



Ronald M. George State Office Complex/ Hiram W. Johnson Building (402)

455 Golden Gate Ave., San Francisco, CA 94104

Facility Condition Assessment

September 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 (RESA) 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 Ronald M. George State Office Complex / Hiram W. Johnson Building (402).

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 Ronald M. George State Office Complex / Hiram W. Johnson Building (402) 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 Ronald M. George State Office Complex / Hiram W. Johnson Building (402) on February 9-11, 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 | \$521,057,435 |
| Immediate Repair Costs (12 months) | \$1,386,395 |
| 1-5 Year Capital Needs | \$19,757,683 |
| 6-10 Year Capital Needs | \$2,025,750 |
| Total 10-Year Capital Reserve Needs | \$23,169,829 |

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

Current Year FCI

$$\text{Current FCI} = \frac{\$1,386,395}{\$521,057,435}$$

Ten-Year FCI

$$\text{Ten-Year FCI} = \frac{\$23,169,829}{\$521,057,435}$$

| Current Year FCI | Ten-Year FCI |
|--------------------------------|--------------------------------|
| 0.27 % = <i>Good Condition</i> | 4.45 % = <i>Good Condition</i> |

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

- The two large skylights over the light wells have water leakage problems and require repairs.
- All restrooms are original to the 1998 construction. Barrier removal to meet current California Title 24 accessibility requirements is required.
- According to a landscape study commissioned by DGS, there are planter leaks along Golden Gate Avenue and Polk Street that require repairs to prevent further water intrusion into the building.

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

Originally known as the San Francisco Civic Center, the Ronald M. George State Office Complex was renamed in 2010 by Governor Schwarzenegger after the state's 27th Chief Justice Ronald M George. The complex consists of two buildings located on the same block; the Earl Warren Building and Hiram W. Johnson State Office Building. The two buildings are connected by a common vestibule and house over 200 pieces of art. The complex is located in close proximity to the Bay Area Rapid Transit (BART) Civic Center Station, San Francisco Main Library, San Francisco City Hall, Billy Graham Civic Auditorium, Hastings College of Law, and United States Federal Building.

The complex sits on a 2.59 acre parcel and includes a below-ground 50 space controlled access parking facility. Total occupant capacity for the complex exceeds 2,000 people.

Jurisdictionally, the complex falls under the responsibility of the San Francisco State Building Authority (a Joint Powers Authority) entity between the state and City of San Francisco. This entity was formed as part of the lease revenue bonds issued to build the Hiram W. Johnson Building and to renovate the historic Earl Warren building in 1998. The lease revenue bonds are scheduled for payoff in December 2021.

There are 13 different agencies as tenants in the complex, including the Judicial Council, Department of Justice, the Supreme Court and the Department of Industrial Relations.

Hiram W. Johnson State Office Building:

Hiram W. Johnson is located at 455 Golden Gate Avenue. This multi-tenant building is named after the State's 23rd Governor and United States Senator. Skidmore, Owings and Merrill's design complements the style of the historic Earl Warren Building.

The 14-story building, completed in 1998, has an exterior cladding of granite on floors one through four. Upper elevations are formed of pre-cast concrete panels designed to take full advantage of natural light consumption. Amenities include: interior atriums rising to the fourth floor, two interior courtyards, a 230 person auditorium, cafeteria, and childcare center. The building also contains ground floor retail shops and services. Mechanical and power plant rooms are located on the penthouse level as well the basement.

The gross area of the Hiram W. Johnson State Office building is 844,500 SF, consisting of an office building with a gross floor area of 818,651 SF and a 25,849 SF parking structure. The net usable area of the offices is 712,694 SF and the ratio of gross area to net usable is 87.1 percent.

The complex’s overall gross area is 1,178,500 SF with 870,965 net usable SF. The ratio between gross area and net usable is 80.8 percent. The occupant capacity is 2,084.

BUILDING DESCRIPTION

The building structural system is a steel framed column and beam mainframe with concrete filled metal floor and roof decks. The foundation consists of concrete pile caps and spread footings with concrete basement walls.

The primary flat roof is a conventional built-up system finished with gravel, and two prominent atrium skylight assemblies.

The exterior walls are finished with granite and metal framed curtain walls, windows, and fully glazed storefront entrances.

Interior walls are painted drywall, granite, ceramic tile, and wood paneling. Floor finishes include carpet, terrazzo, vinyl composition tiles, sheet vinyl, and ceramic tiles. Ceilings are suspended acoustic tiles, painted drywall, and open atriums to the roof skylights.

The facility is served by 12 traction passenger elevators and 1 freight elevator that access all 14 floors.

Domestic hot water is supplied to the restrooms and break-room areas by commercial grade electric water heaters located in the janitors’ closets and mechanical areas.

Heating is provided by steam purchased from the city’s central plant. Cooling is provided by three roof-mounted cooling towers and two basement chillers. Heated or chiller air is distributed by four air handlers on each floor that connect to variable air volume distribution boxes.

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

The building covers nearly the entire site and the only landscaping is perimeter planters. Landscaped areas are irrigated by drip irrigation system.

