# East End Complex Block 173 (053)

1615 Capitol Avenue, Sacramento, CA 95814

## Facility Condition Assessment

June 2015

*Prepared for the State of California Department of General Services*

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# EXECUTIVE SUMMARY

## BACKGROUND

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

The DGS portfolio comprises nearly 17 million gross square feet (GSF) of state-owned office facilities statewide, contained within 54 general-purpose state-owned office building sites. The FCA inventories and evaluates each of the DGS general purpose office buildings to benchmark current condition and establish a replacement value. This FCA assesses the infrastructure conditions for the East End Complex Block 173 (053).

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 173 (053) 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 173 (053) on January 17, 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 | $87,072,385 |
| Immediate Repair Costs (12 months) | $83,934 |
| 1-5 Year Capital Needs | $2,038,500 |
| 6-10 Year Capital Needs | $2,414,118 |
| Total 10-Year Capital Reserve Needs | $4,536,553 |

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

**Current Year FCI**

$$\text{Current FCI} = \frac{\$83{,}934}{\$87{,}072{,}385}$$

**Ten-Year FCI**

$$\text{Ten-Year FCI} = \frac{\$4{,}536{,}553}{\$87{,}072{,}385}$$

| Current Year FCI | Ten-Year FCI |
|---|---|
| **0.10 %= *Good / Fair / Poor Condition*** | **5.21 %= *Good / Fair / Poor Condition*** |

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

- Automatic faucets are recommended for all sinks, in order to conserve water.
- 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 Block 173 (053) was designed and constructed by the design-build team of Clark Construction and Gruen Associates. Located at 1615 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 Block 173 (053) 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 219,444 GSF with 169,060 SF of net usable area. The ratio of net usable to gross building area is 77 percent. The occupant capacity is 990 and the garage includes 89 parking stalls.

## BUILDING DESCRIPTION

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

The exterior walls are finished with a veneer that consists of granite and precast panels.

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, marble and granite in the lobby entry, 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 HVAC system is a hot water and chilled water system from the central plant. The central system is located in Building 173 and provides service to Buildings 171, 172, 173, and 174 by distribution pipes located in the basement parking areas. For Building 173, there are four rooftop air handling units, and the conditioned air supplies variable air volume boxes within the office spaces. The interior variable air volume boxes provide conditioned air and ventilation only. The perimeter variable air volume boxes are supplied with hot water for re-heat capability.

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 a fire pump located in the parking garage of the building.

The building covers nearly the entire site, and the only landscaping is in an inner courtyard that connects the office building to the parking garage. The landscaping consists of trees and shrubs. Landscaped areas are irrigated by a drip irrigation system.

According to the drawings, there are a total of 200 parking stalls located in a subterranean garage that is below Block 173 and Block 174.

The sidewalks at the perimeter of the site are constructed of cast-in-place concrete. The accent treatment of large rounded stones set in concrete that occurs at the entry and corners of the building are part of the property.

**Project Statistics**

| Item | Description |
|---|---|
| Project Name | East End Complex Block 173 |
| Building ID | 053 |
| Property Type | Administration |
| Year Built | 2003 |
| Number of Stories | 7 |
| Occupied | Yes |
| Land Area (acres) | 2.77 |
| Gross Square Feet (GSF) | 219,444 |

# FACILITY CONDITION ASSESSMENT

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

## COMPONENTS OF THE FCA

### Current conditions analysis

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

### Anticipated building reserve analysis

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

### Funding needs analysis

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

## CALCULATION OF FUNDING NEEDS

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

### Immediate Repair Costs

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

### Capital Reserve Needs

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

### Current Replacement Value

Current Replacement Value is determined by multiplying the existing building's SF by the Cost per SF to construct a new, similar building on a similar site. Current Replacement Value is not an appraised or market value for the purposes of a property sale. To estimate the cost per SF, EMG referenced Marshall & Swift's *Marshall Valuation Service*. This building cost data index is an industry standard, adjusted annually, and relied upon by the insurance industry, as well as other agencies and organizations. Cost per SF is calculated by adjusting Marshall & Swift's unit cost for a Government Office Building to account for factors related to building systems, class of construction, and location to reflect the estimated cost of construction at the subject building site.

### Remaining Useful Life

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

### Opinions of Probable Cost

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

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

### Facility Condition Index

The FCI gives an indication of a building's overall state of condition. The values are based on a 0-100 percent scale. The Current Year FCI is the ratio of Immediate Repair Costs to Current Replacement Value. The Ten-Year FCI is the ratio of Capital Reserve Needs (2015 – 2024) to Current Replacement Value. The Ten-Year FCI is calculated using uninflated 2015 dollars because the year of project implementation is likely unknown or subject to change. Since both the repair/replacement costs and Current Replacement Value will increase at the same inflation rate, the impacts of inflation do not significantly affect the FCI ratio.

## SCOPE OF ASSESSMENT

The evaluation team conducted a walk-through survey of East End Complex Block 173 (053) on January 17, 2015. The survey included analysis and observation of the building's interior and exterior, including the roofs. The evaluation team interviewed the building maintenance staff to inquire about the subject property's previous repairs and replacements and their costs, level of preventive maintenance exercised, pending repairs and improvements, and frequency of repairs and replacements. Opinions were developed based on the site evaluation, interviews with relevant maintenance providers and facilities managers, and previous experience with comparable properties. The evaluation team questioned those knowledgeable of the subject property's physical condition and operation (or knowledgeable of similar systems) to gain comparative information to use in evaluation of the subject property. In addition, the building staff provided documents and information to the evaluation team that were relevant to the subject property's physical improvements, extent, and type of use and assisted the team in identifying potential discrepancies between reported information and observed conditions.

[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 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.

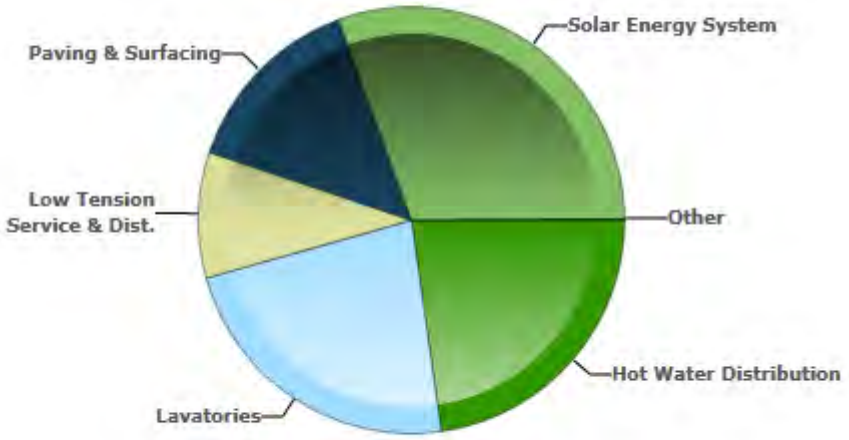
## PRIORITY RATIO

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.

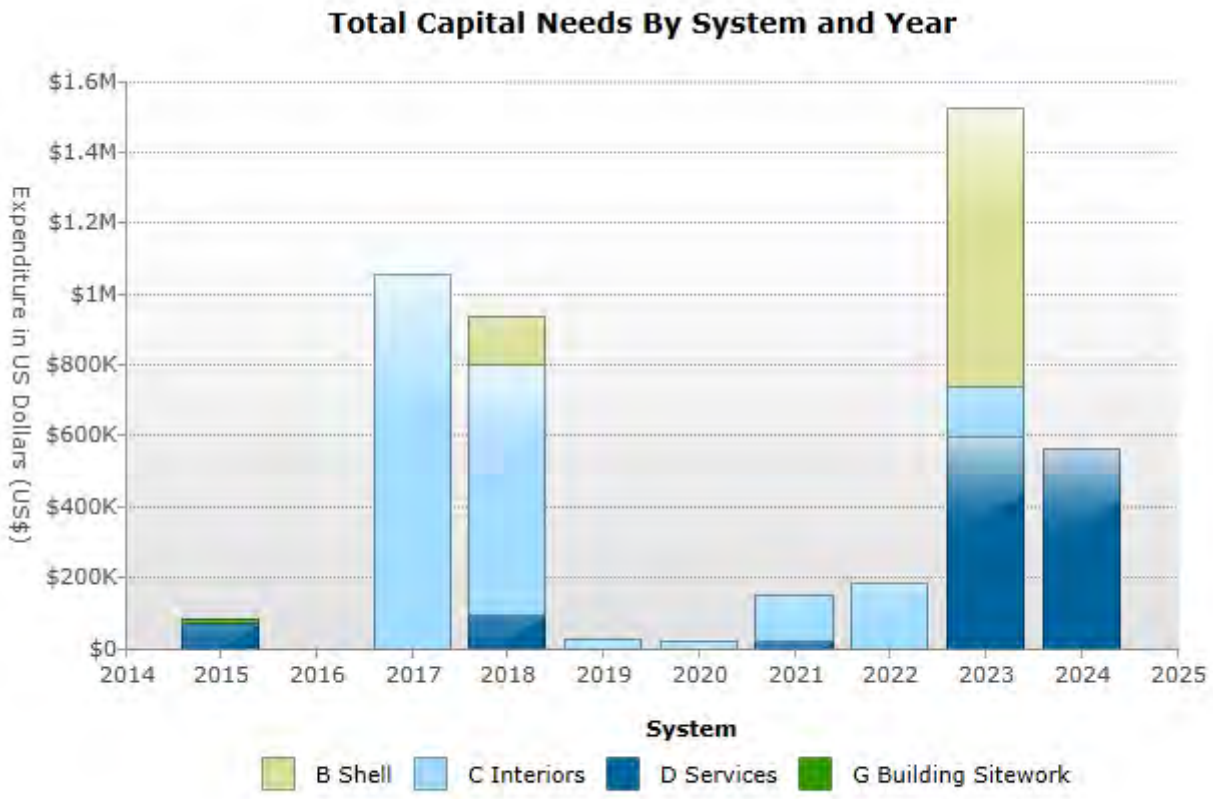
The physical condition of building systems and related components are typically defined as being in one of four conditions: Good, Fair, Poor, or Very Poor, or a combination thereof. For the purposes of this report, the following definitions are used:

| 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 |
|---|---|---|
| D2013 | Lavatories | $19,200 |
| D3016 | Solar Energy System | $25,560 |
| D3044 | Hot Water Distribution | $19,097 |
| D5012 | Low Tension Service & Dist. | $8,000 |
| G2031 | Paving & Surfacing | $12,001 |
| G2035 | Exterior Steps & Ramps | $76 |
| | **Total** | **$83,934** |


Total Capital Needs By System and Year
$1.6M
$1.4M
$1.2M
$1M
$800K
$600K
$400K
$200K
$0
Expenditure in US Dollars (US$)
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 | $0 | $0 | $71,857 | $0 | $0 | $12,077 | **$83,934** |
| 2017 | $0 | $0 | $1,053,001 | $0 | $0 | $0 | $0 | **$1,053,001** |
| 2018 | $0 | $135,305 | $705,221 | $95,038 | $0 | $0 | $0 | **$935,564** |
| 2019 | $0 | $0 | $27,924 | $0 | $0 | $0 | $0 | **$27,924** |
| 2020 | $0 | $0 | $22,012 | $0 | $0 | $0 | $0 | **$22,012** |
| 2021 | $0 | $0 | $127,968 | $20,136 | $0 | $0 | $0 | **$148,104** |
| 2022 | $0 | $0 | $181,288 | $0 | $0 | $0 | $0 | **$181,288** |
| 2023 | $0 | $788,221 | $137,491 | $598,414 | $0 | $0 | $0 | **$1,524,126** |
| 2024 | $0 | $0 | $0 | $560,600 | $0 | $0 | $0 | **$560,600** |
| **Total** | **$0** | **$923,526** | **$2,254,905** | **$1,346,045** | **$0** | **$0** | **$12,077** | **$4,536,553** |

## CURRENT REPLACEMENT VALUE

The Current Replacement Value has been determined as $87,072,385 for the East End Complex Block 173 Building (053). 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 |
|---|---|---|
| 219,444 GSF | $397 | $87,072,385 |

## FACILITY CONDITION INDEX

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

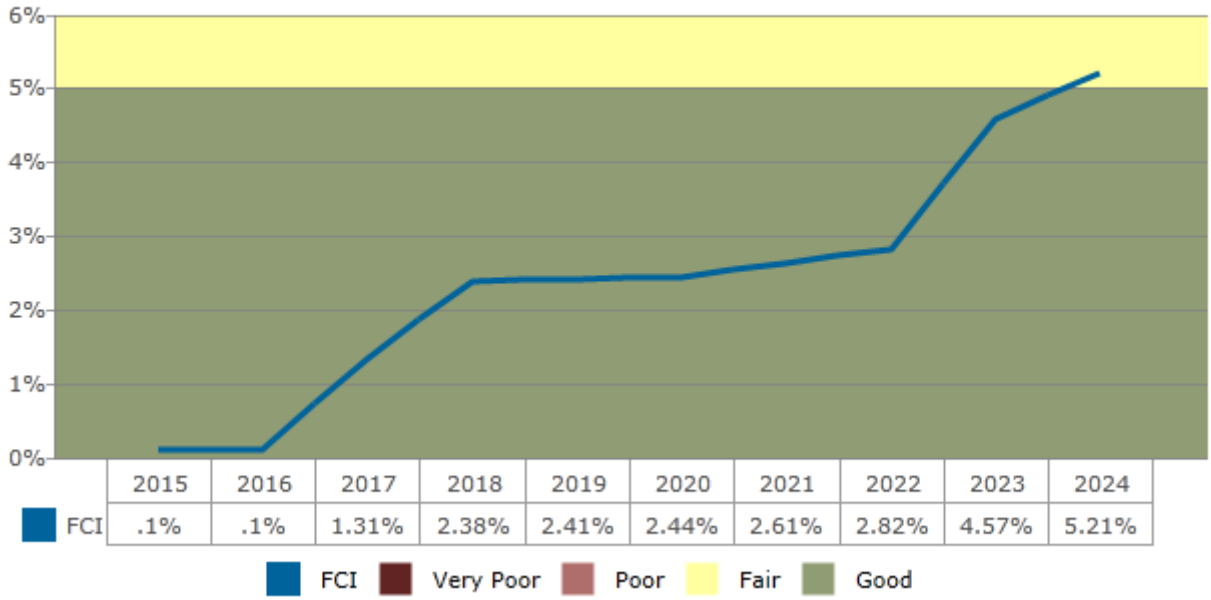
[2] Sean C. Rush (1991). Managing the Facilities Portfolio: a Practical Approach to Institutional Facility Renewal and Deferred Maintenance. National Association of College and University Business Officers. pp. 26–66. ISBN 978-0-915164-59-2.

