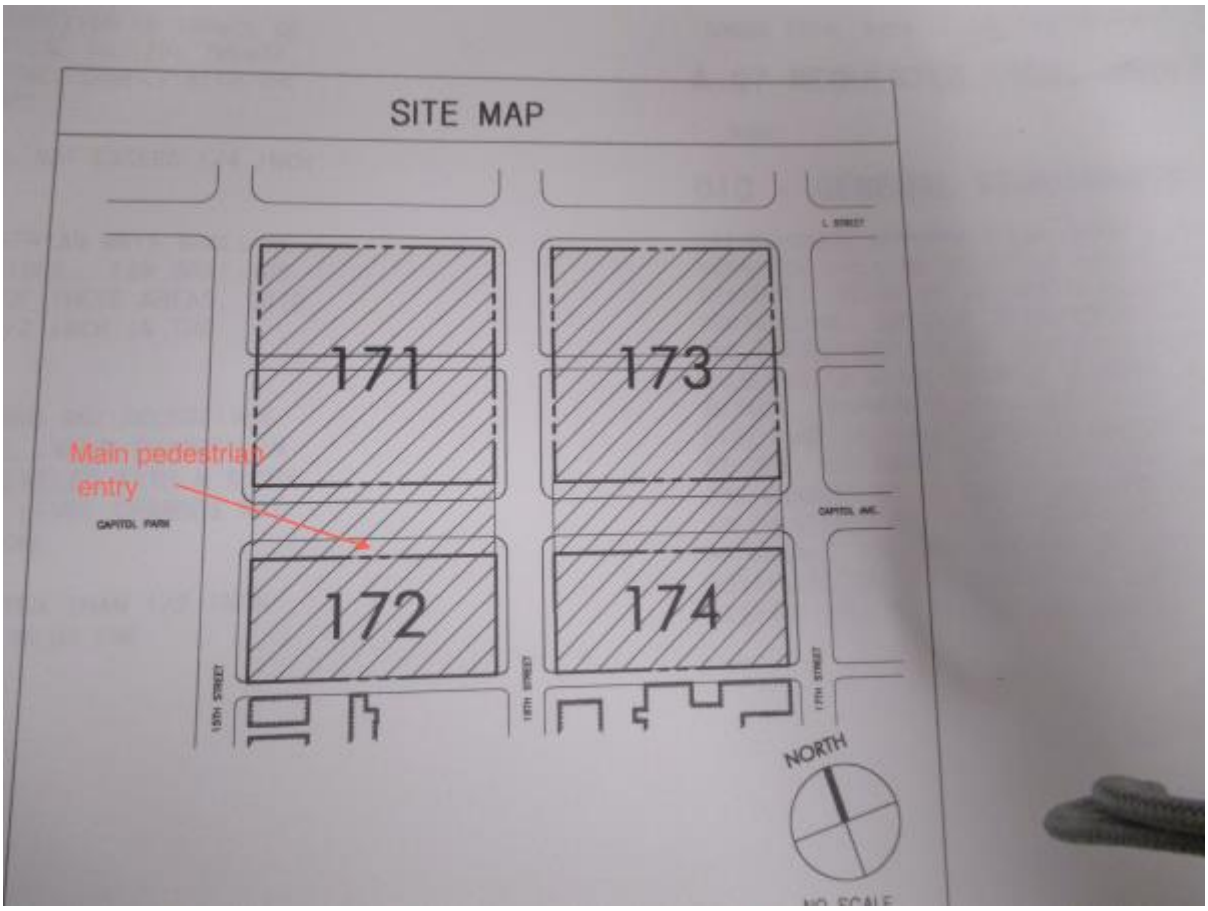
*** - Present Value Currency**

Current Repl.Value $74,282,473

Footnotes

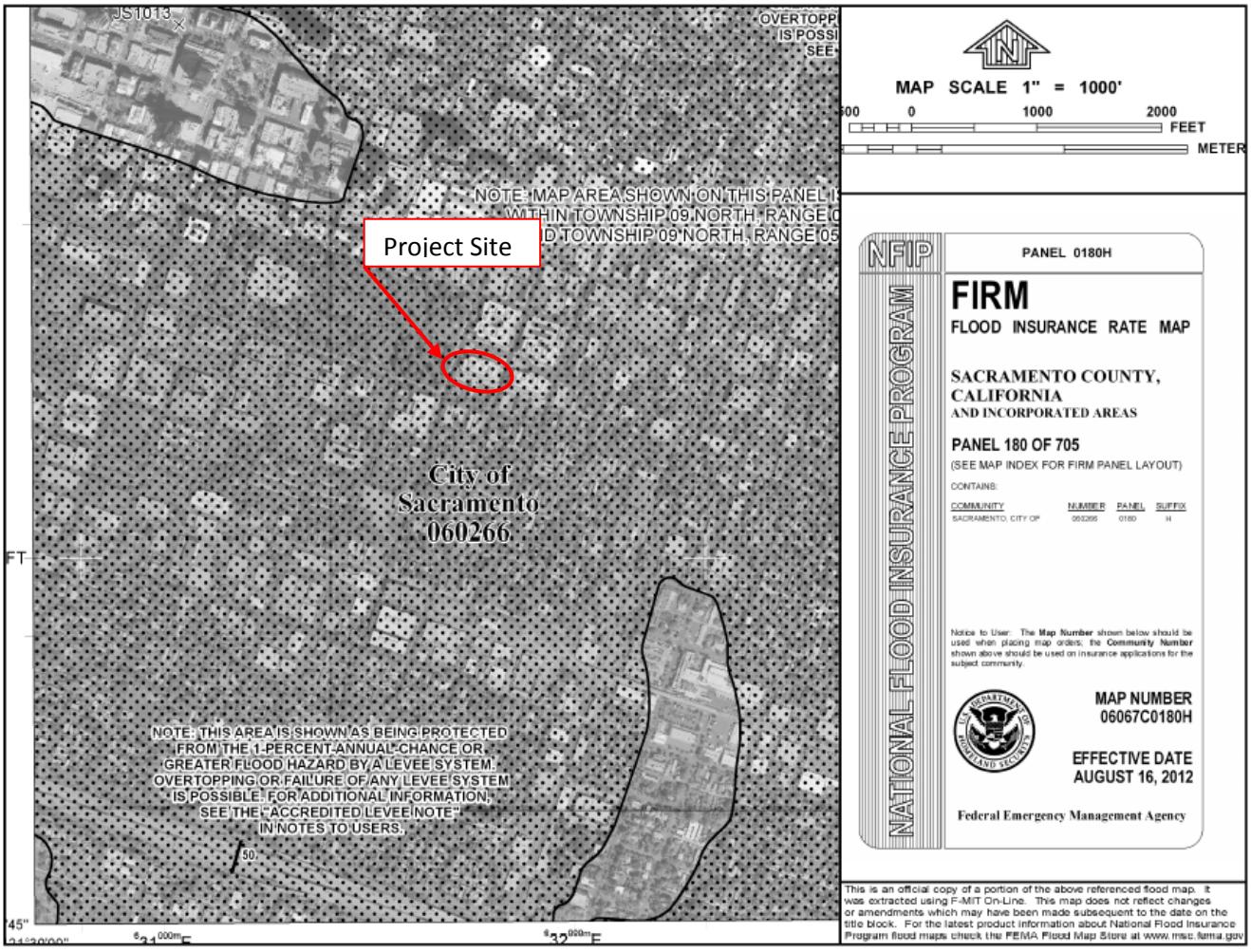
1 Detailed descriptions for Useful Life and Plan Type can be found in the Appendices of the Facility Condition
2 Detailed Descriptions of the Priorities can be found in the Appendices of the Facility Condition Assessment