All of the parking stalls are located in a subterranean garage. Based on a physical count, parking is provided for 50 cars. The sidewalks around the property are constructed of cast-in-place concrete.

Project Statistics

| Item | Description |
|--------------|---|
| Project Name | Ronald M. George State Office Complex / Hiram W. Johnson Building |
| Building ID | 402 |

| Item | Description |
|-------------------------|----------------|
| Property Type | Administration |
| Year Built | 1998 |
| Number of Stories | 14 |
| Occupied | Yes |
| Land Area (acres) | 1.73 |
| Gross Square Feet (GSF) | 844,500 |

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 E2018-08¹ 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 Ronald M. George State Office Complex / Hiram W. Johnson Building (402) on February 9-11, 2015. The survey included analysis and observation

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

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

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

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

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

PRIORITY RANKING

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

PRIORITY RANKING CATEGORIES

Building Mission Ranking

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

Remaining Useful Life Ranking

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

Asset Component Category

Each material or system (asset) evaluated is assigned a unique Unifomat code. The Unifomat 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 as 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.

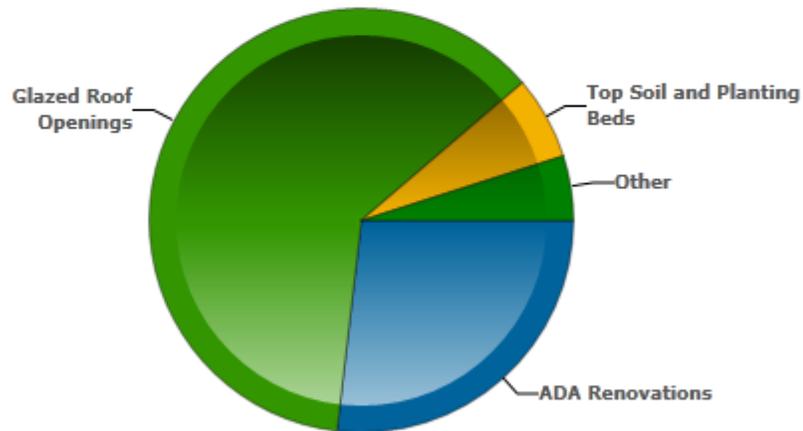
PRIORITY RATIO

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:

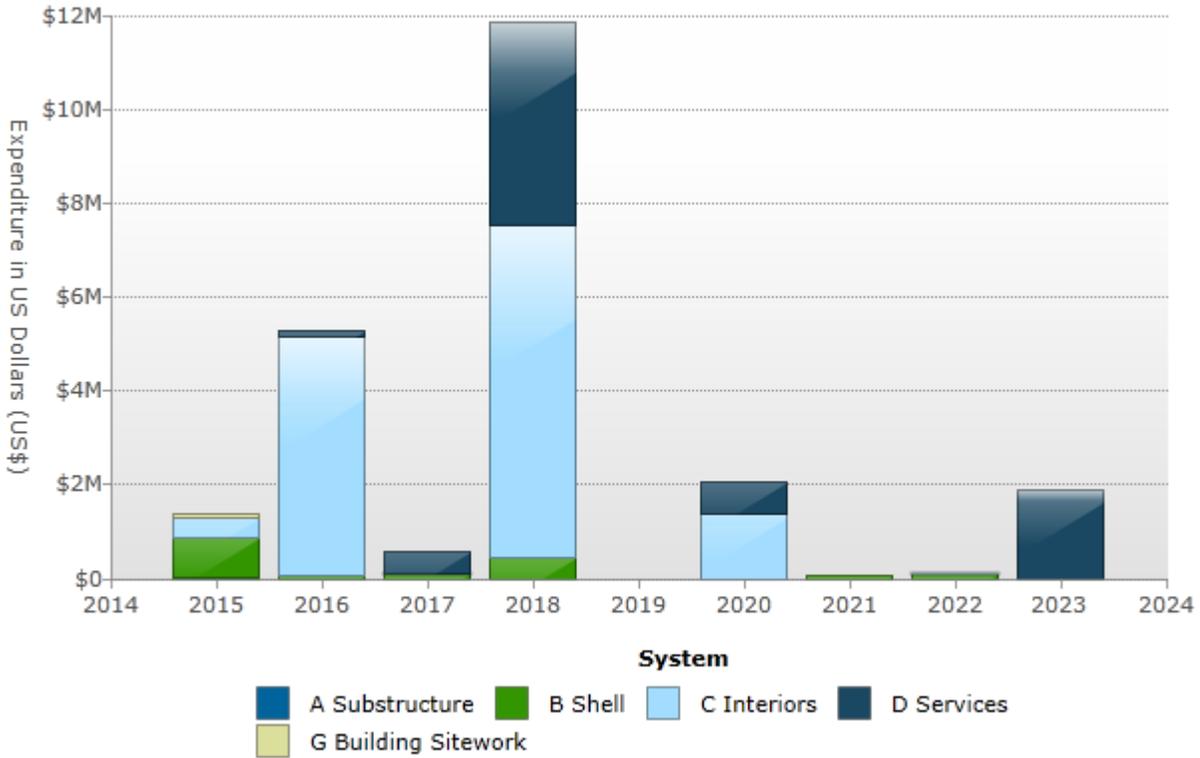
| Condition | Definition |
|-----------|---|
| Good | In new or well-maintained condition, with no visual evidence of wear, soiling, or other deficiencies. |
| Fair | Subjected to wear and soiling but is still in a serviceable and functioning condition. |
| Poor | Subjected to hard or long-term wear. 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 |
|-------|----------------------------|--------------------|
| A1027 | Pressure Injected Grouting | \$15,228 |
| A2022 | Moisture Protection | \$5,756 |
| B3021 | Glazed Roof Openings | \$858,204 |
| C1021 | Interior Doors | \$10,449 |
| C1035 | Identifying Devices | \$4,427 |
| C30 | Interior Finishes | \$13,640 |
| C3005 | ADA Renovations | \$372,000 |
| G2053 | Top Soil and Planting Beds | \$87,812 |
| G3034 | Lift Stations | \$18,880 |
| | Total | \$1,386,395 |