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




| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|---|
| FCI | .1% | .1% | 1.31% | 2.38% | 2.41% | 2.44% | 2.61% | 2.82% | 4.57% | 5.21% |

# 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** | 30128 / SF |
| **RUL (years)** | 86 |
| **Location** | Below grade |

OBSERVATIONS/COMMENTS:

No further action is required.

# B Shell Systems

## B10 SUPERSTRUCTURE

| Item | Description |
|---|---|
| **B10 Superstructure** | B1032 Concrete Frame Structure, walls |
| **Condition** | Good |
| **Qty / UOM** | 9400 / SF |
| **RUL (years)** | 47 |
| **Location** | Parking Structure |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|---|
| **B10 Superstructure** | B1010 Frame Structure,Beams |
| **Condition** | Good |
| **Qty / UOM** | 18000 / LF |
| **RUL (years)** | 47 |
| **Location** | Parking Structure |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|---|
| **B10 Superstructure** | B1032 Concrete Frame Structure, slab |
| **Condition** | Fair - Good |
| **Qty / UOM** | 245044 / SF |
| **RUL (years)** | 47 |
| **Location** | Parking Structure |

OBSERVATIONS/COMMENTS:

Regular sealing of the entry drives, and striping of the parking spaces is recommended.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| B10 | Reseal concrete at entrance and exit areas | 12,000.0 - SF | 2.8 | OP - Maintenance | Priority 3 | 2018 | 33,840 |
| B10 | Restripe parking spaces | 24.5 - 10000 SF | 497.0 | OP - Maintenance | Priority 3 | 2018 | 12,177 |
| B10 | Restripe parking spaces | 24.5 - 10000 SF | 497.0 | OP - Maintenance | Priority 3 | 2023 | 12,177 |

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

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|---|
| **B10 Superstructure** | B1032 Concrete Frame Structure, slab |
| **Condition** | Good |
| **Qty / UOM** | 6264 / SF |
| **RUL (years)** | 47 |
| **Location** | Central Plant |

OBSERVATIONS/COMMENTS:

No further action is required.

| 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 required.

| Item | Description |
|---|---|
| **B10 Superstructure** | B1032 Concrete Frame Structure, slab |
| **Condition** | Good |
| **Qty / UOM** | 183220 / SF |
| **RUL (years)** | 47 |
| **Location** | Subterranean Parking Garage |

OBSERVATIONS/COMMENTS:

Regular striping of the concrete paving is recommended.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| B10 | Painting parking spaces | 18.3 - 10000 SF | 497.0 | OP - Maintenance | Priority 3 | 2018 | 9,095 |
| B10 | Painting parking spaces | 18.3 - 10000 SF | 497.0 | OP - Maintenance | Priority 3 | 2023 | 9,095 |

| Item | Description |
|---|---|
| **B10 Superstructure** | B10 Superstructure, Steel Frame |
| **Condition** | Good |
| **Qty / UOM** | 8000 / SF |
| **RUL (years)** | 48 |
| **Location** | Central Plant |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|---|
| **B1012 Upper Floors Construction** | B1012 Metal Decking with Concrete Topping |
| **Condition** | Good |
| **Qty / UOM** | 185717 / SF |
| **RUL (years)** | 40 |
| **Location** | First through seventh floors |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|---|
| **B1021 Flat Roof Construction** | B1021 Structural Steel Beams Supporting Corrugated Metal Roof Deck with Lightweight Concrete Topping |
| **Condition** | Good |
| **Qty / UOM** | 49335 / SF |
| **RUL (years)** | 57 |
| **Location** | Roofs |

OBSERVATIONS/COMMENTS:

No further action is required.

COST SUMMARY:

| Type | Year | Total Expenditures |
|---|---|---|
| B10 Superstructure | 2018 | $55,112 |
| B10 Superstructure | 2023 | $21,272 |

## 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:

Sealant replacement is recommended. See sealant replacement cost.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| B2011 | Replace exterior sealant | 1,000.0 - LF | 6.3 | IN - Beyond Rated Life | Priority 2 | 2018 | 6,310 |

| Item | Description |
|---|---|
| **B2011 Exterior Wall Construction** | B2011 Stucco and Lath |
| **Condition** | Fair |
| **Qty / UOM** | 2000 / SF |
| **RUL (years)** | 3 |
| **Location** | Machine rooms on roof |

OBSERVATIONS/COMMENTS:

The stucco is developing cracks and leaks. Recommend removal of existing stucco and installation of new.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| B2011 | Replace B2011 Stucco and Lath | 2,000.0 - SF | 18.3 | IN - Beyond Rated Life | Priority 2 | 2018 | 36,654 |

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

OBSERVATIONS/COMMENTS:

Sealant replacement is recommended See sealant cost.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| B2011 | Replace exterior sealant | 4,000.0 - LF | 6.3 | IN - Beyond Rated Life | Priority 2 | 2018 | 25,240 |

| Item | Description |
|---|---|
| **B2021 Windows** | B2021 Windows |
| **Condition** | Fair - Good |
| **Qty / UOM** | 300 / SF |
| **RUL (years)** | 27 |
| **Location** | Exteriors |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|---|
| **B2022 Curtain Walls** | B2022 Curtain Wall Glazing |
| **Condition** | Fair - Good |
| **Qty / UOM** | 4000 / SF |
| **RUL (years)** | 20 |
| **Location** | Exteriors |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|---|
| **B2031 Glazed Doors & Entrances** | B2031 Glazed Entrance Doors |
| **Condition** | Fair |
| **Qty / UOM** | 8 / EA |
| **RUL (years)** | 18 |
| **Location** | Lobby |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|---|
| **B2032 Solid Exterior Doors** | B2032 Steel 3'-0" X 7'-0" |
| **Condition** | Fair - Good |
| **Qty / UOM** | 18 / EA |
| **RUL (years)** | 33 |
| **Location** | Exteriors |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|---|
| **B2032 Solid Exterior Doors** | B2032 Steel 3'-0" X 7'-0" |
| **Condition** | Fair - Good |
| **Qty / UOM** | 18 / EA |
| **RUL (years)** | 18 |
| **Location** | Parking Garage |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|---|
| **B2032 Solid Exterior Doors** | B2032 3'-0" X 9'-0" Steel, Insulated Core, Ptd. Door |
| **Condition** | Fair |
| **Qty / UOM** | 10 / EA |
| **RUL (years)** | 32 |
| **Location** | Exteriors |

OBSERVATIONS/COMMENTS:

No further action is required.

COST SUMMARY:

| Type | Year | Total Expenditures |
|---|---|---|
| B20 Exterior Enclosure | 2018 | $68,204 |

## B30 ROOFING

| Item | Description |
|---|---|
| **B3010 Roof Coverings** | B3011 Liquid Applied Waterproofing |
| **Condition** | Fair |
| **Qty / UOM** | 392 / SQ |
| **RUL (years)** | 8 |
| **Location** | Roof |

OBSERVATIONS/COMMENTS:

Based on the RUL, roof coating will be required during the reserve term.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| B3010 | Replace B3011 Liquid Applied Waterproofing | 392.0 - SQ | 1806.4 | IN - Beyond Rated Life | Priority 4 | 2023 | 708,092 |
| B3010 | Pressure wash roof | 39,238.0 - SF | 1.5 | IN - Reliability | Priority 4 | 2023 | 58,857 |

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

OBSERVATIONS/COMMENTS:

The metal coping requires no further action.

The sealant between the pieces of 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.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| B3014 | Replace sealant at coping | 1,900.0 - LF | 6.3 | OP - Maintenance | Priority 3 | 2018 | 11,989 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|---|---|---|
| B30 Roofing | 2018 | $11,989 |
| B30 Roofing | 2023 | $766,949 |

# C Interiors Systems

## C10 Interior Construction

| Item | Description |
|---|---|
| **C1021 Interior Doors** | C1021 Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware |
| **Condition** | Fair |
| **Qty / UOM** | 350 / EA |
| **RUL (years)** | 12 |
| **Location** | Doors to corridors, offices |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|---|
| **C1031 Fabricated Toilet Partitions** | C1031 Fabricated Toilet Partitions |
| **Condition** | Fair |
| **Qty / UOM** | 63 / EA |
| **RUL (years)** | 8 |
| **Location** | Restrooms |

OBSERVATIONS/COMMENTS:

Based on the RUL, replacement is anticipated during the assessment period.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| C1031 | Replace toilet partitions | 63.0 - EA | 2182.4 | IN - Beyond Rated Life | Priority 4 | 2023 | 137,491 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|---|---|---|
| C10 Interior Construction | 2023 | $137,491 |

## C20 STAIRS

| Item | Description |
|---|---|
| **C2014 Stair Handrails and Balustrades** | C2014 Steel stairs |
| **Condition** | Good |
| **Qty / UOM** | 3 / EA |
| **RUL (years)** | 15 |
| **Location** | Stair wells, Parking Structure |

OBSERVATIONS/COMMENTS:

There are two sets of steel stairs. Paint maintenance is required. See paint cost.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| C2014 | Prep and paint steel stairway parts | 8,300.0 - SF | 1.6 | OP - Maintenance | Priority 3 | 2019 | 12,948 |

| Item | Description |
|---|---|
| **C2014 Stair Handrails and Balustrades** | C2014 Steel stairs |
| **Condition** | Good |
| **Qty / UOM** | 2 / EA |
| **RUL (years)** | 15 |
| **Location** | Stair wells, Blk 173 |

OBSERVATIONS/COMMENTS:

There are two sets of interior steel stairs. Paint maintenance is required. See paint cost.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| C2014 | Prep and paint steel stairway parts | 9,600.0 - SF | 1.6 | OP - Maintenance | Priority 3 | 2019 | 14,976 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|---|---|---|
| C20 Stairs | 2019 | $27,924 |

## 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-facing needs no further action.

| Item | Description |
|---|---|
| **C3012 Wall Finishes to Interior Walls** | C3012 Paint Interior Walls, Drywall |
| **Condition** | Fair - Good |
| **Qty / UOM** | 85000 / SF |
| **RUL (years)** | 7 |
| **Location** | Fourth through seventh floors |

OBSERVATIONS/COMMENTS:

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

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| C3012 | Replace C3012 Paint Interior Walls, Drywall | 85,000.0 - SF | 2.1 | IN - Appearance | Priority 4 | 2022 | 181,288 |

| 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.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| C3012 | Replace C3012 Paint Interior Walls, Drywall | 60,000.0 - SF | 2.1 | IN - Appearance | Priority 4 | 2021 | 127,968 |

| Item | Description |
|---|---|
| **C3024 Flooring** | C3024 Vinyl Tile |
| **Condition** | Fair |
| **Qty / UOM** | 175 / 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 | 175.0 - SY | 125.8 | IN - Appearance | Priority 4 | 2020 | 22,012 |

| 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 |
|---|---|
| **C3024 Flooring** | C3024 Marble/Granite Flooring |
| **Condition** | Good |
| **Qty / UOM** | 15000 / SF |
| **RUL (years)** | 38 |
| **Location** | Entry Lobby |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|---|
| **C3025 Carpeting** | C3025 Carpet Tiles - Standard |
| **Condition** | Fair |
| **Qty / UOM** | 7300 / SY |
| **RUL (years)** | 3 |
| **Location** | First through 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 | 7,300.0 - SY | 96.6 | IN - Appearance | Priority 3 | 2018 | 705,221 |

| Item | Description |
|---|---|
| **C3025 Carpeting** | C3025 Carpet Tiles - Standard |
| **Condition** | Fair |
| **Qty / UOM** | 10900 / SY |
| **RUL (years)** | 2 |
| **Location** | Fourth, fifth, sixth & seventh 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 | 10,900.0 - SY | 96.6 | IN - Appearance | Priority 3 | 2017 | 1,053,001 |

| Item | Description |
|---|---|
| **C3032 Suspended Ceilings** | C3032 Acoustical Ceiling Tile |
| **Condition** | Fair - Good |
| **Qty / UOM** | 67450 / SF |
| **RUL (years)** | 16 |
| **Location** | Ceilings first through third floors |

OBSERVATIONS/COMMENTS:

Based on the RUL, replacement is anticipated during the assessment period.

| Item | Description |
|---|---|
| **C3032 Suspended Ceilings** | C3032 Acoustical Ceiling Tile |
| **Condition** | Fair - Good |
| **Qty / UOM** | 89450 / SF |
| **RUL (years)** | 12 |
| **Location** | Ceilings, fourth, fifth, sixth & seventh floors |

OBSERVATIONS/COMMENTS:

No further action is required.