APPENDIX H: SUPPORTING DOCUMENTATION



EMG	**Source:** **The north arrow indicator is an approximation of 0° North.**	**Project Number:** 111326.14R-022.305 **Project Name:** East End Complex Block 172
N		**On-Site Date:** January, 6, 2015

Flood Map



EMG	**SOURCE:** FEMA	**Project Number:** 111326.14R-022.305
N		**Project Name:** East End Complex Block 172
	Not drawn to scale. The north arrow indicator is an approximation of 0° North.	**On-Site Date:** January 6, 2015

Estimate of Structures Cost Using Marshall Cost Systems

East End Block Complex 172 (052)

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	$334.02	177,912	$59,425,978
	$0.00	0	$0
	$0.00	0	$0
	$0.00	0	$0
	$0.00	0	$0
	Total	177,912	$59,425,978

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	$59,425,978	25.00%	$74,282,473
	$0	25.00%	$0
	$0	25.00%	$0
	$0	25.00%	$0
	$0	25.00%	$0
Cost Per SF	**$417.52**	**Total Estimate**	**$74,282,473**

ADA Checklist

Property Name: East End Complex Block 172
Date: January 6, 2015
Project Number: 111326.14R-022.305

EMG Abbreviated Accessibility Checklist					
	Building History	**Yes**	**No**	**N/A**	**Comments**
1.	Has the management previously completed an ADA review?	✓			
2.	Have any ADA improvements been made to the property?	✓			
3.	Does a Barrier Removal Plan exist for the property?				Unknown
4.	Has the Barrier Removal Plan been reviewed/approved by an arms-length third party such as an engineering firm, architectural firm, building department, other agencies, etc.?				Unknown
5.	Has building ownership or management received any ADA related complaints that have not been resolved?	✓			Elevator wait times
6.	Is any litigation pending related to ADA issues?				Unknown
	Parking Blk 171 & Blk 172	**Yes**	**No**	**N/A**	**Comments**
1.	Are there sufficient accessible parking spaces with respect to the total number of reported spaces?	✓			387 total, nine accessible spaces, only eight are required.
2.	Are there sufficient van-accessible parking spaces available (96" wide/ 96" aisle for van)?	✓			Three van spaces required, three provided
3.	Are accessible spaces marked with the International Symbol of Accessibility? Are there signs reading "Van Accessible" at van spaces?	✓			
4.	Is there at least one accessible route provided within the boundary of the site from public transportation stops, accessible parking spaces, passenger loading zones, if provided, and public streets and sidewalks?	✓			
5.	Do curbs on the accessible route have depressed, ramped curb cuts at drives, paths, and drop-offs?	✓			
	Parking Blk 171 & Blk 172	**Yes**	**No**	**N/A**	**Comments**
6.	Does signage exist directing you to accessible parking and an accessible building entrance?	✓			

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

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

EMG Abbreviated Accessibility Checklist					
8.	Are grab bars provided in toilet stalls?	✓			
	Restrooms	**Yes**	**No**	**N/A**	**Comments**
9.	Are sinks provided with clearance for a wheelchair to roll under (29″ clearance)?	✓			
10.	Are sink handles operable with one hand without grasping, pinching or twisting?	✓			
11.	Are exposed pipes under sink sufficiently insulated against contact?	✓			
12.	Are soap dispensers, towel, etc. reachable (48″ from floor for frontal approach, 54″ for side approach)?	✓			
13.	Is the base of the mirror no more than 40″ from the floor?	✓			

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: JORDAN JUNIO

Building name: East End Complex Block 172 (052)

What is your association with this property? MAINTENAIN AND MANAGE THE BUILDING

What is the length of your association with this property? AROUND 7 YEARS

Phone number: 916-445-3501

Please provide information about inspections relating to the following items

Inspections	Date Last Inspected	List Name & Contact for Maintenance Contractor, if any.
1. Elevators	APRIL 2014	THYSSEN KRUPP
2. HVAC, Mechanical, Electric, Plumbing	JANUARY 2015	IN-HOUSE -BUILDING AND PROPERTY MANAGEMENT
3. Life-Safety/Fire	JANUARY 2015	HONEYWELL INTERNATIONAL, NATIONAL FIRE INC.
4. Roofs	JANURY 2015	IN-HOUSE, BUILDING AND PROPERTY MANAGEMNT

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?