Total Capital Needs By System and Year



| Year | Building System | | | | | | | Total |
|--------------|-----------------|--------------------|---------------------|--------------------|------------------------|-----------------------------|-------------------|---------------------|
| | A Sub-Structure | B Shell | C Interiors | D Services | E Equip. & Furnishings | F Spec. Const. & Demolition | G Bldg. Site Work | |
| 2015 | \$20,984 | \$858,204 | \$400,516 | \$0 | \$0 | \$0 | \$106,692 | \$1,386,395 |
| 2016 | \$0 | \$60,633 | \$5,085,802 | \$114,000 | \$0 | \$0 | \$0 | \$5,260,434 |
| 2017 | \$0 | \$91,569 | \$1,011 | \$475,900 | \$0 | \$0 | \$0 | \$568,481 |
| 2018 | \$0 | \$444,094 | \$7,090,270 | \$4,319,683 | \$0 | \$0 | \$0 | \$11,854,047 |
| 2020 | \$0 | \$0 | \$1,383,582 | \$691,139 | \$0 | \$0 | \$0 | \$2,074,721 |
| 2021 | \$0 | \$60,633 | \$0 | \$0 | \$0 | \$0 | \$0 | \$60,633 |
| 2022 | \$0 | \$91,569 | \$1,011 | \$0 | \$0 | \$0 | \$0 | \$92,581 |
| 2023 | \$0 | \$0 | \$0 | \$1,872,536 | \$0 | \$0 | \$0 | \$1,872,536 |
| Total | \$20,984 | \$1,606,702 | \$13,962,193 | \$7,473,258 | \$0 | \$0 | \$106,692 | \$23,169,829 |

CURRENT REPLACEMENT VALUE

The Current Replacement Value has been determined as \$521,057,435 for the Ronald M. George State Office Complex / Hiram W. Johnson Building Building (402). 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 |
|---------------|---------|---------------------------|
| 844,500 GSF | \$617 | \$521,057,435 |

FACILITY CONDITION INDEX

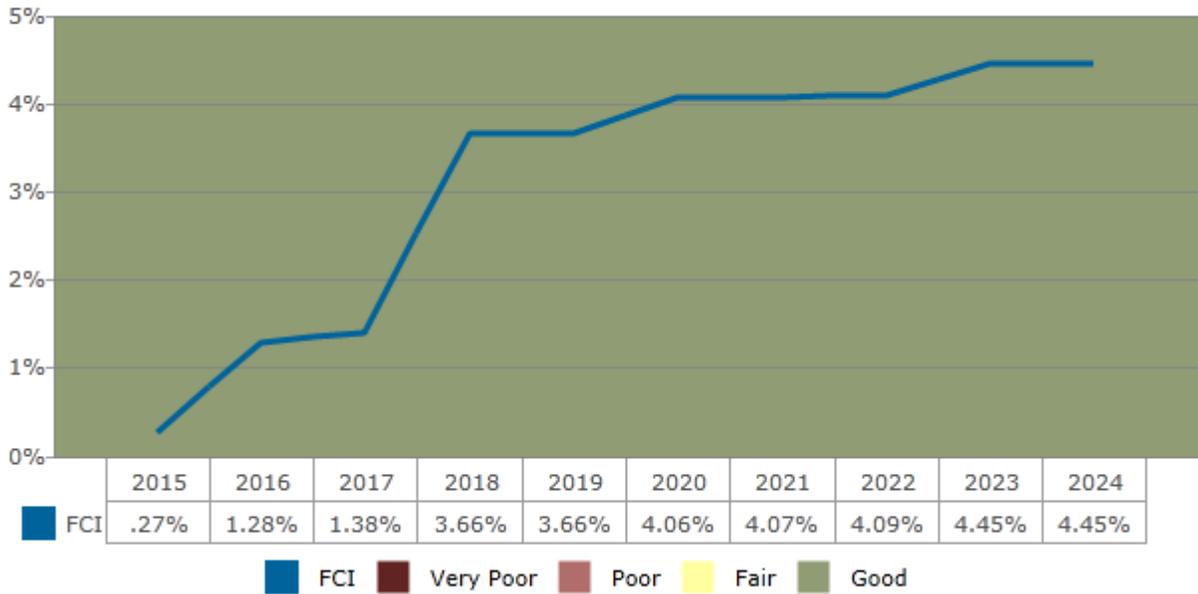
The FCI¹ is an indication of a building’s current and future overall condition. According to industry standards an FCI ratio of 65 percent, or the “rule of two-thirds,” is the threshold for identifying potential candidates for replacement or divestment.² Once the FCI ratio reaches 65 percent, or roughly two-thirds of the Current Replacement Value of the estimated cost to replace a building, it may not be prudent to continue to fund repairs. In cases where aggressive facilities planning is expected to be necessary, this threshold may be adjusted to address more pressing needs.