COST SUMMARY:

| Type | Year | Total Expenditures |
|---|---|---|
| C30 Interior Finishes | 2017 | $1,053,001 |
| C30 Interior Finishes | 2018 | $705,221 |
| C30 Interior Finishes | 2020 | $22,012 |
| C30 Interior Finishes | 2021 | $127,968 |
| C30 Interior Finishes | 2022 | $181,288 |

# D Services Systems

## D10 Conveying Systems

| Item | Description |
|---|---|
| **D1011 Passenger Elevators** | D1011 Traction Geared Elevator |
| **Condition** | Fair |
| **Qty / UOM** | 7 / EA |
| **RUL (years)** | 13 |
| **Location** | Throughout Facility |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|---|
| **D1012 Freight Elevators** | D1011 Hydraulic Elevator Machinery and Controls |
| **Condition** | Good |
| **Qty / UOM** | 1 / EA |
| **RUL (years)** | 18 |
| **Location** | Maintenance area |

OBSERVATIONS/COMMENTS:

No further action is required.

## D20 PLUMBING

| Item | Description |
|---|---|
| **D2011 Water Closets** | D2011 Water Closets |
| **Condition** | Good |
| **Qty / UOM** | 54 / EA |
| **RUL (years)** | 14 |
| **Location** | Floors 1-7 |

OBSERVATIONS/COMMENTS:

Automatic flush valves were observed on the plumbing fixtures.

| Item | Description |
|---|---|
| **D2011 Water Closets** | D2011 Water Closets Auto |
| **Condition** | Good |
| **Qty / UOM** | 9 / EA |
| **RUL (years)** | 14 |
| **Location** | Floors 1-7 |

OBSERVATIONS/COMMENTS:

Automatic flush valves were observed on the plumbing fixtures.

| Item | Description |
|---|---|
| **D2012 Urinals** | D2012 Urinal - Auto |
| **Condition** | Good |
| **Qty / UOM** | 2 / EA |
| **RUL (years)** | 23 |

| Item | Description |
|---|---|
| **Location** | Floors 1-7 |

OBSERVATIONS/COMMENTS:

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

| Item | Description |
|---|---|
| **D2012 Urinals** | D2012 Urinal |
| **Condition** | Good |
| **Qty / UOM** | 12 / EA |
| **RUL (years)** | 23 |
| **Location** | Floors 1-7 |

OBSERVATIONS/COMMENTS:

Floors 2-7 have standard flush valves.

| Item | Description |
|---|---|
| **D2013 Lavatories** | D2013 Counter Top Sink and Faucet |
| **Condition** | Good |
| **Qty / UOM** | 48 / 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 | 48.0 - EA | 400.0 | OP - Energy | Priority 2 | 2015 | 19,200 |

| 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 required.

| Item | Description |
|---|---|
| **D2018 Drinking Fountains and Coolers** | D2018 Drinking Fountain |
| **Condition** | Good |
| **Qty / UOM** | 7 / EA |
| **RUL (years)** | 6 |
| **Location** | Floors 1-7 |

OBSERVATIONS/COMMENTS:

Drinking fountains are supplied with dedicated chilled and filtered water. Based on RUL, drinking fountain 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 | 7.0 - EA | 2876.6 | IN - Beyond Rated Life | Priority 3 | 2021 | 20,136 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|---|---|---|
| D20 Plumbing | 2015 | $19,200 |
| D20 Plumbing | 2021 | $20,136 |

## 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** | No |
| **Fuel Tank Type** | N/A |
| **Fuel Tank Size (gallons)** | N/A |
| **Fuel Tank Location** | N/A |
| **Gas Meter Location** | N/A |
| **Electrical Meter Location** | Electrical Room |
| **Water Meter Location** | At street |

| Item | Description |
|---|---|
| **D3016 Solar Energy System** | D3016 Solar Panels 2' x 4' |
| **Condition** | Poor - Fair |
| **Qty / UOM** | 198 / EACH |
| **RUL (years)** | 13 |
| **Location** | Rooftop |

OBSERVATIONS/COMMENTS:

During site visit, there were solar panels that had failed. Repair and replacement of some panels is recommended.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| D3016 | Replace faulty solar panels | 60.0 - EA | 426.0 | IN - Reliability | Priority 1 | 2015 | 25,560 |

| Item | Description |
|---|---|
| **D3021 Boilers** | Water Boiler, Gas High Efficiency, 550 to 660 MBH |
| **Condition** | Good |
| **Qty / UOM** | 2 / EA |
| **RUL (years)** | 18 |
| **Location** | Central Plant Mechanical |

OBSERVATIONS/COMMENTS:

Boilers have been maintained and serviced.

| Item | Description |
|---|---|
| **D3022.1 Circulating Pumps** | D3022 HVAC Chill Water Rtn Circ Pump 30 HP |
| **Condition** | Fair - Good |
| **Qty / UOM** | 5 / EA |
| **RUL (years)** | 8 |
| **Location** | Central Plant Mechanical |
| **Pump HP** | 30 |

OBSERVATIONS/COMMENTS:

The 30-hp condenser water return pumps and associated motor appear to be original and functional. It is recommended that VFD motors be added. Based on RUL, pump replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| D3022 | Replace D3022 HVAC Chill Water Rtn Circ Pump 30 HP | 5.0 - EA | 26054.9 | IN - Beyond Rated Life | Priority 4 | 2023 | 130,274 |

| Item | Description |
|---|---|
| **D3022.1 Circulating Pumps** | D3022 HVAC Chill Water Rtn Circ Pump 30 HP |
| **Condition** | Fair - Good |
| **Qty / UOM** | 5 / EA |
| **RUL (years)** | 8 |
| **Location** | Central Plant Mechanical |
| **Pump HP** | 30 |

OBSERVATIONS/COMMENTS:

The 30-hp chilled water return pumps and associated motor appear to be original and functional. It is recommended that VFD motors be added. Based on RUL, pump replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| D3022 | Replace D3022 HVAC Chill Water Rtn Circ Pump 30 HP | 5.0 - EA | 26054.9 | IN - Beyond Rated Life | Priority 4 | 2023 | 130,274 |

| Item | Description |
|---|---|
| **D3022.1 Circulating Pumps** | D3022 HVAC Chill Water Supply Pump 30 HP - VFD |
| **Condition** | Fair - Good |
| **Qty / UOM** | 2 / EA |
| **RUL (years)** | 8 |
| **Location** | Central Plant Mechanical |
| **Pump HP** | 30 |

OBSERVATIONS/COMMENTS:

The 30-hp chilled water supply pumps and associated motor appear to be original and functional. It is recommended that they be equipped with VFD motors in the future. Based on RUL, pump replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| D3022 | Replace D3022 HVAC Chill Water Supply Pump 30 HP - VFD | 2.0 - EA | 26054.9 | IN - Beyond Rated Life | Priority 4 | 2023 | 52,110 |

| Item | Description |
|---|---|
| **D3022.1 Circulating Pumps** | D3022 Water Supply Boiler Pump 30 HP - VFD |
| **Condition** | Fair - Good |
| **Qty / UOM** | 2 / EA |
| **RUL (years)** | 8 |
| **Location** | Central Plant Mechanical |
| **Pump HP** | 30 |

OBSERVATIONS/COMMENTS:

The 30-hp hot water supply pumps and associated VFD motors appear to be original and functional. Based on RUL, pump replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| D3022 | Replace D3022 Water Supply Boiler Pump 30 HP - VFD | 2.0 - EA | 26054.9 | IN - Beyond Rated Life | Priority 4 | 2023 | 52,110 |

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

OBSERVATIONS/COMMENTS:

Based on the RUL, replacement of original fuel-fired suspended heating unit is 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 |
|---|---|
| **D3031.1 Chillers** | D3031 Chiller, Water Cooled, Centrifugal, 400 Ton |
| **Condition** | Good |
| **Qty / UOM** | 3 / EA |
| **RUL (years)** | 10 |
| **Location** | Central Plant Mechanical |

OBSERVATIONS/COMMENTS:

Chilled water is provided by three 400-ton chillers. No further action is required.

| Item | Description |
|---|---|
| **D3031.1 Chillers** | D3030 Water Cooled Chiller, Centrifugal, 1275 Tons |
| **Condition** | Good |
| **Qty / UOM** | 2 / EA |
| **RUL (years)** | 10 |
| **Location** | Central Plant Mechanical |

OBSERVATIONS/COMMENTS:

Chilled water is provided by two 1275-ton chillers. No further action is required.

| Item | Description |
|---|---|
| **D3031.2 Cooling Towers** | D3031.2 Cooling Towers - 500 ton |
| **Condition** | Good |
| **Qty / UOM** | 6 / EA |
| **RUL (years)** | 13 |
| **Location** | Central Plant Mechanical Roof |

OBSERVATIONS/COMMENTS:

A total of six 500-ton cooling towers are located on the roof of the central plant building, with access from the third level of the parking garage. Units appear to be original and show wear on grids. Replacement grids are recommended.

| 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 is 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 is required.

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

| Item | Description |
|---|---|
| **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 south roof, which feed VAV boxes in each space. The AHUs are supplied with heated and chilled water from the central system, and are rated at 70000 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 1-7 |

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 RUL, replacement is anticipated during the reserve term.

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 is 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 | FN - Modernization | 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:

All DX units are heat pumps. Based on RUL, pump 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:

All rooftop DX units are heat pumps. Based on the RUL, pump 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 Direct Digital Controls (DDC) |
| **Condition** | Fair - Good |
| **Qty / UOM** | 219444 / SF |
| **RUL (years)** | 8 |
| **Location** | Throughout Facility |

OBSERVATIONS/COMMENTS:

Honeywell DDC system has no reported issues. Based on RUL, system replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| D3068 | Replace D3068 Direct Digital Controls (DDC) | 219,444.0 - SF | 0.8 | IN - Beyond Rated Life | Priority 4 | 2023 | 179,593 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|---|---|---|
| D30 HVAC | 2015 | $44,657 |
| D30 HVAC | 2023 | $598,414 |
| 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 |
| **Carbon Monoxide Detectors** | No |
| **Heat Detector** | N/A |
| **Central Fire Alarm Panel Location** | N/A |
| **Annunciator Panel Location** | N/A |
| **Fire Extinguishers** | Yes |
| **Fire Extinguisher Inspection Date** | N/A |
| **Distance to Nearest Fire Hydrant (ft)** | 50 |
| **Illuminated Exit Signs** | Yes |
| **Kitchen Suppression Systems** | No |
| **Halon Gas Systems** | No |
| **Smoke Evacuation Systems** | No |
| **Fire-rated Stairwells** | Yes |
| **Fire-rated Stairwell Finish** | Masonry |
| **Stairwell Discharge** | Exterior of the building at Grade |
| **Stairwell Pressurized** | No |
| **Fire-Rated Doors Observed** | Yes |
| **Location of Fire-Rated Doors** | Office entrances |
| **Fire Alarm Service Company** | N/A |
| **Date of Last Fire Alarm Service** | N/A |
| **Are the individual office unit fire alarm systems monitored?** | N/A |
| **Are the common area fire alarm systems monitored?** | N/A |
| **Types of Common Areas Monitored** | N/A |

| Fire and Life Safety System | |
|---|---|
| **Item** | **Description** |
| **Fire Alarm Monitoring Company** | N/A |

| Item | Description |
|---|---|
| **D4011 Sprinkler Water Supply** | D4011 Sprinkler Heads |
| **Condition** | Good |
| **Qty / UOM** | 219444 / 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. No further action is required.

| Item | Description |
|---|---|
| **D4012 Sprinkler Pumping Equipment** | D4012 Fire Pump Deisel 1500 Gpm |
| **Condition** | Good |
| **Qty / UOM** | 1 / EA |
| **RUL (years)** | 13 |
| **Location** | Parking Garage |
| **Fire Pump Delivery Rate (GPM)** | 1500 |
| **Check Valve** | Yes |

OBSERVATIONS/COMMENTS:

The fire pumps are located in fire room in the lower level (parking garage) in building 174. Building 173 is serviced by the 1500 GPM diesel fire pump that was replaced in 2014. No further action is required.