PLANNED FOR THE UPGRADE OF THE AUDIO/VIDEO EQUIPMENT IN THE AUDITORIUM - ESTIMATED COST AROUND $600,000.00

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

12 YEARS

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

HVAC - ANNUAL PM - CONTRACTED OUT, ROOF -INSPECTIONS AND MAINTENANCE - IN HOUSE

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				MINOR WINDOW LEAKS MULTIPLE SPOTS DUE TO DETERIORATED CAULKINGS
17. Are there any roof leaks?		x			
18. Is the roofing covered by a warranty or bond?		x			WARRANTY EXPIRED 2013
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				IRRIGATION AUTOMATION IS CURRENTLY NON-FUNCTIONAL -REQUIRING COMPUTER RE-PRO-GRAMING OR SYSTEM UPGRADE
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				DGS-RESD-BPM-ESHOP
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	SALE-LEASEBACK CASE -2008
37. Has the State previously completed an ADA or 'Title 24 review?	x				
38. Have any ADA or Title 24 improvements been made to the property?				x	
39. Does a Barrier Removal Plan exist for the property?			x		
40. Has the Barrier Removal Plan been approved by a credentialed third party?			x		
41. Have there been any ADA or Title 24 related complaints?				x	
42. Have there been any complaints about the elevators or wait times?		x			
43. Are there any problems with exterior lighting?		x			
44. Are there any other significant issues/hazards with the property?		x			
45. Are there any unresolved construction defects at the property?		x			

APPENDIX J: ELEVATOR REPORT

East End – DHCS and CDPH HQ
1500, 1501, 1615, and 1616 Capitol Avenue
Sacramento, CA

Due Diligence
Elevator Report

June 5, 2015

Prepared for:

Ms. Karla Rodriquez
EMG Corporation
Hunt Valley, MD 21212

Prepared by:

Mr. Bob Nicholson
President
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1326 5th Ave., Suite 630
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ARCHITECTURAL ELEVATOR CONSULTING, LLC

TABLE OF CONTENTS

Section I: Executive Summary

A. Introduction

On February 4th and 5th , 2015 Russell Holt of Architectural Elevator Consulting, LLC (AEC) surveyed all the vertical transportation systems at the East End – DHCS and CDPH HQ 1500-1501, 1615, and 1616 Capital Avenue, Sacramento, CA. There are four separate buildings with a total of twenty-six (26) elevators. Twenty-five (25) of the elevators are geared traction type and one (1) is an in-ground hydraulic elevator. The elevators provide vertical transportation to all the office floors in each building and one below grade level of parking. The purpose of the survey was to review the major components, to identify upgrades needed over the next ten years and check for compliance with various codes. In addition to reviewing the major components of the elevators we checked the performance parameters of the equipment and tested safety devices such as door restrictors, electric edges and emergency phones.

All the traction elevators were manufactured and installed by ThyssenKrupp Elevator (TKE) during the original building construction from 2002 to 2003. The traction elevators have TKE's TAC 50 controller, GD-1 machines, solid-date drives, HD-91 door operators and TKE signal fixtures. The single hydraulic elevator has TKE's DMC controller and pump units. All of this equipment is regarded as high-quality.

During our survey we noted that the elevators were being properly maintained by ThyssenKrupp Elevator. Housekeeping in the machine rooms was noted to be very good, most the pits, car tops and door equipment was also noted to be clean and adjusted well. Most of the door open times were slow but the floor-to-floor times were close to design and the full speeds that were checked were at design. All of the elevators have had annual and five year full load tests as required by Group III in California, and they were current.

B. Elevator Layout

Each building has four to six passenger elevators and one (1) service elevator. The passenger elevators have fast and efficient center opening doors with capacities if 3,500 lbs. The larger service elevators have 4,500 lbs. capacities and side opening doors. All the traction elevators are rated for 350 FPM and the single hydraulic elevator at 1615 is rated for 3,500 lbs. and 150 FPM.

Elevator Summary -1501 Capitol Ave. (Blk 171)				
Elevator Bank	**Elevator Speed**	**Floors Served**	**Capacity**	**Door Type**
Cars 1-6	350 FPM	P, 1-6	4,000 lbs.	Center
Car 7	350 FPM	P, 1-6	4,500 lbs.	Side

Elevator Summary -1500 Capitol Ave. (Blk 172)				
Elevator Bank	**Elevator Speed**	**Floors Served**	**Capacity**	**Door Type**
Cars 8-11	350 FPM	P, 1-6	3,500 lbs.	Center
Car 12	350 FPM	P, 1-6	4,500 lbs.	Side

Elevator Summary -1615 Capitol Ave. (Blk 173)				
Elevator Bank	**Elevator Speed**	**Floors Served**	**Capacity**	**Door Type**
Car 13	150 FPM	P, 1-5	3,500 lbs.	Center
Car 14-15	350 FPM	P, 1-5	3,500 lbs.	Center
Cars 16 – 19	350 FPM	P, 1-7	3,500 lbs.	Center
Car 20	350 FPM	P, 1-7	4,500 lbs.	Side

Elevator Summary -1616 Capitol Ave. (Blk 174)				
Elevator Bank	**Elevator Speed**	**Floors Served**	**Capacity**	**Door Type**
Cars 21-25	350 FPM	P, 1-7	3,500 lbs.	Center
Car 26	350 FPM	P, 1-7	4,500 lbs.	Side

C. Condition/Components

Most the major components of the elevators were found to be in good to very good condition. The elevators have solid-state controllers with energy efficient VF AC drives. The car and hall signal fixtures meet ADA and were in good condition. The machines, car equipment and door operators are in good condition. The equipment is approximately 13 years old and should last another 10 years without needing a 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 above average. The performance was observed to be close to the designed times and speeds. A majority the pits and car tops were found to be clean. The annual and five year tests are current on all the elevators. In ***Appendix C*** of this report we provide a summary of the performance times for each elevator followed by a maintenance deficiency list. We recommend this list be provided to the elevator service provider so they can improve the door open times.

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 ADA and California Title 24 requirements. The sizes of the passenger elevators meet ADA for new and existing elevators. All the cars had proper hall lanterns and gongs. ***Appendix A*** provides a complete listing of the ADA/T24 requirements.

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 were installed with all of these features and are thus in full compliance.

3. **Seismic:** The elevators were installed in 2002/2003 under California Group III seismic code. They have seismic fishplates, brackets and full seismic operation. No work is needed for seismic compliance.