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

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

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

Cumulative Effects of FCI over the Study Period



APPENDICES

APPENDIX A: ACCESSIBILITY ISSUES

| Item | Description |
|---------------------------|---------------------------|
| C1035 Identifying Devices | C1035 Directional Signage |
| Condition | Fair |
| Qty / UOM | 14 / EACH |
| RUL (years) | 0 |
| Location | All Floors |

| Item | Description |
|-----------------------|---------------------|
| C3005 ADA Renovations | C3005 ADA Restrooms |
| Condition | Fair - Good |
| Qty / UOM | 30 / EA |
| RUL (years) | 0 |
| Location | All Floors |

Recommendations:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|-------------------------------------|-------------|----------------|--------------------|------------|------|-------------------|
| C1021 | B2031 Add ADA automatic door opener | 12.0 - EA | 870.8 | CC - Accessibility | Priority 2 | 2015 | 10,449 |
| C1035 | Replace C1035 Directional Signage | 14.0 - EACH | 316.2 | CC - Accessibility | Priority 1 | 2015 | 4,427 |
| C3005 | Replace C3005 ADA Restrooms | 30.0 - EA | 12400.0 | CC - Accessibility | Priority 1 | 2015 | 372,000 |

Cost Summary:

| Year | Total Expenditures |
|------|--------------------|
| 2015 | \$386,876 |

APPENDIX B: GENERAL ASSESSMENT INFORMATION

A Substructure Systems

A10 FOUNDATIONS

| Item | Description |
|---|---|
| A1012 Column Foundations & Pile Caps | A1012 Structural Concrete Foundation, pile cap over 10 CY |
| Condition | Good |
| Qty / UOM | 350 / CY |
| RUL (years) | 53 |
| Location | Foundation |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|------------------------------------|
| A1027 Pressure Injected Grouting | A1027 Concrete Slab - Crack Repair |
| Condition | Fair |
| Qty / UOM | 150 / LF |
| RUL (years) | 0 |
| Location | Basement |

OBSERVATIONS/COMMENTS:

Repair concrete slab cracks with epoxy injection during the assessment period.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|--|------------|----------------|------------------|------------|------|-------------------|
| A1027 | Replace A1027 Concrete Slab - Crack Repair | 150.0 - LF | 101.5 | OP - Maintenance | Priority 1 | 2015 | 15,228 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|-----------------|------|--------------------|
| A10 Foundations | 2015 | \$15,228 |

A20 BASEMENT CONSTRUCTION

| Item | Description |
|----------------------------------|--------------------------------------|
| A2022 Moisture Protection | A2020 Basement Walls - Waterproofing |
| Condition | Poor |
| Qty / UOM | 1,250 / SF |
| RUL (years) | 0 |
| Location | North Basement |

OBSERVATIONS/COMMENTS:

There are signs of water intrusion at basement north walls. Waterproof coating is recommended.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|--|--------------|----------------|------------------|------------|------|-------------------|
| A2022 | Replace A2020 Basement Walls - Waterproofing | 1,250.0 - SF | 4.6 | OP - Maintenance | Priority 1 | 2015 | 5,756 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|---------------------------|------|--------------------|
| A20 Basement Construction | 2015 | \$5,756 |

B Shell Systems

B20 EXTERIOR ENCLOSURE

| Item | Description |
|---|----------------------|
| B2011 Exterior Wall Construction | B2011 Exterior Walls |
| Condition | Good |
| Qty / UOM | 142,500 / SF Face |
| RUL (years) | 33 |
| Location | All Floors |
| Exterior Wall Construction | Finished Concrete |
| Parapets | Yes |
| Balcony Walls and Handrails | Metal |
| Exterior Soffits | Concealed |
| Lintels and Sills | Metal |

OBSERVATIONS/COMMENTS:

The exterior walls are primarily granite panels. The roof penthouse structure is finished with metal panels. The monitors have tempered glass panels. No further action is required.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|---|---------------|----------------|------------------|------------|------|-------------------|
| B2011 | B2011 Replace damaged joint sealant as needed | 12,391.0 - LF | 7.4 | OP - Maintenance | Priority 2 | 2017 | 91,569 |
| B2011 | B2011 Replace damaged joint sealant as needed | 12,391.0 - LF | 7.4 | OP - Maintenance | Priority 2 | 2022 | 91,569 |

| Item | Description |
|-------------------------|------------------------------|
| B2021 Windows | B2021 Windows /Curtain Walls |
| Condition | Good |
| Qty / UOM | 124 / EA |
| RUL (years) | 10 |
| Location | All Upper Floors |
| Window Type | Fixed |
| Windows Material | Steel |
| Windows Glazing | Double Glazed |
| Window Operation | Manual |