## D50 ELECTRICAL SYSTEMS

| Item | Description |
|---|---|
| **D5012 Low Tension Service & Dist.** | D5012 Main Switchgear, Mainframe, 1200 Amps |
| **Condition** | Good |
| **Qty / UOM** | 2 / EA |
| **RUL (years)** | 28 |
| **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 | 8000.1 | IN - Reliability | Priority 1 | 2015 | 8,000 |

| Item | Description |
|---|---|
| **D5012 Low Tension Service & Dist.** | D5012 Panel 225 Amps, 30 Circuits |
| **Condition** | Good |
| **Qty / UOM** | 56 / 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 Seconary Dry Transformer 45 kVA |
| **Condition** | Good |
| **Qty / UOM** | 4 / EA |
| **RUL (years)** | 3 |
| **Location** | Utility Areas/Closets |
| **Electrical Wiring Material** | Solid Copper |
| **Electrical Wiring in Metal Conduit** | Yes |

OBSERVATIONS/COMMENTS:

The step-down transformers are original. Based on RUL, transformer replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| D5012 | Replace D5012 Seconary Dry Transformer 45 kVA | 4.0 - EA | 14159.8 | IN - Beyond Rated Life | Priority 3 | 2018 | 56,639 |

| Item | Description |
|---|---|
| **D5012 Low Tension Service & Dist.** | D5012 Main Dry Transformer 300kVA |
| **Condition** | Good |
| **Qty / UOM** | 1 / EA |
| **RUL (years)** | 28 |
| **Location** | Floors 1-7 |

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)** | 25 |
| **Location** | Floors 1-7 |

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)** | 3 |
| **Location** | Main Electrical Room |

OBSERVATIONS/COMMENTS:

The vast majority of the step-down transformers are original. Based on RUL, transformer replacement is anticipated during the reserve term.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| D5012 | Replace D5012 Secondary Dry Transformer 75 kVA | 2.0 - EA | 19199.4 | IN - Beyond Rated Life | Priority 3 | 2018 | 38,399 |

| 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, along with some minor upgrades to the alarm system. No further action is required.

| Item | Description |
|---|---|
| **D5037 Fire Alarm Systems** | D5037 Fire Alarm System |
| **Condition** | Good |
| **Qty / UOM** | 219444 / 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.

| Item | Description |
|---|---|
| **D5092 Emergency Light & Power Systems** | D5092 Diesel Generator 600 |
| **Condition** | Good |
| **Qty / UOM** | 1 / EA |
| **RUL (years)** | 15 |
| **Location** | Central Plant Mechanical Roof |

OBSERVATIONS/COMMENTS:

The building is equipped with a 600 kVA diesel emergency generator dedicated to the State of California Emergency Plan room located in building 173. The emergency generator was reported to have a transfer switch in the event of a power outage. No further action is required.

| Item | Description |
|---|---|
| **D5092 Emergency Light & Power Systems** | D5092 Diesel Generator 1250 kVA |
| **Condition** | Good |
| **Qty / UOM** | 1 / EA |
| **RUL (years)** | 15 |
| **Location** | Central Plant Mechanical Roof |

OBSERVATIONS/COMMENTS:

The building is equipped with a 1250 kVA diesel emergency generator that provides emergency power to critical systems in all four buildings in the east end complex. The emergency generator has a transfer switch in the event of a power outage. No further action is required.

| Item | Description |
|---|---|
| **D5092 Emergency Light & Power Systems** | D5092 Emergency Gen Auto Transfer Switch |
| **Condition** | Good |
| **Qty / UOM** | 2 / EA |
| **RUL (years)** | 15 |
| **Location** | Central Plant Mechanical Roof |

OBSERVATIONS/COMMENTS:

The emergency transfer switch is located on the central plant roof. Eventual lifecycle replacements are budgeted for switch. We were unable to access the second emergency generator and transfer switch. No further action is required.

COST SUMMARY:

| Type | Year | Total Expenditures |
|---|---|---|
| D50 Electrical Systems | 2015 | $8,000 |
| D50 Electrical Systems | 2018 | $95,038 |

# G Building Sitework Systems

## G20 Site Improvements

| Site Information | |
|---|---|
| **Item** | **Description** |
| **Main Ingress and Egress** | Capitol Avenue |
| **Access from** | SW |
| **Additional Entrances** | 16th Street |
| **Access from** | W |
| **Parking Count: Open lot** | N/A |
| **Parking Count: Sheltered by carports** | N/A |
| **Parking Count: Private garages** | N/A |
| **Parking Count: Subterranean garage** | 200 |
| **Parking Count: Freestanding parking structure** | 846 |
| **Number of ADA Compliant Spaces** | 17 |
| **Number of ADA Compliant Spaces for Vans** | 6 |
| **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** | Yes |
| **Illuminated Sign** | No |
| **Location of Property ID Sign** | Front elevation of building |
| **Trees Present** | No |
| **Shrubs Present** | No |
| **Grasses Present** | No |
| **Flower beds Present** | No |
| **Decorative Rocks Present** | No |
| **Lava Rocks Present** | No |
| **Ponds Present** | No |
| **Fountains Present** | No |
| **Topography** | Flat |

| Item | Description |
|---|---|
| **G2031 Paving & Surfacing** | G2031 Paving & Surfacing |
| **Condition** | Poor - Fair |
| **Qty / UOM** | 60 / SF |
| **RUL (years)** | 0 |
| **Location** | At the entry |

OBSERVATIONS/COMMENTS:

Near the main entry, small round rocks set into concrete adjacent to the pedestrian walkway appear to be a trip hazard. Removal of uneven material and replacement with less hazardous 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 | IN - Beyond Rated Life | Priority 1 | 2015 | 6,001 |
| G2031 | Replace uneven surfacing material with something less hazardous | 60.0 - SF | 100.0 | CC - Life Safety | Priority 1 | 2015 | 6,000 |

| Item | Description |
|---|---|
| **G2035 Exterior Steps & Ramps** | G2035 Concrete Entry Landing |
| **Condition** | Poor - Fair |
| **Qty / UOM** | 1 / EA |
| **RUL (years)** | 18 |
| **Location** | Front entry |

OBSERVATIONS/COMMENTS:

Cracking was noted near the entry, which is a trip hazard. Immediate repair is recommended.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost ($) | Plan Type | Priority | Year | Expenditures ($) |
|---|---|---|---|---|---|---|---|
| G2035 | Repair cracked and broken sidewalk | 20.0 - SF | 3.8 | CC - Life Safety | Priority 1 | 2015 | 76 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|---|---|---|
| G20 Site Improvements | 2015 | $12,077 |

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** | Yes |
| **Floor Plan Reviewed** | Yes |
| **Construction Drawings Reviewed** | No |
| **Termite Inspection Report Reviewed** | No |
| **Boiler Certificates Reviewed** | No |
| **Document Year Built Information Obtained From** | The fact sheet provided by the client |

# 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.

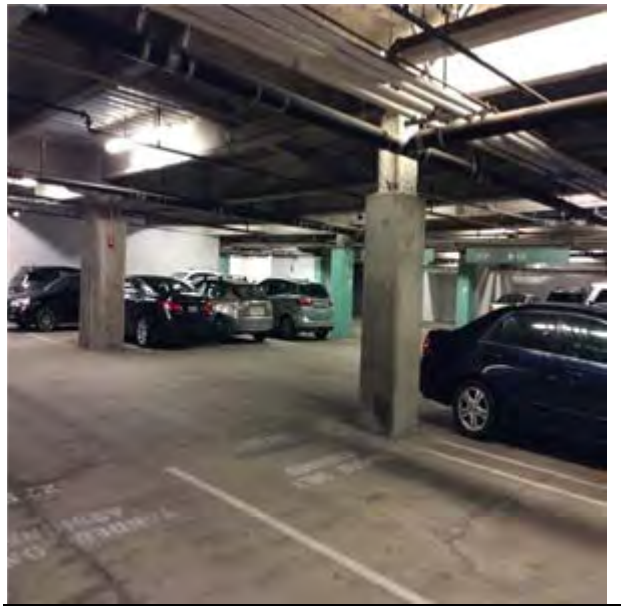
**Prepared By:** Kay van der Have, Field Observer

**Reviewed By:** Matt Anderson, Program Manager

# APPENDIX D: PHOTOS

:- Front, Capitol Avenue elevation

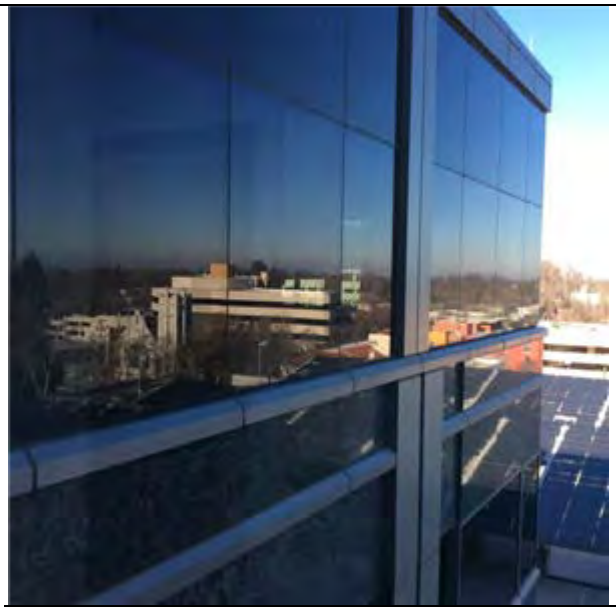
:- Side elevation, along 17 th Street



B1032 Concrete Frame Structure, slab

B1032 Concrete Frame Structure, slab

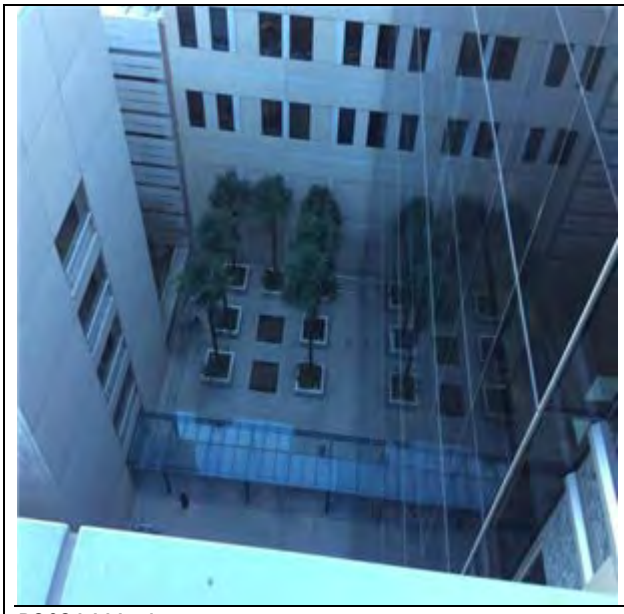
B1032 Concrete Frame Structure, slab :- The limited extent of the surface coating is visible



B2011 Granite Veneer:- B2022 Curtain Wall

B2011 Stucco and Lath :- Crack in exterior stucco wall finish.

B2011 Stucco and Lath:- Damage to the interior gypsum wall board.