F. Recommendation:

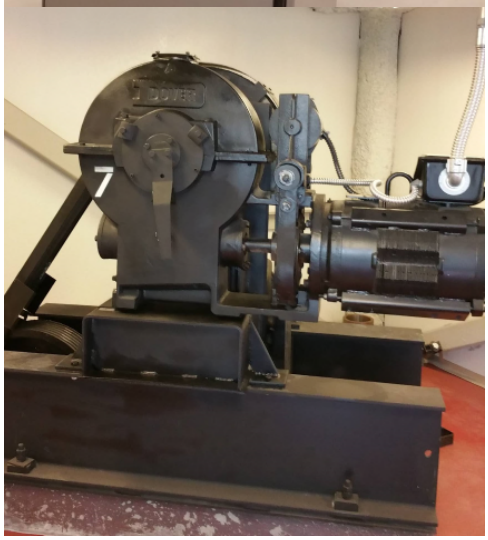
No work is recommended at this time other than to continue the high level of maintenance.

Section II: Component Review

A. MACHINE ROOM:

Controllers:

The controllers were manufactured and installed by TKE in 2003/2003. The controllers are TKE's TAC 50 which are known to be a reliable elevator system.



Machines:

All the traction elevators have TKE geared hoist machines that were found to be in good to excellent condition. The machines have AC hoist motors and the sheaves have seismic rope guards.

Mainline Disconnect:

The elevators have code complying disconnects that are in good condition. No work is anticipated.

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 found to be in good condition.

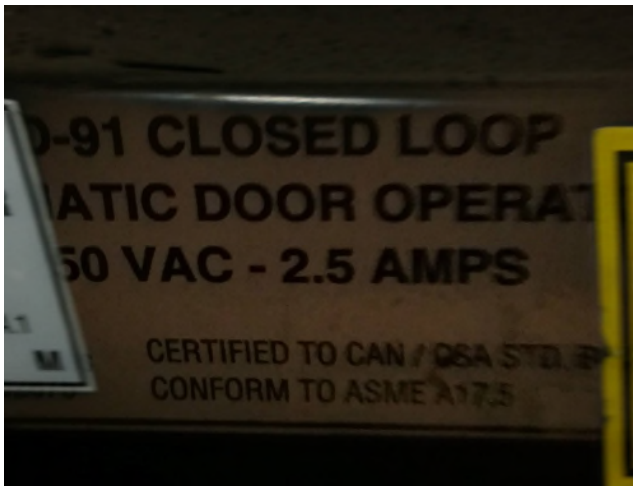
Car Guide Rails:

The car rails are in good condition and have seismic fishplates. No work is needed on the guide rails.

Pits:

The pits were found to be dry. Most of the pits were clean but a few had some minor dust.

C. CAR TOP:



Door Operator:

The door operators are TKE's HD-91 which are known to be reliable and closed loop.

Car Roller/Slide Guides:

On both sides of the elevators and on the top and bottom roller guides keep the elevators riding up and down the steel guide rails. All the cars and counterweights have high quality TKE roller guides that were in good condition.

D. SIGNAL FIXTURES:

Car Operating Panels:

All the Car Operating Panels (COP's) are original. The panels are in good condition and meet all ADA and T24 however. The buttons are stainless steel and high quality.

Hall Lanterns:

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

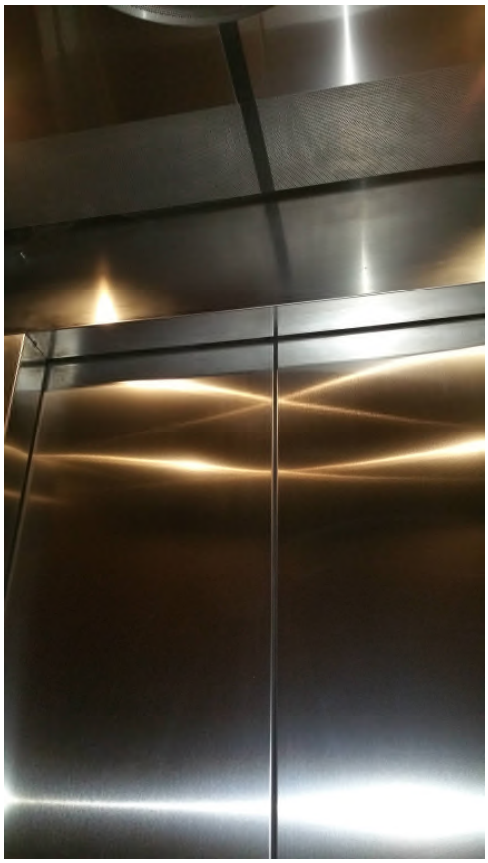
Hall Call Pushbuttons:

At each floor hall call push buttons are located so that users can call the elevator. The hall call stations have raised operation buttons which meet ADA and California Title 24. They also have the code required fire exit signs in station.

E. CAB INTERIOR:

Wall Finish:

The existing cab interiors are in good condition and have the code required handrails. The service cars in each building have stainless steel cabs which are desired for service cars.



Ceilings:

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

Vertical Transportation

East End DHCS and CDPH - HQ 1500, 1501, 1615, and 1616 Capitol Ave.

Item No.	Recommendation	Rating	Quantity	Unit	Unit Cost	Immediate Code Items	Immediate - Repair	Years 1-3	Years 4-6	Years 7-10	Totals
1	No costs			EA							$0
2				EA							$0
3				EA							$0
4				EA							$0
5				EA							$0
6				EA							$0
7				EA							$0
8				EA							$0
9				EA							$0
10				EA							$0
11											
12											
	Subtotal					$0	$0	$0	$0	$0	$0

1	$0	Code and Safety
2	$0	Deferred Maintenance & Repair
3	$0	Capital Expenditure
4	$0	Modernization / Improvements
5	$0	Total