OBSERVATIONS/COMMENTS:

The curtain walls at the main lobby and light wells were installed in 1998. Re-sealing windows and replacing gaskets during the term is recommended.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|---|--------------|----------------|------------------|------------|------|-------------------|
| B2021 | B2021 Re-seal windows and replace gaskets | 3,950.0 - LF | 15.4 | OP - Maintenance | Priority 3 | 2018 | 60,633 |

| Item | Description |
|-------------------------|----------------------------------|
| B2021 Windows | B2021 Windows, Single Pane Metal |
| Condition | Good |
| Qty / UOM | 234 / EA |
| RUL (years) | 13 |
| Location | All Floors |
| Window Type | Fixed |
| Windows Material | Steel |
| Windows Glazing | Double Glazed |
| Window Operation | Manual |

OBSERVATIONS/COMMENTS:

There are 234 single-pane metal windows installed in 1998. Re-sealing windows and replacing gaskets during the term is recommended.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|------------------------|--------------|----------------|------------------|------------|------|-------------------|
| B2021 | B2021 Replace caulking | 3,950.0 - LF | 15.4 | OP - Maintenance | Priority 2 | 2016 | 60,633 |
| B2021 | B2021 Replace caulking | 3,950.0 - LF | 15.4 | OP - Maintenance | Priority 2 | 2021 | 60,633 |

| Item | Description |
|---|----------------------------------|
| B2031 Glazed Doors & Entrances | B2031 Main Entrance double doors |
| Condition | Good |
| Qty / UOM | 3 / EA |
| RUL (years) | 10 |
| Location | First Floor |
| Door Hardware | Push Plate |
| Door Operation | Manual |
| Glass Type | Tempered Glass |
| Door Frame | Metal Framed |
| Door Use | Entrance |

OBSERVATIONS/COMMENTS:

No further action is required.

COST SUMMARY:

| Type | Year | Total Expenditures |
|------------------------|------|--------------------|
| B20 Exterior Enclosure | 2016 | \$60,633 |
| B20 Exterior Enclosure | 2017 | \$91,569 |
| B20 Exterior Enclosure | 2018 | \$60,633 |
| B20 Exterior Enclosure | 2021 | \$60,633 |
| B20 Exterior Enclosure | 2022 | \$91,569 |

B30 ROOFING

| Item | Description |
|------------------------|--------------------------|
| B3011 Roof Finishes | B3011 Built-up Roof |
| Condition | Fair |
| Qty / UOM | 206 / SQ |
| RUL (years) | 3 |
| Location | Roof |
| Insulation | Batt |
| Flashings and Trim | Metal |
| Roof Eaves and Soffits | No |
| Roof Drainage | Internal Building Piping |
| Roof Warranty | No |

OBSERVATIONS/COMMENTS:

Based on remaining useful life (RUL), roof replacement is anticipated during the assessment period.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|-----------------------------|------------|----------------|------------------------|------------|------|-------------------|
| B3011 | Replace B3011 Built-up Roof | 206.0 - SQ | 1861.5 | IN - Beyond Rated Life | Priority 2 | 2018 | 383,461 |

| Item | Description |
|----------------------------|----------------------|
| B3021 Glazed Roof Openings | B3021 Glass Skylight |
| Condition | Fair |
| Qty / UOM | 7,500 / SF |
| RUL (years) | 0 |
| Location | Roof |
| Roof Opening Operation | Fixed |

OBSERVATIONS/COMMENTS:

Based on conversation with maintenance staff, the two skylights over the light wells have water leakage problems. A project is in place to repair these during the term.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|------------------------------|--------------|----------------|------------------|------------|------|-------------------|
| B3021 | Replace B3021 Glass Skylight | 7,500.0 - SF | 114.4 | OP - Maintenance | Priority 1 | 2015 | 858,204 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|-------------|------|--------------------|
| B30 Roofing | 2015 | \$858,204 |
| B30 Roofing | 2018 | \$383,461 |

C Interiors Systems

C10 INTERIOR CONSTRUCTION

| Item | Description |
|----------------------|-----------------------|
| C1021 Interior Doors | B2031 Solid Wood Door |
| Condition | Good |
| Qty / UOM | 79 / EA |
| RUL (years) | 10 |
| Location | All Floors |

OBSERVATIONS/COMMENTS:

As part of 2014 DGS ADA accessibility survey, adding automatic door openers with DC actuators is recommended at all floor entrance doors.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|-------------------------------------|-----------|----------------|--------------------|------------|------|-------------------|
| C1021 | B2031 Add ADA automatic door opener | 12.0 - EA | 870.8 | CC - Accessibility | Priority 2 | 2015 | 10,449 |

| Item | Description |
|-----------------------------|---|
| C1021 Interior Doors | C1021 Entrance double wood with with Panels |
| Condition | Good |
| Qty / UOM | 43 / EA |
| RUL (years) | 10 |
| Location | All Floors |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|----------------------------------|---------------------------|
| C1035 Identifying Devices | C1035 Directional Signage |
| Condition | Fair |
| Qty / UOM | 14 / EACH |
| RUL (years) | 0 |
| Location | All Floors |