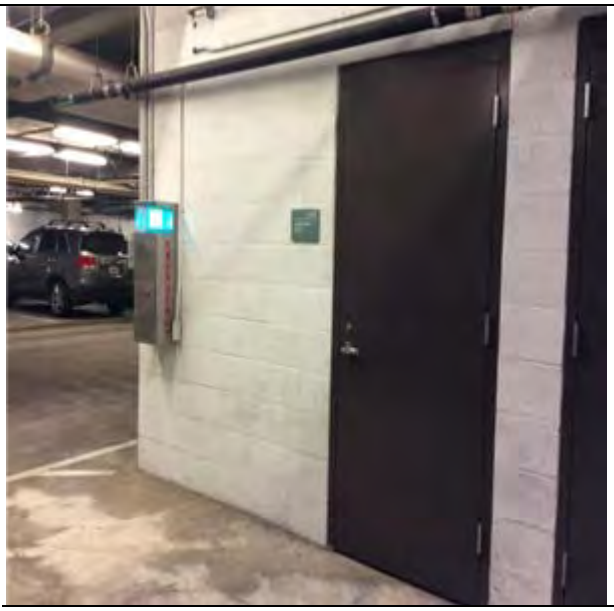
B2021 Windows

B2021 Windows

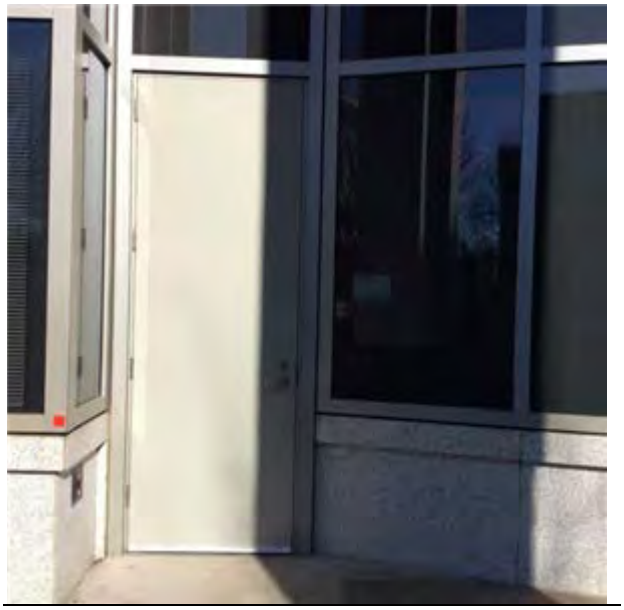
B2022 Curtain Wall Glazing

B2031 Glazed Entrance Doors

B2032 Steel 3'-0" X 7'-0" :- B2034 Overhead Door



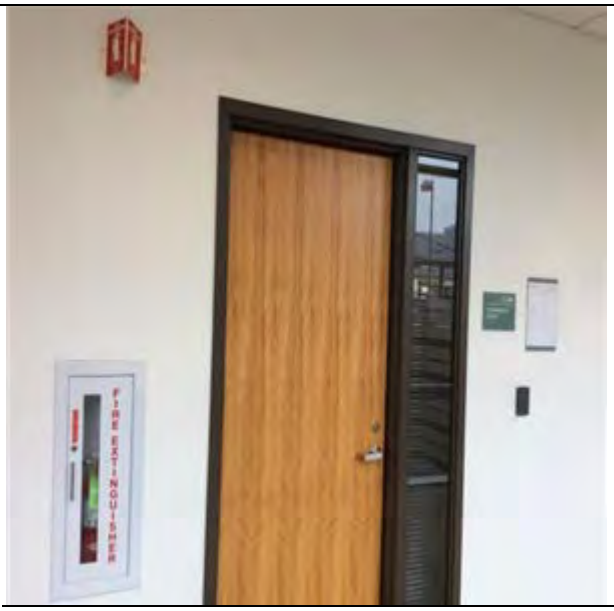
B2032 Steel 3'-0" X 7'-0":- B2032 Steel Door



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

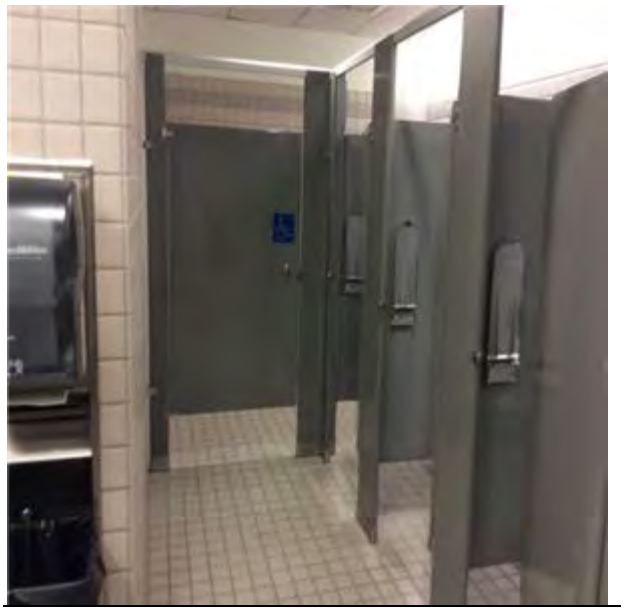
B3011 Liquid Applied Waterproofing

B3014 Coping




C1021 Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware

C1031 Fabricated Toilet Partitions

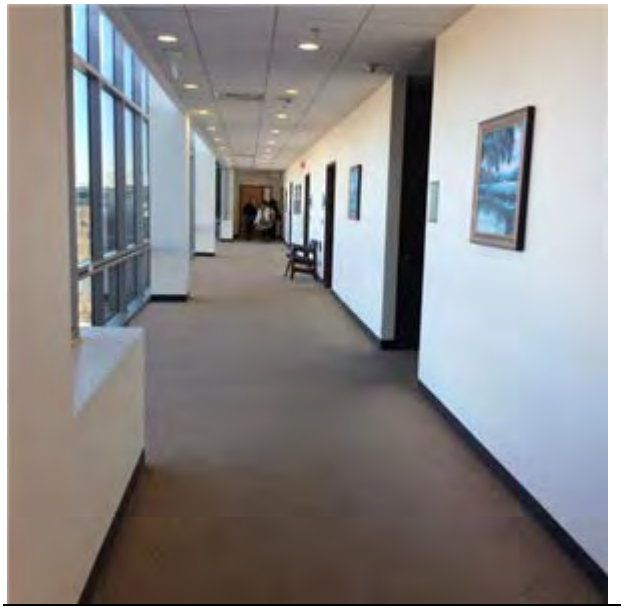


C1031 Fabricated Toilet Partitions

C2014 Steel stairs

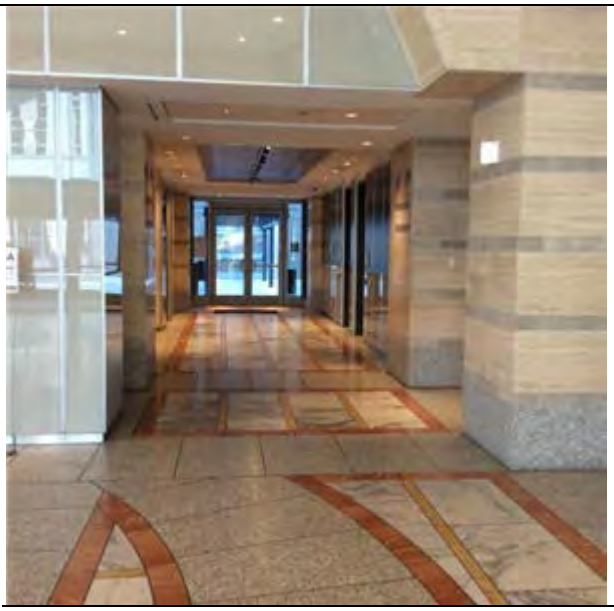
C3011 Wall Finishes to Inside Exterior Walls

C3012 Paint Interior Walls, Drywall

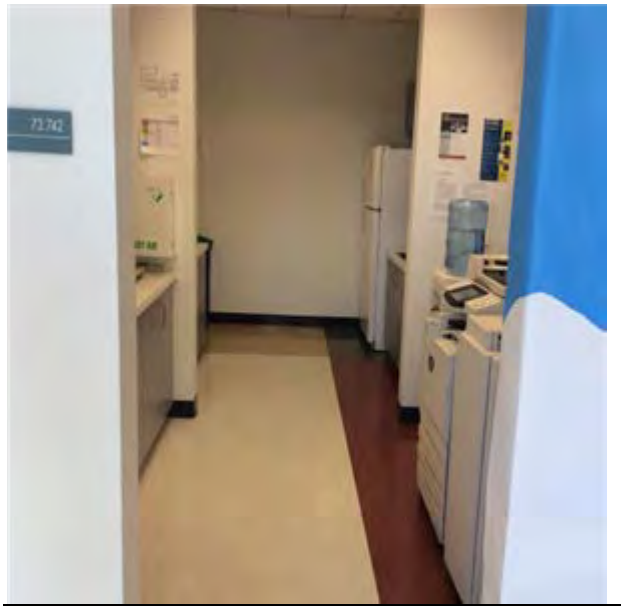


C3012 Paint Interior Walls, Drywall

C3024 4X4 Ceramic Tile

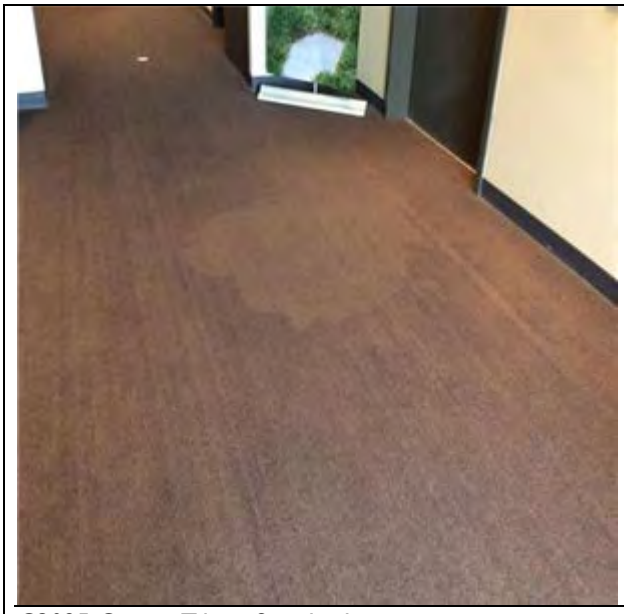


C3024 Marble/Granite Flooring

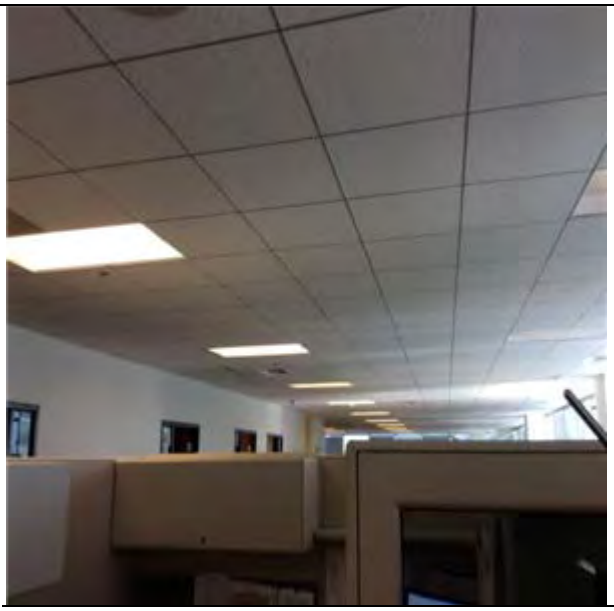


C3024 Vinyl Tile

C3025 Carpet Tiles - Standard:- View of a large carpet stain.

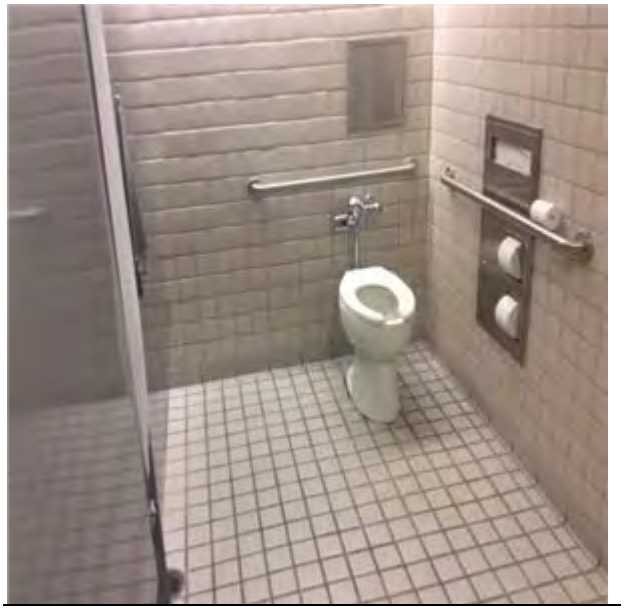


C3025 Carpet Tiles - Standard



C3032 Acoustical Ceiling Tile

D2011 Water Closets



D2011 Water Closets Auto

D2012 Urinal - Auto

D2012 Urinal

D2013 Counter Top Sink and Faucet

D2013 Counter Top Sink and Faucet - Auto

D2018 Drinking Fountain

D3016 Solar Panels 2' x 4'