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

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		Cars 1-26
	GENERAL	
4.10.1	Elevator must comply with ASME A17.1-1990. Freight elevators are not acceptable unless only elevator provided, and is permitted to carry passengers, both public and employees.	Yes
	AUTOMATIC OPERATION	
4.10.2	Elevators must be Automatic.	Yes
4.10.2	Self-leveling to within 1/2 in.	Yes
	HALL CALL BUTTONS	
4.10.3	Buttons centered at 42 in. above the floor.	Yes
4.10.3	Buttons to illuminate when call is entered and extinguish when answered.	Yes
4.10.3	Buttons to be at least 3/4 in. in the smallest dimension.	Yes
4.10.3	Up button located above down button.	Yes
4.10.3	Buttons raised or flushed. **(T24 must be raised)**	Yes
4.10.3	Objects mounted beneath hall buttons not to project into the lobby more than 4 in.	Yes
	HALL or CAR LANTERNS	
4.10.4	Visible and audible signals at each hoistway entrance to indicate which car is responding to the call.	Yes – Hall
4.10.4	Audible signals to sound once for up and twice for “down” or may verbal announcement stating “up” “down.”	Yes
4.10.4	Hall directional lantern centered 72 in. above floor.	Yes
4.10.4	Directional lantern visible elements minimum of 2-½ in. in the smallest dimension.	Yes
4.10.4	Directional lanterns must be visible from the vicinity of the hall call button.	Yes
4.10.4	In car lanterns, meeting the requirements above are acceptable in lieu of hall directional lanterns.	N/A
	HOISTWAY ENTRANCES	
4.10.5	Raised and Braille floor designations are required on both door jambs. Permanently applied plates are acceptable. **(T24 must be to the left)**	Yes
4.10.5	Centerline of floor designation characters 60 in. above floor.	Yes
4.30.4	Characters must be 2 in. high, raised 1/32 in. upper sans serif (block letters) or simple serif type.	Yes
4.30.4	Grade II Braille to accompany raised characters.	Yes
	DOOR PROTECTIVE & REOPENING DEVICES	
4.10.6	Doors must open and close automatically.	Yes
4.10.6	Non-contact door reopening device at 5 in. and 29 in. above the floor.	Yes
4.1.6(3)(c)	If safety edges are provided on existing elevators, the non-contact door reopening devices may be omitted.	Yes

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		Cars 1-26
4.10.6	Reopening device to remain operational for at least 20 seconds.	Yes
	DOOR AND SIGNAL TIMING	
4.10.7	Minimum acceptable door open time from notification car is answering a hall call until the car doors begin to close: *T=D / 1.5ft/s*, where *T* is the total time in and *D* is the distance from a point in the lobby or corridor 60 in. directly in front of the farthest button controlling that car to centerline of its hoistway door.	Yes
4.10.7	Minimum acceptable notification time 5.0 seconds.	Yes
	DOOR DELAY FOR CAR CALLS	
4.10.8	Doors to remain open for a minimum of 3.0 seconds in response to car calls.	Yes
	FLOOR PLAN NEW ELEVATOR	
4.10.9	At least 36" wide door. Side Open Door: Cab must be 5'-8" wide x 4'-3" deep Center Open Door: Cab must be 6'-8" wide by 4'-3" deep	Yes
	FLOOR PLAN EXISTING ELEVATOR	
4.1.6	Minimum of 48" x 48"	Yes
4.10.9	Clearance between car platform sill and edge of hoistway landing sill no greater than 1-¼ in.	Yes
	Handrails Circular Square Dia.____Top of Handrail _____ Height Side Back **(T24 must be 32")**	Yes
	FLOOR SURFACES	
4.10.10	Surfaces to be stable, firm and slip resistant.	Yes
4.5.3	Carpeting if installed must have firm cushion, pad or backing, or no cushion or pad. Carpeting must have level loop, textured loop, level pile texture. Carpeting pile thickness not to exceed 1/2 in. Carpeting must have exposed edges fastened to the floor surface. Exposed edges of carpets must be trimmed.	Yes
	ILLUMINATION LEVELS	
4.10.11	Five foot-candles of illumination to be provided at car controls, platform and at sill.	Yes
	CAR CONTROLS	
4.10.12	Buttons to be at least 3/4 in. in their smallest dimension.	Yes
4.10.12	Buttons must be flush or raised. **(T24 must be raised)**	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

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		Cars 1-26
4.10.12	Call button illuminates when call is entered and extinguish when answered.	Yes
4.10.12	Floor buttons must be no higher than 48 in. when located in front return. Buttons must be no higher than 54 in. when a side approach provided.	Yes
4.10.12	Emergency controls, including emergency alarm and emergency stop (if provided) must be grouped at the bottom of the panel and have centerlines no less than 35 in. above the finished floor.	Yes
4.10.12	Controls must be on the front return wall with center-opening doors. They may be on the front return or strike jamb sidewall with side doors.	Yes
	CAR POSITION INDICATORS	
4.10.13	Visual car position indicator must be provided above control panel or over door.	Yes
4.10.13	Car position indicator numerals must be a minimum of 1/2 in. high.	Yes
4.10.13	Audible signal to sound as the car passes or stops at a floor and a corresponding floor designation must illuminate. Audible signal must be at least 20 dB with a frequency no higher than 1,500 Hz.	Yes
4.10.13	A button to activate audible signal only for desired trip may be provided.	N/A
4.10.13	An automatic verbal announcement the floor at which a car stops may be substituted for the audible signal.	N/A
	EMERGENCY COMMUNICATIONS	
4.10.14	If provided, emergency two-way communication systems between the elevator and a point outside the hoistway must comply with ASME A17.1-1990, Rule 211.1.	Yes
4.10.14	The highest operable part must be a maximum of 48 in. from the car floor.	Yes
4.10.14	Emergency communication identification must be provided and located adjacent to the device. Characters must be a minimum of 5/8 in. high raised 1/32 in., upper case serif (block letters) or simple serif type, and accompanied by Grade II Braille.	Yes
4.10.13	If a handset is provided the cord must be at least 29 in. long.	N/A
4.27.4	If located in a closed compartment, the door must be operable with one hand. It must not require tight grasping, pinching or twisting of the wrist. The force required to open the door must not exceed 5 lb./f.	N/A
4.10.13	The system must not require voice communication.	Yes

Appendix "B"