OBSERVATIONS/COMMENTS:

According to the DGS access barrier plans dated October 2014, adding directional signage at lobby area and hallways as part of ADA accessibility requirement is recommended.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|-----------------------------------|-------------|----------------|--------------------|------------|------|-------------------|
| C1035 | Replace C1035 Directional Signage | 14.0 - EACH | 316.2 | CC - Accessibility | Priority 1 | 2015 | 4,427 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|---------------------------|------|--------------------|
| C10 Interior Construction | 2015 | \$14,876 |

C20 STAIRS

| Item | Description |
|-------------------------|------------------------|
| C2011 Regular Stairs | C2011 Fire Exit Stairs |
| Condition | Good |
| Qty / UOM | 16,580 / SF |
| RUL (years) | 10 |
| Location | Stairs |
| Stairs Frame | Steel |
| Stair Riser | Closed |
| Stair Treads | Concrete |
| Stair Railings | Metal |
| Stair Soffit Finishes | Plaster |
| Stair Handrail Finishes | Painted |

OBSERVATIONS/COMMENTS:

There are six fire exit stairs with concrete flooring, and additional stairs near elevators with terrazzo flooring. Recommend periodic refinishing of terrazzo flooring, no further action required.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|---------------------------------|------------|----------------|-----------------|------------|------|-------------------|
| C2011 | C2011 Fire exit stairs flooring | 991.5 - SF | 1.0 | IN - Appearance | Priority 3 | 2017 | 1,011 |
| C2011 | C2011 Fire exit stairs flooring | 991.5 - SF | 1.0 | IN - Appearance | Priority 3 | 2022 | 1,011 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|------------|------|--------------------|
| C20 Stairs | 2017 | \$1,011 |
| C20 Stairs | 2022 | \$1,011 |

C30 INTERIOR FINISHES

| Item | Description |
|-----------------------|-----------------------|
| C30 Interior Finishes | C3015 Mold Evaluation |
| Condition | Poor |
| Qty / UOM | 1 / EA |
| RUL (years) | 0 |
| Location | 5th Floor |

OBSERVATIONS/COMMENTS:

Based on conversation with maintenance staff, a mold issue exists due to water leakage in the fifth floor northwest meeting room. Mold and air quality evaluations are recommended.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|------|-------------------------------|-----------|----------------|-------------------------|------------|------|-------------------|
| C30 | Replace C3015 Mold Evaluation | 1.0 - EA | 13640.0 | EN - Air/ Water Quality | Priority 1 | 2015 | 13,640 |

| Item | Description |
|-----------------------|---------------------|
| C3005 ADA Renovations | C3005 ADA Restrooms |
| Condition | Fair - Good |
| Qty / UOM | 30 / EA |
| RUL (years) | 0 |
| Location | All Floors |

OBSERVATIONS/COMMENTS:

All restrooms are original to the 1998 construction. The DGS access barrier removal project for upgrading all restrooms to meet current California Title 24 accessibility requirements is in the bidding process.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|-----------------------------|-----------|----------------|--------------------|------------|------|-------------------|
| C3005 | Replace C3005 ADA Restrooms | 30.0 - EA | 12400.0 | CC - Accessibility | Priority 1 | 2015 | 372,000 |

| Item | Description |
|--|------------------------------|
| C3012 Wall Finishes to Interior Walls | C3012 Interior Painted Walls |
| Condition | Fair |
| Qty / UOM | 245,000 / SF |
| RUL (years) | 3 |
| Location | All Floors |

OBSERVATIONS/COMMENTS:

Due to normal wear, interior wall finishes for offices and common areas will require paint maintenance during the assessment period.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|--------------------------------------|----------------|----------------|-----------------|------------|------|-------------------|
| C3012 | Repaint C3021 Interior Painted Walls | 245,000.0 - SF | 2.1 | IN - Appearance | Priority 3 | 2018 | 522,536 |

| Item | Description |
|--|-----------------------------|
| C3012 Wall Finishes to Interior Walls | C3010 Granite Wall Finishes |
| Condition | Good |
| Qty / UOM | 2,290 / SF |
| RUL (years) | 33 |
| Location | Elevator Lobbies |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|--|----------------------------------|
| C3012 Wall Finishes to Interior Walls | C3012 Stained Wood Paneled Walls |
| Condition | Good |
| Qty / UOM | 4,580 / SF |
| RUL (years) | 10 |
| Location | Various |

OBSERVATIONS/COMMENTS:

Stained wood-paneled wall finishes are in elevator lobbies, court room, and various other locations. No further action is required.

| Item | Description |
|-----------------------|-----------------------------------|
| C3024 Flooring | C3020 Ceramic Tile Floor Finishes |
| Condition | Fair |
| Qty / UOM | 710 / CSF |
| RUL (years) | 13 |
| Location | Restrooms and various |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|----------------|-----------------------|
| C3024 Flooring | C3024 Vinyl Tile |
| Condition | Good |
| Qty / UOM | 11,000 / SY |
| RUL (years) | 5 |
| Location | Throughout Facility |
| Floor Toppings | Light Weight Concrete |