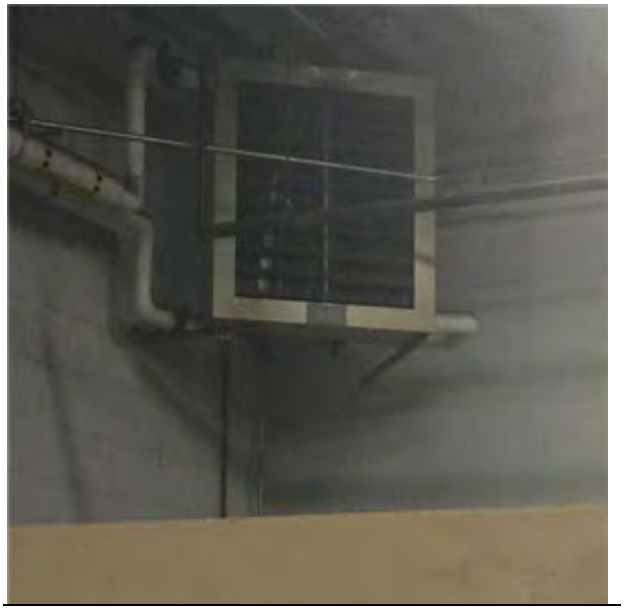
Water Boiler, Gas High Efficiency, 550 to 660 MBH

D3022 HVAC Chill Water Rtn Circ Pump 30 HP

D3022 HVAC Chill Water Supply Pump 30 HP - VFD

D3022 HVAC Chill Water Rtn Circ Pump 30 HP

D3022 Water Supply Boiler Pump 30 HP - VFD



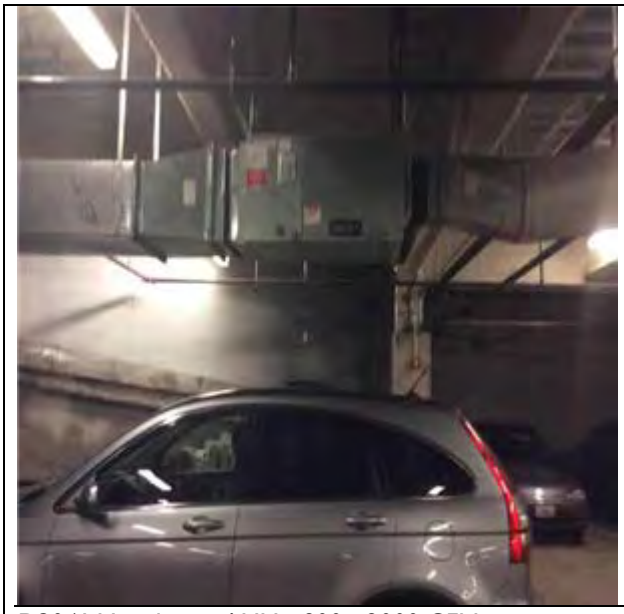
D3025 Gas Fired Heater

D3031 Chiller, Water Cooled, Centrifugal, 400 Ton

D3030 Water Cooled Chiller, Centrifugal, 1275 Tons

D3031.2 Cooling Towers - 500 ton

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

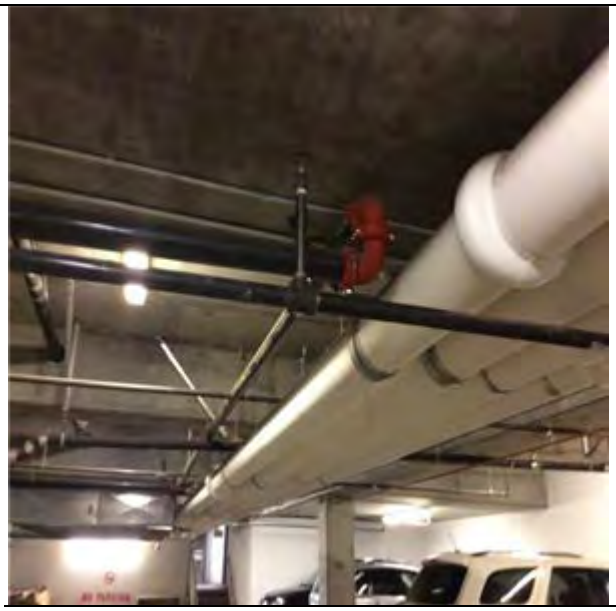
D3042 Exhaust Fan 12000 CFM

D3044 Isolation Valve HVAC Water Supply

D3051 Heat Pump Air to Air 3-Ton

D3051 Heat Pump Air to Air 15-Ton

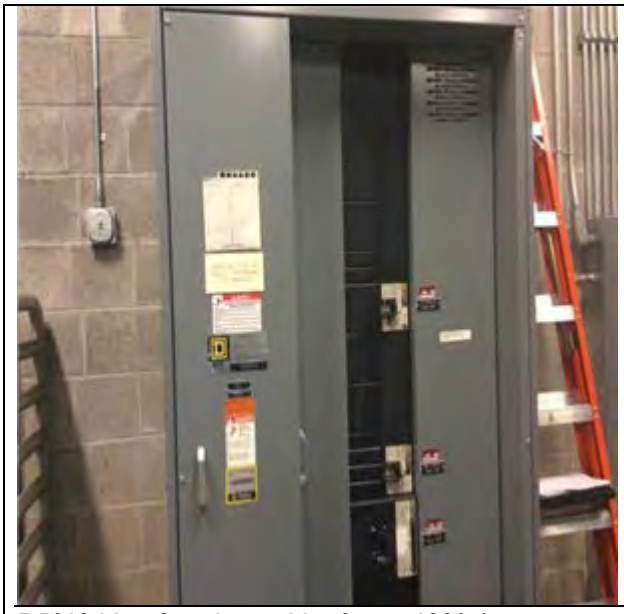
D3068 Direct Digital Controls (DDC)



D4011 Sprinkler Heads

D4012 Fire Pump Deisel 1500 Gpm

D5012 Seconary Dry Transformer 45 kVA



D5012 Main Switchgear, Mainframe, 1200 Amps

D5012 Panel 225 Amps, 30 Circuits

D5012 Main Dry Transformer 300kVA

D5012 Secondary Dry Transformer 75 kVA

D5037 Fire Alarm System

D5037 Fire Alarm System

D5037 Fire Alarm Panel

D5092 Emergency Gen Auto Transfer Switch

D5092 Diesel Generator 600

D5092 Diesel Generator 600

D5092 Diesel Generator 1250 kVA

G2031 Paving & Surfacing

G2035 Concrete Entry Landing :- Spalled concrete pavers at the entrance landing.

# 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.<br>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.<br>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.<br>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

Real Property #: 10500

- 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
  $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, BPM #: 049
Occupied by the Department of Education. SOLD retail tenants are KI Gifts, Yellowbill, Zia's Deli, Curry Club, and East End Child Care Center
475,128 GSF 298,859 NSF 298,859 Assigned SF

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

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

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

1616 Capitol Avenue - Block 174 Completed in 2003 (10 years) — SPI Structure #: 5160, BPM #: 054
Occupied by the Department of Public Health and the Mental Health Services Oversight Commission
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 173**
1615 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** | | | | | | | | | | | | | | | | | | | | | | | |
| **B10** | **SUPERSTRUCTURE** | | | | | | | | | | | | | | | | | | | | | | |
| B10 | B10 Superstructure | B1032 Concrete Frame Structure, slab | Subterranean Parking Garage | Painting parking spaces | 5 | 3 | 18.30 | 10000 SF | $497.00 | OP - Maintenance | Priority 3 | $0 | $0 | $0 | $9,095 | $0 | $0 | $0 | $0 | $9,095 | $0 | $0 | $18,190 |
| B10 | B10 Superstructure | B1032 Concrete Frame Structure, slab | Parking Structure | Reseal concrete at entrance and exit areas | 10 | 3 | 12,000.00 | SF | $2.82 | OP - Maintenance | Priority 3 | $0 | $0 | $0 | $33,840 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $33,840 |
| | B10 Superstructure | B1032 Concrete Frame Structure, slab | Parking Structure | Restripe parking spaces | 5 | 3 | 24.50 | 10000 SF | $497.00 | OP - Maintenance | Priority 3 | $0 | $0 | $0 | $12,177 | $0 | $0 | $0 | $0 | $12,177 | $0 | $0 | $24,353 |
| **B20** | **EXTERIOR ENCLOSURE** | | | | | | | | | | | | | | | | | | | | | | |
| B2011 | B2011 Exterior Wall Construction | B2011 Granite Veneer | Exteriors | Replace exterior sealant | 12 | 3 | 1,000.00 | LF | $6.31 | IN - Beyond Rated Life | Priority 2 | $0 | $0 | $0 | $6,310 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $6,310 |
| B2011 | Stucco and Lath | B2011 Stucco and Lath | Machine rooms on roof | Replace B2011 Stucco and Lath | 30 | 3 | 2,000.00 | SF | $18.33 | IN - Beyond Rated Life | Priority 2 | $0 | $0 | $0 | $36,654 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $36,654 |
| B2011 | Stone Veneer - First Floor | B2011 Precast veneer panels | First through seventh floors | Replace exterior sealant | 12 | 3 | 4,000.00 | LF | $6.31 | IN - Beyond Rated Life | Priority 2 | $0 | $0 | $0 | $25,240 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $25,240 |
| **B30** | **ROOFING** | | | | | | | | | | | | | | | | | | | | | | |
| B3010 | B3010 Roof Coverings | B3011 Liquid Applied Waterproofing | Roof | Pressure wash roof | 15 | 8 | 39,238.00 | SF | $1.50 | IN - Reliability | Priority 4 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $58,857 | $0 | $0 | $58,857 |
| | B3010 Roof Coverings | B3011 Liquid Applied Waterproofing | Roof | Replace B3011 Liquid Applied Waterproofing | 20 | 8 | 392.00 | SQ | $1,806.36 | IN - Beyond Rated Life | Priority 4 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $708,092 | $0 | $0 | $708,092 |
| B3014 | B3014 Flashings & Trim | B3014 Coping | Coping at parapets | Replace sealant at coping | 15 | 3 | 1,900.00 | LF | $6.31 | OP - Maintenance | Priority 3 | $0 | $0 | $0 | $11,989 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $11,989 |
| **Shell Subtotal** | | | | | | | | | | | | **$0** | **$0** | **$0** | **$135,305** | **$0** | **$0** | **$0** | **$0** | **$788,221** | **$0** | **$0** | **$923,526** |
| **C. INTERIORS** | | | | | | | | | | | | | | | | | | | | | | | |
| **C10** | **INTERIOR CONSTRUCTION** | | | | | | | | | | | | | | | | | | | | | | |
| C1031 | C1031 Fabricated Toilet Partitions | C1031 Fabricated Toilet Partitions | Restrooms | Replace toilet partitions | 20 | 8 | 63.00 | EA | $2,182.40 | IN - Beyond Rated Life | Priority 4 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $137,491 | $0 | $0 | $137,491 |
| **C20** | **STAIRS** | | | | | | | | | | | | | | | | | | | | | | |
| C2014 | C2014 Stair Handrails and Balustrades | C2014 Steel stairs | Stair wells, Blk 173 | Prep and paint steel stairway parts | 7 | 4 | 9,600.00 | SF | $1.56 | OP - Maintenance | Priority 3 | $0 | $0 | $0 | $0 | $14,976 | $0 | $0 | $0 | $0 | $0 | $0 | $14,976 |
| C2014 | C2014 Stair Handrails and Balustrades | C2014 Steel stairs | Stair wells, Parking Structure | Prep and paint steel stairway parts | 7 | 4 | 8,300.00 | SF | $1.56 | OP - Maintenance | Priority 3 | $0 | $0 | $0 | $0 | $12,948 | $0 | $0 | $0 | $0 | $0 | $0 | $12,948 |
| **C30** | **INTERIOR FINISHES** | | | | | | | | | | | | | | | | | | | | | | |
| C3012 | Paint Interior Walls, Drywall | C3012 Paint Interior Walls, Drywall | First through third floors | Replace C3012 Paint Interior Walls, Drywall | 10 | 6 | 60,000.00 | SF | $2.13 | IN - Appearance | Priority 4 | $0 | $0 | $0 | $0 | $0 | $0 | $127,968 | $0 | $0 | $0 | $0 | $127,968 |
| C3012 | Paint Interior Walls, Drywall | C3012 Paint Interior Walls, Drywall | Fourth through seventh floors | Replace C3012 Paint Interior Walls, Drywall | 10 | 7 | 85,000.00 | SF | $2.13 | IN - Appearance | Priority 4 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $181,288 | $0 | $0 | $0 | $181,288 |
| C3024 | Vinyl Tile | C3024 Vinyl Tile | Break & copy rooms | Replace C3024 Vinyl Tile | 18 | 5 | 175.00 | SY | $125.78 | IN - Appearance | Priority 4 | $0 | $0 | $0 | $0 | $0 | $22,012 | $0 | $0 | $0 | $0 | $0 | $22,012 |
| C3025 | Carpet Tiles - Standard | C3025 Carpet Tiles - Standard | Fourth, fifth, sixth & seventh floors | Replace C3025 Carpet Tiles - Standard | 10 | 2 | 10,900.00 | SY | $96.61 | IN - Appearance | Priority 3 | $0 | $0 | $1,053,001 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $1,053,001 |
| C3025 | Carpet Tiles - Standard | C3025 Carpet Tiles - Standard | First through third floors | Replace C3025 Carpet Tiles - Standard | 10 | 3 | 7,300.00 | SY | $96.61 | IN - Appearance | Priority 3 | $0 | $0 | $0 | $705,221 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $705,221 |
| **Interiors Subtotal** | | | | | | | | | | | | **$0** | **$0** | **$1,053,001** | **$705,221** | **$27,924** | **$22,012** | **$127,968** | **$181,288** | **$137,491** | **$0** | **$0** | **$2,254,905** |
| **D. SERVICES** | | | | | | | | | | | | | | | | | | | | | | | |
| **D20** | **PLUMBING** | | | | | | | | | | | | | | | | | | | | | | |
| D2013 | Counter Top Sink and Faucet | D2013 Counter Top Sink and Faucet | Restrooms | Install automatic faucets with motion sensors | 20 | 0 | 48.00 | EA | $400.00 | OP - Energy | Priority 2 | $19,200 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $19,200 | $0 |
| D2018 | Drinking Fountain | D2018 Drinking Fountain | Floors 1-7 | Replace D2018 Drinking Fountain | 10 | 6 | 7.00 | EA | $2,876.60 | IN - Beyond Rated Life | Priority 3 | $0 | $0 | $0 | $0 | $0 | $0 | $20,136 | $0 | $0 | $0 | $0 | $20,136 |
| **D30** | **HVAC** | | | | | | | | | | | | | | | | | | | | | | |
| D3016 | Solar Panel 3' x 8' | D3016 Solar Panels 2' x 4' | Rooftop | Replace faulty solar panels | 20 | 0 | 60.00 | EA | $426.00 | IN - Reliability | Priority 1 | $25,560 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $25,560 | $0 |
| D3022.1 | Circulation Pump 30 HP | D3022 HVAC Chill Water Rtn Circ Pump 30 HP | Central Plant Mechanical | Replace D3022 HVAC Chill Water Rtn Circ Pump 30 HP | 20 | 8 | 5.00 | EA | $26,054.88 | IN - Beyond Rated Life | Priority 4 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $130,274 | $0 | $0 | $130,274 |
| D3022.1 | Circulation Pump 30 HP | D3022 HVAC Chill Water Supply Pump 30 HP - VFD | Central Plant Mechanical | Replace D3022 HVAC Chill Water Supply Pump 30 HP - VFD | 20 | 8 | 2.00 | EA | $26,054.88 | IN - Beyond Rated Life | Priority 4 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $52,110 | $0 | $0 | $52,110 |
| D3022.1 | Circulation Pump 30 HP | D3022 HVAC Chill Water Rtn Circ Pump 30 HP | Central Plant Mechanical | Replace D3022 HVAC Chill Water Rtn Circ Pump 30 HP | 20 | 8 | 5.00 | EA | $26,054.88 | IN - Beyond Rated Life | Priority 4 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $130,274 | $0 | $0 | $130,274 |
| D3022.1 | Circulation Pump 30 HP | D3022 Water Supply Boiler Pump 30 HP - VFD | Central Plant Mechanical | Replace D3022 Water Supply Boiler Pump 30 HP - VFD | 20 | 8 | 2.00 | EA | $26,054.88 | IN - Beyond Rated Life | Priority 4 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $52,110 | $0 | $0 | $52,110 |
| 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 1-7 | Replace D3041 Terminal Units VAV | 20 | 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 | FN - Modernization | 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 Direct Digital Controls (DDC) | Throughout Facility | Replace D3068 Direct Digital Controls (DDC) | 20 | 8 | 219,444.00 | SF | $0.82 | IN - Beyond Rated Life | Priority 4 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $179,593 | $0 | $0 | $179,593 |
| **D50** | **ELECTRICAL SYSTEMS** | | | | | | | | | | | | | | | | | | | | | | |
| D5012 | Switchgear, Mainframe, 1200 Amps | D5012 Main Switchgear, Mainframe, 1200 Amps | Main Electrical Room | A full infrared scan, cleaning, and tightening effort is scheduled for 2015. | 15 | 0 | 1.00 | Each | $8,000.10 | IN - Reliability | Priority 1 | $8,000 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $8,000 | $0 |
| D5012 | Secondary Dry Transformer 45 kVA | D5012 Seconary Dry Transformer 45 kVA | Utility Areas/Closets | Replace D5012 Seconary Dry Transformer 45 kVA | 30 | 3 | 4.00 | EA | $14,159.76 | IN - Beyond Rated Life | Priority 3 | $0 | $0 | $0 | $56,639 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $56,639 |
| D5012 | Secondary Dry Transformer 75 kVA | D5012 Secondary Dry Transformer 75 kVA | Main Electrical Room | Replace D5012 Secondary Dry Transformer 75 kVA | 40 | 3 | 2.00 | EA | $19,199.43 | IN - Beyond Rated Life | Priority 3 | $0 | $0 | $0 | $38,399 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $38,399 |
| **Services Subtotal** | | | | | | | | | | | | **$71,857** | **$0** | **$0** | **$95,038** | **$0** | **$0** | **$20,136** | **$0** | **$598,414** | **$560,600** | **$71,857** | **$1,274,188** |
| **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 Paving & Surfacing | G2031 Paving & Surfacing | At the entry | Replace G2031 Paving & Surfacing | 40 | 0 | 60.00 | SF | $100.02 | IN - Beyond Rated Life | Priority 1 | $6,001 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $6,001 | $0 |