A17.3 Code for Existing Traction Elevators

A17.3	Code Item	Cars: 1-26
2.1	**HOISTWAYS**	
2.1.1	Hoistway Construction (Enclosed & Fire rated per local code or ANSI/NFPA No. 101)	Yes
2.1.2	Windows in Hoistway Enclosures: (If provided are they guarded properly.)	Yes
2.1.3	Projections in Hoistway (Must be flush and level; Leveling zone +3"./ 60 to 75 deg. bevel.)	Yes
2.1.4	Pipes Conveying Gases, Vapors, or Liquids. (If provided must be properly covered & securely fastened.)	Yes
2.1.5	Counterweight Guards (Start at 12" go to 84" above pit floor; not needed with comp rope/chain)	N/A
2.2	**MACHINE ROOMS AND MACHINERY SPACES**	
2.2.1	Enclosures – Designated Machine Room (No-non elevator equipment- existing can stay)	Yes
2.2.2	Access to Machine Rooms and Machinery Spaces (A permanent means to the machine room- locked door)	Yes
2.2.3	Lighting(Permanent lighting in all machine rooms)	Yes
2.2.4	Ventilation (Natural or mechanical to avoid overheating)	Yes
2.2.5	Pipes Conveying Gases, Vapors, or liquids (Existing pipes allowed if guarded to prevent discharge)	Yes
2.2.6	Protection From Weather	Yes
2.3	**PITS**	
2.3.1	Access to Pits (Means of access to all pits. If access door provide closer & keys onsite.)	Yes
2.3.2	Drains (Drains connected directly to the sewer are not permitted.)	Yes
2.3.3	Stop Switch (A stop switch shall be provided for every pit. Locate near access, color, etc.)	Yes
2.4	**CLEARANCES AND RUNBYS**	
2.4.1	Horizontal Car Clearances (Not more than 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 Run by (Shall not exceed 24" for cars; or 36" for cwt.)	Yes
2.4.4	Top Car Clearance (Car does not strike any overhead structure)	Yes
2.4.5	Landing Sill Clearance (At least ½" for side guides; at least ¾" for corner guides. Max cannot exceed 1 ½".)	Yes
2.5	**PROTECTION OF SPACES BELOW HOISTWAYS**	
2.5	Counterweight safeties required	N/A
2.6	**HOISTWAY ENTRANCES**	
2.6.1	Doors or Gates Required (Passenger Elevators – full width/height – no hand latches.) (Freight Elevators – at least 6-0" gate)	Yes
2.6.2	Closing of Hoistway Doors (Door closers required on cars except swinging portion of horizontal door)	Yes
2.6.3	Hoistway Door Vision Panels (Required on manually operated or self-closing doors, location, Size, and type of glass)	N/A
2.6.4	Door Hangers (Prevent jumping, and stops, 4 times load)	Yes
2.6.5	Non-Shearing Astragals (For vertical bi-parting doors only)	N/A
2.6.6	Pull Straps (Must not be more than 6'-6" from floor when open)	N/A
2.7	**HOISTWAY DOOR LOCKING DEVICES, PARKING, DEVICES, AND ACCESS**	
2.7.1	Hoistway Door or Gate Locking Devices (Mechanical and electrical interlocks required)	Yes
2.7.2	Elevator Parking Device (For cars operated from within car only)	N/A
2.7.3	Access to Hoistway (Hoistway door unlocking devices and access switches)	Yes

A17.3	Code Item	Cars: 1-26
2.7.4	Restricted Opening of Hoistway Doors and/or Car Doors on Passenger Elevators (Cannot open more than 4" outside unlocking zone +-18" max.)	Yes
2.7.5	Hoistway Emergency Door Contacts (Positively opened)	Yes
2.8	**POWER OPERATION OF DOORS AND GATES**	
2.8.1	Kinetic Energy and Force Limitations for Power-operated Horizontal Sliding Doors. (Shall not exceed 7ft/lbs. with re-opening device, without 2.5ft/lbs.; cannot exceed 30 ft./lbs.)	Yes
2.8.2	Reopening Device for Power-Operated Car Doors or Gates (Can be rendered inoperative if less than 2.5ft./lb.)	Yes
	Part III	
3.1	Buffers And Bumpers (Car and counterweight buffers are required)	Yes
3.2	Counterweights (The weights shall be protected so that they cannot be dislodged. The rod nuts shall be protected)	Yes
3.3	**CAR FRAMES AND PLATFORMS**	
3.3.1	Car Platforms(Cover entire area)	Yes
3.3.2	Platform Guards (Aprons) (Vertical face at least 21", 60-75deg, withstand 150#)	Yes
3.3.3	Hinged Platform Sills(Must have contacts & prevent operation unless within 2")	N/A
3.3.4	Floating (Movable) Platforms(Prohibited if car can move when door is not closed)	N/A
3.3.5	Protection of Platforms Against Fire (Must be covered with sheet metal or fire resistant material)	Yes
3.4	**CAR ENCLOSURES**	
3.4.1	Car Enclosures (Passenger – total enclosed; Frt maybe perforated, but not by the cwt.; Car top must withstand 300lbs on any 2sq ft.)	Yes
3.4.2	Car Doors and Gates (Must have gate or door and electric contract)	Yes
3.4.3	Location of Car Doors and Gates (Hor, distance not more then 5 ½"., Swing door 4" max., space and site guard requirements.)	Yes
3.4.4	Emergency Exits (Cover hinged, single car blind shaft-every 36', side allowed)	Yes
3.4.5	Car Illumination (At least two lights, 5ftc; frt=2.5ftc; emerg. .2ftc for 4 hrs.)	Yes
3.4.6	Protection of Light Bulbs and Tubes (Guarded or coated to prevent breaks)	Yes
3.5	**SAFTIES**	
3.5.1	Car Safeties (Every car must have a safety)	Yes
3.5.2	Counterweight Safeties (If occupied space below)	Yes
3.5.3	Safeties to Stop Ascending Cars or Counterweights Prohibited (Cannot be provided)	Yes
3.5.4	Application and Release of Safeties (Must be mechanical can only release if car goes up)	Yes
3.5.5	Max. Permissible Movement of Gov. Rope to Oper. Safety (For type "B" Safties-200ft or less 42in.; 201 to 375fpm – 36in.; Over 375 FPM 30in. Cwt. = 42in all speeds.)	Yes
3.5.6	Rail Lubricants and Lubrication Plate (Plate on cross head stating type of lubricant or none at all.)	Yes
3.5.7	Overall Length of Guide Rails (Extended to prevent disengaging)	Yes
3.6	**SPEED GOVERNORS**	
3.6.1	Speed Governor Overspeed and Car Safety Mechanism Switches. (A switch shall be provided when speed is over 150FPM. For static control switch shall be for all speeds & both direct.)	Yes
3.6.2	Governor Ropes (Shall be of iron, steel, monel metal, phosphor bronze, or SS. At least 3/8" in diameter Tiller rope not allowed.)	Yes
3.7	**CAPACITY AND LOADING**	
3.7.1	Minimum Rated Load for Passenger Elevators (per table 3.7.1)	Yes
3.7.2	Use of Partitions for Reducing Inside Net Platform Area (Partitions must be permanent and symmetrical)	N/A
3.7.3	Min. Rated Load for Freight Elevators (Class A = Not more than ¼ of total cap.; Class B = Motor Veh.; Class C = loading with industrial truck, etc.)	N/A
3.7.4	Capacity Plates (Every car must have one with rated load; Frt: one piece loads, loading and unloading; ¼" high for pass, 1" for frt.)	Yes
3.7.5	Signs on Freight Elevators	N/A