| Element # | Component Description | Asset | Location | Action | EUL (Yrs) | RUL (Yrs) | Qty. | Unit of Meas. | Unit Cost | Plan Type | Priority[2] | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Total - Deferred | Total - Scheduled |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Year 0 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | | |
| G2031 | G2031 Paving & Surfacing | G2031 Paving & Surfacing | At the entry | Replace uneven surfacing material with something less hazardous | 15 | 0 | 60.00 | SF | $100.00 | CC - Life Safety | Priority 1 | $6,000 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $6,000 | $0 |
| G2035 | Concrete Entry Landing | G2035 Concrete Entry Landing | Front entry | Repair cracked and broken sidewalk | 20 | 0 | 20.00 | SF | $3.80 | CC - Life Safety | Priority 1 | $76 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $76 | $0 |
| **Building Sitework Subtotal** | | | | | | | | | | | | **$12,077** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$12,077** | **$0** |
| **Z. GENERAL** | | | | | | | | | | | | | | | | | | | | | | | |
| **General Subtotal** | | | | | | | | | | | | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| | | | | | | | | | | **Expenditure Totals per Year** | | **$83,934** | **$0** | **$1,053,001** | **$935,564** | **$27,924** | **$22,012** | **$148,104** | **$181,288** | **$1,524,126** | **$560,600** | **$83,934** | **$4,452,618** |
| | | | | | | | | | | **Total Cost (Inflated @ 5% per Yr.)** | | **$83,934** | **$0** | **$1,160,934** | **$1,083,032** | **$33,942** | **$28,093** | **$198,474** | **$255,090** | **$2,251,828** | **$869,674** | **Total *** | **$4,536,553** |

*** - Present Value Currency**

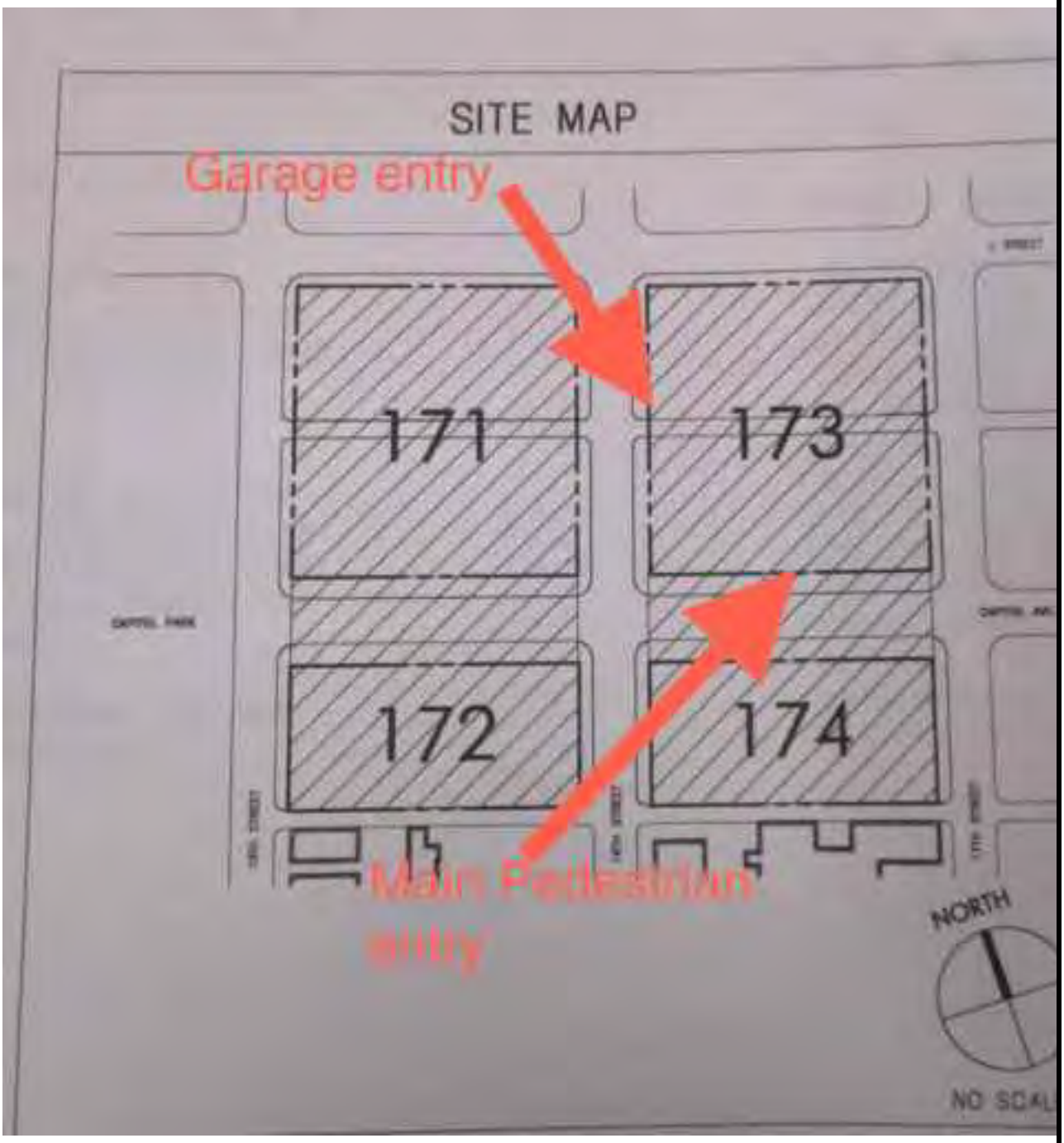
**Current Repl.Value** **$87,072,385**

**Footnotes**

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

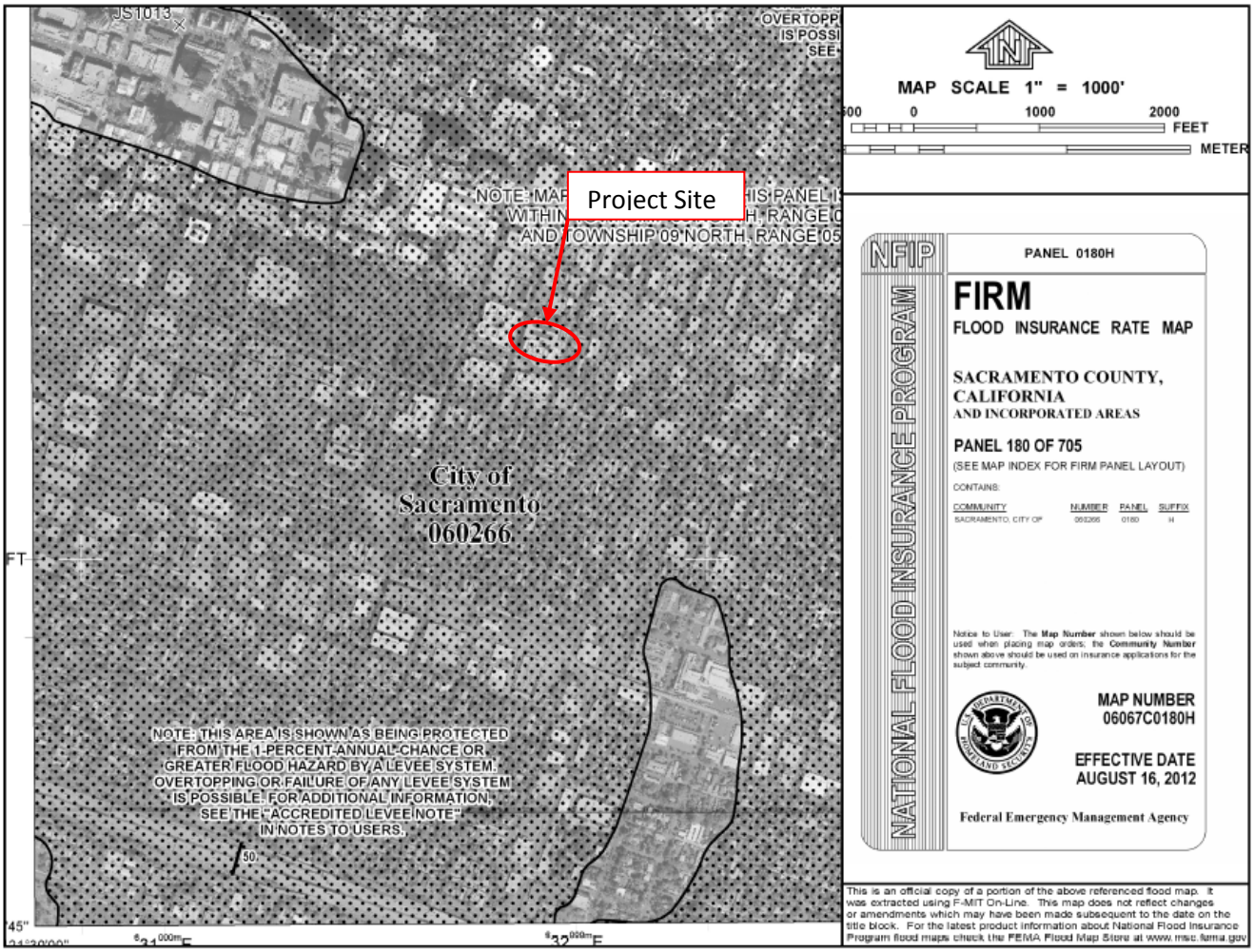
2 Detailed Descriptions of the Priorities can be found in the Appendices of the Facility Condition Assessment