A17.3	Code Item	Cars: 1-26
	(NOT A PASS ELEV…etc. ½" high letters)	
3.8	**DRIVING MACHINES AND SHEAVES**	
3.8.1	General Requirements (Must be cast iron or steel, fin. Grooves no set screws)	Yes
3.8.2	Winding Drum Machines (Must have slack rope switch; Chain, belt, or rope-driven mechanisms shall not be used.)	N/A
3.8.3	Indirect-Drive Machines (Must be at least 3 belts, safety factor of 10)	Yes
3.8.4	Brakes (Must be released electrically and have spring or gravity and friction)	Yes
3.9	**TERMINAL STOPPING DEVICES**	
3.9.1	Normal and Terminal Stopping Devices (Locate at upper and lower terminals. If in machine room provide broken rope, tape or chain switch)	Yes
3.9.2	Final Terminal Stopping Devices (Winding drum machines- on machines and in hoistway; Traction – in the hoistway operated by the car.)	Yes
3.10	**OPERATING DEVICES AND CONTROL EQUIPMENT**	
3.10.1	Types of Operating Devices (Rope or rod devices shall not be used.)	Yes
3.10.2	Car-Switch Operation Elevators (If provided must return to stop position if released by hand)	Yes
3.10.3	Top-of-Car Operating Devices (Continuous pressure <150FPM; between crosshead & door)	Yes
3.10.4	Electrical Provisions	
	(a) Slack Rope Switch	N/A
	(b) Motor-Generator Running Switch	N/A
	(c) Compensating Rope Sheave Switch	N/A
	(d) Broken rope, tape or chain	Yes
	(e) Stop Switch – Top of Car- marked "stop" & "run"	Yes
	(f) Car-Safety Mechanism Switch	Yes
	(g) Speed Gov. Overspeed Switch	Yes
	(h) Final Terminal Stopping Devices	Yes
	(i) Emergency Terminal Stopping Devices (reduced stroke)	Yes
	(j) Motor Generator Overspeed Protection	N/A
	(k) Motor Field Sensing Means (not required w/ static drive)	Yes
	(m) Buffer Switches for Oil Buffers (type c safety)	N/A
	(n) Hoistway Door Interlocks or Hoistway Door Contacts	Yes
	(p) Car Door or Gate Electric Contacts	Yes
	(q) Normal Terminal Stopping Devices	Yes
	(r) Car Side Emergency Exit Electric Contact	N/A
	(s) Electric Contacts for Hinged Car Platform Sills	N/A
	(t) In-Car Stop Switch (Must be keyed, if provided)	Yes
	(u) Emergency Stop Switch (Must be provided for freight cars)	Yes
	(v) Stop Switch in Pit	Yes
	(w) Buffer Switches for Gas Spring Return Oil Buffers	N/A
3.10.5	Power Supply Line Disconnecting Means (Provided w/ overcurrent protection, within site, and numbered)	Yes
3.10.6	Phase Reversal and Failure Protection (Means to prevent starting if out of phase)	Yes
3.10.7	Devices for Making Hoistway Door Interlocks or Electric Contacts, or Car Door or Gate Electric Contacts Inoperative (These devices are prohibited)	Yes
3.10.8	Release and Application of Driving Machine Brakes (If ungrounded or if stop switch is pulled shall release brake)	Yes
3.10.9	Control and Operating Circuit Requirements (The failure of any single magnetically operated switch)	Yes
3.10.10	Absorption of Regenerated Power (Provide means to absorb energy during overhauling)	Yes
3.11	**EMERGENCY OPERATION AND SIGNALING DEVICES**	
3.11.1	Car Emergency Signaling Devices	Yes

A17.3	Code Item	Cars: 1-26
	(Audible signal, two-way communication, on emerg. power)	
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.)	Yes
3.12	**SUSPENSION MEANS AND THEIR CONNECTIONS**	
3.12.1	Suspension Means (Must be wire rope made of iron or steel- Elevator ropes only)	Yes
3.12.2	Rope Data Tag	Yes
3.12.3	Factor of Safety (f = SxN/W or table 3.12.3)	Yes
3.12.4	Minimum Number and Diameter of Suspension Ropes (3 for traction; 2 for drum; minimum diameter = 3/8")	Yes
3.12.5	Suspension Rope Equalizers (When provided shall be of the individual-compression spring type)	Yes
3.12.6	Securing of Suspension Wire Ropes to Winding Drums (Rope must be secured by clamps or tapered babbitted sockets.)	N/A
3.12.7	Spare Turns on Winding Drums (Not less than one turn of the rope when car is on buffer)	N/A
3.12.8	Suspension Rope Fastenings (Spliced eyes by return loop may continue in service)	Yes
3.12.9	Auxiliary Rope Fastening Devices	N/A

Appendix "C"

Performance Review and Maintenance Deficiency List

Performance Review:

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

Part A: Definitions

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

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

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

Appendix "C"

Performance Review and Maintenance Deficiency List

1501 Capitol Avenue										
	PERFORMANCE TIMES	**Design 1-6**	**CAR 1**	**CAR 2**	**CAR 3**	**CAR 4**	**CAR 5**	**CAR 6**	**Design 7**	**CAR 7**
7.1	Door Open Time	**1.7**	2.9	2.3	3.1	3.7	2.3	2.4	**2.5**	3.7
7.2	Door Close Time	**2.7**	3.6	4.0	3.7	3.5	3.7	3.1	**4.4**	4.9
7.3	Floor to Floor Up	**9.6**	10.1	10.8	11.1	10.8	10.5	10.3	**11.9**	13.5
9.6	Floor to Floor Down	**9.6**	10.2	11.2	11.5	10.9	10.7	10.5	**11.9**	12.5
7.5	Full Speed Up	**350 FPM**	-	-	348	-	-	348	**350 FPM**	346
7.6	Full Speed Down	**350 FPM**	-	-	351	-	-	350	**350 FPM**	343
7.9	Power Closing of Door	**<30lbs**	22	28	20	23	25	18	**<30lbs**	15
7.10	Interrupted Ray	**.5sec**	3.1	3	5.3	4.2	3.2	3.3	**.5sec**	4.1
7.11	Car Dwell Time	**3.0**	5.1	5.1	4.6	4.8	5.1	4.6	**3.0**	5.8
7.12	Hall Call Dwell Time	**5.0**	6.9	7.1	7.3	8	7.6	7.6	**5.0**	6.5
7.13	Hall/Car Lantern Time	**8.0**	8.9	9.2	9.3	10.1	9.8	9.4	**8.0**	9.4
7.14	Nudging	**20.0**	22	21	36	20	20.9	20	**20.0**	20
7.15	Test Emergency Phone	**Yes**	Yes	Yes	Yes	Yes	Yes	Yes	**Yes**	Yes

1500 Capitol Avenue								
	PERFORMANCE TIMES	**Design 8-12**	**CAR 8**	**CAR 9**	**CAR 10**	**CAR 11**	**Design 12**	**CAR 12**
7.1	Door Open Time	**1.7**	2.9	2.3	OUT OF SERVICE	3.7	**2.5**	2.3
7.2	Door Close Time	**2.7**	3.6	4.0		3.5	**4.4**	3.7
7.3	Floor to Floor Up	**9.6**	10.1	10.8		10.8	**11.9**	10.5
9.6	Floor to Floor Down	**9.6**	10.2	11.2		10.9	**11.9**	10.7
7.5	Full Speed Up	**350 FPM**	-	-		-	**350 FPM**	-
7.6	Full Speed Down	**350 FPM**	-	-		-	**350 FPM**	-
7.9	Power Closing of Door (Pressure Gauge)	**<30lbs**	22	28		23	**<30lbs**	25
7.10	Interrupted Ray	**.5sec**	3.1	3		4.2	**.5sec**	3.2
7.11	Car Dwell Time	**3.0**	5.1	5.1		4.8	**3.0**	5.1
7.12	Hall Call Dwell Time	**5.0**	6.9	7.1		8	**5.0**	7.6
7.13	Hall/Car Lantern Time	**8.0**	8.9	9.2		10.1	**8.0**	9.8
7.14	Nudging	**20.0**	22	21		20	**20.0**	20.9
7.15	Test Emergency Phone	**Yes**	Yes	Yes		Yes	**Yes**	Yes

1615 Capitol Avenue – (Blk 173)

Appendix "C"

Performance Review and Maintenance Deficiency List

	PERFORMANCE TIMES	Design 13	CAR 13	Des 14-19	CAR 14	CAR 16	CAR 17	CAR 18	CAR 19	Des 20	CAR 20
7.1	Door Open Time	**1.7**	2.1	**1.7**	2.3	2.2	2.5	2.4	2.4	**2.5**	3.9
7.2	Door Close Time	**2.7**	2.9	**2.7**	3.4	3.9	3.5	3.6	4.1	**4.4**	6.2
7.3	Floor to Floor Up	**13.5**	13.7	**9.6**	11.5	9.7	10.6	10.6	11.4	**11.9**	13.4
9.6	Floor to Floor Down	**13.5**	14	**9.6**	10.9	10.1	11.1	10.1	10.4	**11.9**	14.7
7.5	Full Speed Up	**150 FPM**	150	**350**	353	352	351	350	354	**350**	352
7.6	Full Speed Down	**150 FPM**	138	**350**	343	349	348	347	348	**350**	343
7.9	Power Closing of Door (Pressure Gauge)	**<30lbs**	30	**<30**	27	30	20	>30	28	**15**	
7.10	Interrupted Ray	**.5sec**	4.5	**.5sec**	3.2	3.8	3.2	2.8	3.6	**.5**	3.2
7.11	Car Dwell Time	**3.0**	4.7	**3.0**	5.4	5.2	5.1	5.9	4.2	**3.0**	5.1
7.12	Hall Call Dwell Time	**5.0**	5.3	**5.0**	8.7	7.7	7.7	7.5	6.4	**5.0**	6.4
7.13	Hall/Car Lantern Time	**8.0**	-	**8.0**	2.9	9.5	10.5	9.3	10.6	**8.0**	10.4
7.14	Nudging	**20.0**	25	**20.0**	23	19	15.0	15.2	16.1	**20.0**	18.9
7.15	Test Emergency Phone	**Yes**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	**Yes**	Yes

1616 Capitol Avenue – (Blk 174)									
	PERFORMANCE TIMES	**Design**	**CAR 21**	**CAR 22**	**CAR 23**	**CAR 24**	**CAR 25**	**Des 20**	**CAR 26**
7.1	Door Open Time	**1.7**	OUT OF SERVICE	3.9	3.1	2.7	3.4	**2.5**	3.3
7.2	Door Close Time	**2.7**		3.5	3.7	3.6	4.6	**4.4**	5.6
7.3	Floor to Floor Up	**9.6**		10.7	11.9	16.2	13.5	**11.9**	13.4
9.6	Floor to Floor Down	**9.6**		10.7	11.9	10.9	13.6	**11.9**	13.7
7.5	Full Speed Up	**350 FPM**		346	-	-	-	**350**	-
7.6	Full Speed Down	**350 FPM**		347	-	-	-	**350**	-
7.9	Power Closing of Door (Pressure Gauge)	**<30lbs**		19	15	20	16	**15**	15
7.10	Interrupted Ray	**.5sec**		2.6	3.7	3.3	4.3	**.5**	3.6
7.11	Car Dwell Time	**3.0**		5.1	4.8	5.4	5.3	**3.0**	6.2
7.12	Hall Call Dwell Time	**5.0**		5.1	4.8	5.4	5.3	**5.0**	6.2
7.13	Hall/Car Lantern Time	**8.0**		8.2	9.1	9.5	10.2	**8.0**	10.5
7.14	Nudging	**20.0**		30.4	24.5	27.4	32.1	**20.0**	5.2
7.15	Test Emergency Phone	**Yes**		Yes		Yes			

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