# APPENDIX H: SUPPORTING DOCUMENTATION



| | | |
|---|---|---|
| EMG | **Source:**<br><br>**The north arrow indicator is an approximation of 0° North.** | **Project Number:**<br>111326.14R-023.305<br>**Project Name:**<br>East End Complex Block 173 |
| N | | **On-Site Date:**<br>January 17, 2015 |

# Flood Map




| | | |
|---|---|---|
| EMG | **SOURCE:**<br><br>**FEMA** | **Project Number:**<br><br>**111326.14R-023.305** |
| N | | **Project Name:**<br><br>**East End Complex Block 173** |
| | **Not drawn to scale. The north arrow indicator is an approximation of 0° North.** | **On-Site Date:**<br><br>**January 7, 2014** |

## Estimate of Structures Cost Using Marshall Cost Systems

## East End Block Complex 173 (053)

## 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 | $319.67 | 217,903 | $69,657,908 |
| | $0.00 | 0 | $0 |
| | $0.00 | 0 | $0 |
| | $0.00 | 0 | $0 |
| | $0.00 | 0 | $0 |
| | **Total** | 217,903 | $69,657,908 |

**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 |
|---|---|---|---|
| | $69,657,908 | 25.00% | $87,072,385 |
| | $0 | 25.00% | $0 |
| | $0 | 25.00% | $0 |
| | $0 | 25.00% | $0 |
| | $0 | 25.00% | $0 |
| **Cost Per SF** | **$399.59** | **Total Estimate** | **$87,072,385** |

# ADA Checklist

**Property Name:** East End Complex Block 173
**Date:** January 7, 2015
**Project Number:** 111326.14R-023.305

| 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 173 & Blk 174** | **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? | ✓ | | | |
| 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 | | | | | |
|---|---|---|---|---|---|
| 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)? | ✓ | | | |
| 8. | Are grab bars provided in toilet stalls? | ✓ | | | |

| EMG Abbreviated Accessibility Checklist | | | | | |
|---|---|---|---|---|---|
| 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: Eugene Spencer

Building name: East End Complex Block 173 (053)

What is your association with this property? Building Manager

What is the length of your association with this property? 6 months

Phone number: 916 445-1075

Please provide information about inspections relating to the following items

| Inspections | Date Last Inspected | List Name & Contact for Maintenance Contractor, if any. |
|---|---|---|
| 1. Elevators | 3/15/14 | Thyssen Krupp |
| 2. HVAC, Mechanical, Electric, Plumbing | Monthly, Quartly, Semi Annual, Annual | All work performed inhouse |
| 3. Life-Safety/Fire | January | National Fire and Honeywell |
| 4. Roofs | Monthly, Quartly, Semi Annual, Annual | In-house |

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?

no

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

11 years

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

Roof, paving and honeywell fire and life safety systems.

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 | | | Fire pumps certification not completed. Contractor has replaced (2) pumps now must be certified. |
| 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 | | | | underground parking has minor area leaks. |
| 15. Is there any water infiltration in basements or crawl spaces? | x | | | | underground parking has minor area leaks. |
| 16. Are there any wall, or window leaks? | x | | | | minor leak and old caulking area leak. Repaired in house for small leaks. |
| 17. Are there any roof leaks? | x | | | | small minor leaks that are repair with inhouse staff and caulking. |
| 18. Is the roofing covered by a warranty or bond? | | x | | | |
| 19. Are there any poorly insulated areas? | | | | x | |
| 20. Is Fire Retardant Treated (FRT) plywood used? | | | | x | |
| 21. Is exterior insulation and finish system (EIFS) or a synthetic stucco finish used? | | | | x | |
| 22. Are there any problems with the utilities, such as inadequate capacities? | | x | | | |
| 23. Are there any problems with the landscape irrigation systems? | x | | | | Some draining problems that is causing some decease plants. |
| 24. Has a termite/wood boring insect inspection been performed within the last year? | | | x | | |
| 25. Do any of the HVAC systems use R-11, 12, or 22 refrigerants? | | x | | | |
| 26. Has any part of the property ever contained visible suspect mold growth? | | x | | | |
| 27. Is there a mold Operations and Maintenance Plan? | | x | | | |
| 28. Have there been indoor air quality or mold related complaints from tenants? | | x | | | |

| Question | Y | N | N/A | Unk | Comments |
|---|---|---|---|---|---|
| 29. Is polybutylene piping used? | | | x | | |
| 30. Are there any plumbing leaks or water pressure problems? | x | | | | VERY minor plumbing leaks that is repaired inhouse. |
| 31. Are there any leaks or pressure problems with natural gas service? | | x | | | |
| 32. Does any part of the electrical system use aluminum wiring? | | | | x | |
| 33. Are there transformers inside the building? | x | | | | |
| 34. Do any Commercial units have less than 200-Amp service? | | x | | | |
| 35. Are there any recalled fire sprinkler heads (Star, GEM, Central, Omega)? | | x | | | |
| 36. Is there any pending litigation concerning the property? | | x | | | |
| 37. Has the State previously completed an ADA or 'Title 24 review? | | | | x | |
| 38. Have any ADA or Title 24 improvements been made to the property? | | x | | | |
| 39. Does a Barrier Removal Plan exist for the property? | | | x | | |
| 40. Has the Barrier Removal Plan been approved by a credentialed third party? | | | x | | |
| 41. Have there been any ADA or Title 24 related complaints? | | x | | | |
| 42. Have there been any complaints about the elevators or wait times? | | x | | | |
| 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
Architectural Elevator Consulting, LLC
1326 5th Ave., Suite 630
Seattle, WA 98101

ARCHITECTURAL ELEVATOR CONSULTING, LLC

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## 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:

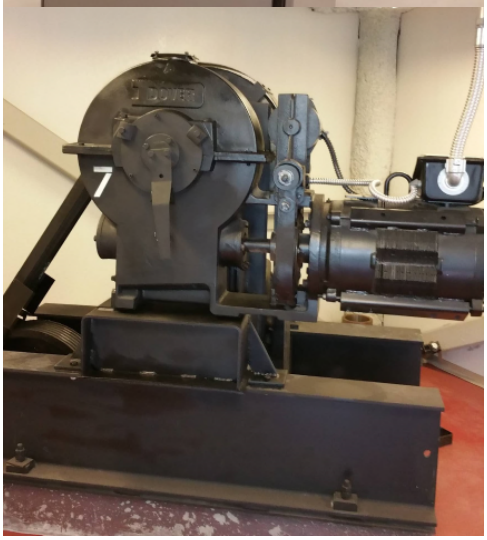
No work is recommended at this time other than to continue the high level of maintenance.

## 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.

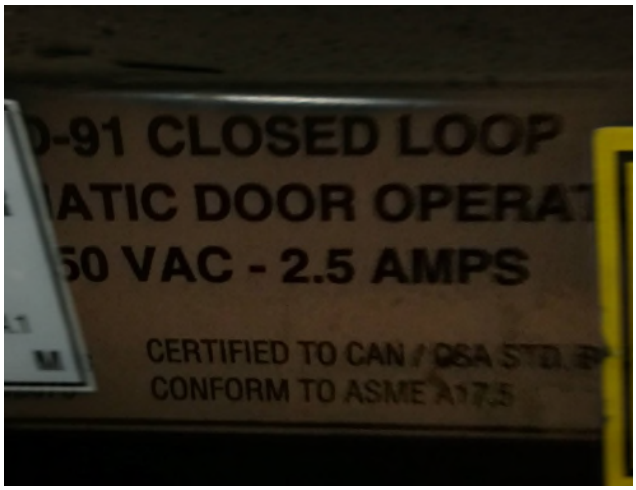
**Car Guide Rails:**

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.

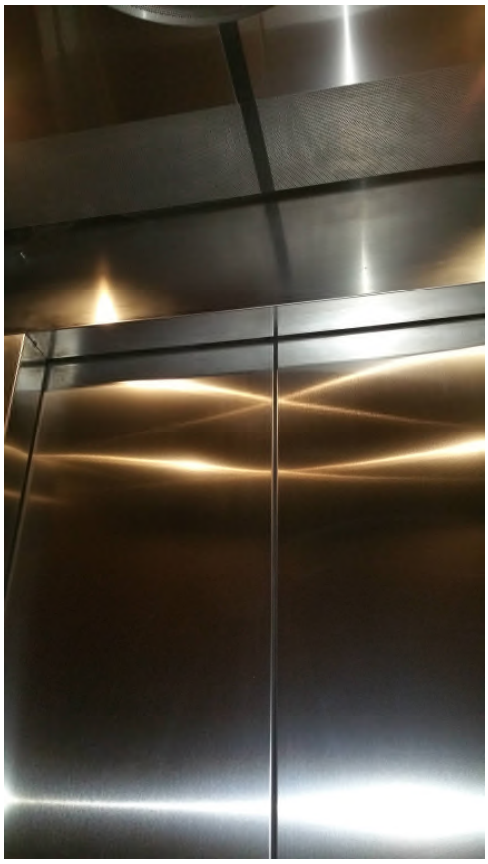
**Hall Call Pushbuttons:**

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.<br>Side Open Door: Cab must be 5’-8” wide x 4’-3” deep<br>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<br>(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<br>(Must be flush and level; Leveling zone +3"./ 60 to 75 deg. bevel.) | Yes |
| 2.1.4 | Pipes Conveying Gases, Vapors, or Liquids.<br>(If provided must be properly covered & securely fastened.) | Yes |
| 2.1.5 | Counterweight Guards<br>(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<br>(No-non elevator equipment- existing can stay) | Yes |
| 2.2.2 | Access to Machine Rooms and Machinery Spaces<br>(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<br>(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<br>(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<br>(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<br>(Not more than 5" for horizontal doors; 7.5" for vertical doors) | Yes |
| 2.4.2 | Bottom Car Clearances<br>(Car shall not strike any equipment when resting on fully compressed buffer.) | Yes |
| 2.4.3 | Bottom Car and Counterweight Run by<br>(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<br>(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<br>(Passenger Elevators – full width/height – no hand latches.)<br>(Freight Elevators – at least 6-0" gate) | Yes |
| 2.6.2 | Closing of Hoistway Doors<br>(Door closers required on cars except swinging portion of horizontal door) | Yes |
| 2.6.3 | Hoistway Door Vision Panels<br>(Required on manually operated or self-closing doors, location,<br>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<br>(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<br>(If provided must be able to absorb regenerative power) | Yes |
| 3.11.3 | Firefighters' Service<br>(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<br>(f = SxN/W or table 3.12.3) | Yes |
| 3.12.4 | Minimum Number and Diameter of Suspension Ropes<br>(3 for traction; 2 for drum; minimum diameter = 3/8" ) | Yes |
| 3.12.5 | Suspension Rope Equalizers<br>(When provided shall be of the individual-compression spring type) | Yes |
| 3.12.6 | Securing of Suspension Wire Ropes to Winding Drums<br>(Rope must be secured by clamps or tapered babbitted sockets.) | N/A |
| 3.12.7 | Spare Turns on Winding Drums<br>(Not less than one turn of the rope when car is on buffer) | N/A |
| 3.12.8 | Suspension Rope Fastenings<br>(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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