OBSERVATIONS/COMMENTS:

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

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|--------------------------|---------------|----------------|-----------------|------------|------|-------------------|
| C3024 | Replace C3024 Vinyl Tile | 11,000.0 - SY | 125.8 | IN - Appearance | Priority 4 | 2020 | 1,383,582 |

| Item | Description |
|----------------------------|---------------------------|
| C3024 Flooring | C3024 Terrazzo Flooring |
| Condition | Good |
| Qty / UOM | 8,810 / SF |
| RUL (years) | 33 |
| Location | Entrance Lobby and Stairs |
| Floor Toppings | Light Weight Concrete |
| Traffic Membranes | Epoxy / Urethane Coated |
| Hardeners and Seals | Paste Wax |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|------------------------|-----------------------|
| C3025 Carpeting | C3025 Carpet Flooring |
| Condition | Fair |
| Qty / UOM | 52,645 / SY |
| RUL (years) | 1 |
| Location | All Floors |
| Floor Toppings | Light Weight Concrete |

OBSERVATIONS/COMMENTS:

All office areas are covered with carpet. The 6th, 8th and 14th floor carpets were replaced in 2006. Based on normal wear and deterioration, replacement will be required in the near term.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|-------------------------------|---------------|----------------|-----------------|------------|------|-------------------|
| C3025 | Replace C3025 Carpet Flooring | 52,645.0 - SY | 96.6 | IN - Appearance | Priority 3 | 2016 | 5,085,802 |

| Item | Description |
|-------------------------------|--------------------------------|
| C3031 Ceiling Finishes | C3010 Painted Drywall Ceilings |
| Condition | Fair |
| Qty / UOM | 72,000 / SF |
| RUL (years) | 3 |
| Location | Restrooms and various |

OBSERVATIONS/COMMENTS:

Based on RUL and condition, ceiling painting is anticipated during the term.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|--|---------------|----------------|-----------------|------------|------|-------------------|
| C3031 | Replace C3010 Painted Drywall Ceilings | 72,000.0 - SF | 4.4 | IN - Appearance | Priority 3 | 2018 | 319,622 |

| Item | Description |
|---------------------------------|----------------------------------|
| C3032 Suspended Ceilings | C3032 Suspended Acoustical Tiles |
| Condition | Fair |
| Qty / UOM | 5,200 / CSF |
| RUL (years) | 3 |
| Location | Office Areas |

OBSERVATIONS/COMMENTS:

All office and hallway ceilings are acoustic tile suspended ceilings. There is water intrusion at the fifth floor. Replacement of 25 percent of the damaged tiles is recommended in the near term.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|--|---------------|----------------|-----------------|------------|------|-------------------|
| C3032 | Replace C3032 Suspended Acoustical Tiles | 5,200.0 - CSF | 1201.6 | IN - Appearance | Priority 3 | 2018 | 6,248,112 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|-----------------------|------|--------------------|
| C30 Interior Finishes | 2015 | \$385,640 |
| C30 Interior Finishes | 2016 | \$5,085,802 |
| C30 Interior Finishes | 2018 | \$7,090,270 |
| C30 Interior Finishes | 2020 | \$1,383,582 |

D Services Systems

D10 CONVEYING SYSTEMS

| Item | Description |
|---------------------------|---------------------------|
| D1011 Passenger Elevators | D1011 Passenger Elevators |
| Condition | Fair |
| Qty / UOM | 4 / EA |
| RUL (years) | 3 |
| Location | Elevators 4-7 |

OBSERVATIONS/COMMENTS:

A 2015 assessment report by Elevator Consulting Associates is included in the appendices and details the anticipated modernization costs included in this report. This includes the consultant’s suggested additional costs for cab finishes, associated trades, and consulting fees.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|-----------------------------------|-----------|----------------|------------------------|------------|------|-------------------|
| D1011 | Replace D1011 Passenger Elevators | 4.0 - EA | 275300.0 | IN - Beyond Rated Life | Priority 2 | 2018 | 1,101,200 |

| Item | Description |
|---------------------------|---------------------------|
| D1011 Passenger Elevators | D1011 Passenger Elevators |
| Condition | Fair |
| Qty / UOM | 1 / EA |
| RUL (years) | 2 |
| Location | Elevator 17 |

OBSERVATIONS/COMMENTS:

A 2015 assessment report by Elevator Consulting Associates is included in the appendices and details the anticipated modernization costs included in this report. This includes the consultant’s suggested additional costs for cab finishes, associated trades, and consulting fees.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|-----------------------------------|-----------|----------------|------------------------|------------|------|-------------------|
| D1011 | Replace D1011 Passenger Elevators | 1.0 - EA | 145300.0 | IN - Beyond Rated Life | Priority 2 | 2017 | 145,300 |

| Item | Description |
|---------------------------|---------------------------|
| D1011 Passenger Elevators | D1011 Passenger Elevators |
| Condition | Fair |
| Qty / UOM | 2 / EA |
| RUL (years) | 2 |
| Location | Elevators 14-15 |

OBSERVATIONS/COMMENTS:

A 2015 assessment report by Elevator Consulting Associates is included in the appendices and details the anticipated modernization costs included in this report. This includes the consultant’s suggested additional costs for cab finishes, associated trades, and consulting fees.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|-----------------------------------|-----------|----------------|------------------------|------------|------|-------------------|
| D1011 | Replace D1011 Passenger Elevators | 2.0 - EA | 165300.0 | IN - Beyond Rated Life | Priority 2 | 2017 | 330,600 |

| Item | Description |
|---------------------------|--------------------------|
| D1011 Passenger Elevators | D1011 Passenger Elevator |
| Condition | Fair |
| Qty / UOM | 1 / EA |
| RUL (years) | 3 |
| Location | Elevator 13 |

OBSERVATIONS/COMMENTS:

A 2015 assessment report by Elevator Consulting Associates is included in the appendices and details the anticipated modernization costs included in this report. This includes the consultant’s suggested additional costs for cab finishes, associated trades, and consulting fees.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|----------------------------------|-----------|----------------|------------------------|------------|------|-------------------|
| D1011 | Replace D1011 Passenger Elevator | 1.0 - EA | 275300.0 | IN - Beyond Rated Life | Priority 2 | 2018 | 275,300 |

| Item | Description |
|---------------------------|---------------------------|
| D1011 Passenger Elevators | D1011 Passenger Elevators |
| Condition | Fair |
| Qty / UOM | 4 / EA |
| RUL (years) | 3 |
| Location | Elevators 8-11 |

OBSERVATIONS/COMMENTS:

A 2015 assessment report by Elevator Consulting Associates is included in the appendices and details the anticipated modernization costs included in this report. This includes the consultant’s suggested additional costs for cab finishes, associated trades, and consulting fees.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|-----------------------------------|-----------|----------------|------------------------|------------|------|-------------------|
| D1011 | Replace D1011 Passenger Elevators | 4.0 - EA | 285300.0 | IN - Beyond Rated Life | Priority 2 | 2018 | 1,141,200 |

| Item | Description |
|-------------------------|------------------------|
| D1012 Freight Elevators | D1012 Freight Elevator |
| Condition | Fair |
| Qty / UOM | 1 / EA |
| RUL (years) | 3 |
| Location | Elevator 12 |

OBSERVATIONS/COMMENTS:

A 2015 assessment report by Elevator Consulting Associates is included in the appendices and details the anticipated modernization costs included in this report. This includes the consultant’s suggested additional costs for cab finishes, associated trades, and consulting fees.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|--------------------------------|-----------|----------------|------------------------|------------|------|-------------------|
| D1012 | Replace D1012 Freight Elevator | 1.0 - EA | 295300.0 | IN - Beyond Rated Life | Priority 2 | 2018 | 295,300 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|-----------------------|------|--------------------|
| D10 Conveying Systems | 2017 | \$475,900 |
| D10 Conveying Systems | 2018 | \$2,813,000 |

D20 PLUMBING

| Item | Description |
|---------------------|---|
| D2011 Water Closets | D2011 Commercial Grade Water Closet, 1.6 GPF Unit |
| Condition | Good |
| Qty / UOM | 105 / EA |
| RUL (years) | 17 |
| Location | Throughout Facility |
| Low Flow Toilet | Yes |
| System Grade | Commercial Grade |

OBSERVATIONS/COMMENTS:

Manual flush valves were observed on the plumbing fixtures. Automatic flush valves are recommended to improve sanitation.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|---|------------|----------------|-------------|------------|------|-------------------|
| D2011 | D2011 Install automatic flush valves on toilets | 105.0 - EA | 400.0 | OP - Energy | Priority 2 | 2016 | 42,000 |

| Item | Description |
|-----------------|---------------------|
| D2012 Urinals | D2012 Urinal |
| Condition | Good |
| Qty / UOM | 30 / EA |
| RUL (years) | 18 |
| Location | Throughout Facility |
| Low Flow Toilet | Yes |
| System Grade | Commercial Grade |

OBSERVATIONS/COMMENTS:

Manual flush valves were observed on the vast majority of plumbing fixtures. Automatic flush valves are recommended to improve sanitation and to save water.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|---|-----------|----------------|-------------|------------|------|-------------------|
| D2012 | D2012 Install automatic flush valves on urinals | 30.0 - EA | 400.0 | OP - Energy | Priority 2 | 2016 | 12,000 |

| Item | Description |
|------------------|-----------------------------------|
| D2013 Lavatories | D2013 Counter Top Sink and Faucet |
| Condition | Fair |
| Qty / UOM | 150 / EA |
| RUL (years) | 18 |
| Location | Restrooms |

OBSERVATIONS/COMMENTS:

Automatic faucets for sinks are recommended to improve sanitation and water conservation.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|---|------------|----------------|-------------|------------|------|-------------------|
| D2013 | D2013 Install automatic faucets with motion sensors | 150.0 - EA | 400.0 | OP - Energy | Priority 2 | 2016 | 60,000 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|--------------|-------------|---------------------------|
| D20 Plumbing | 2016 | \$114,000 |

D30 HVAC

| Energy Supply | |
|---------------------------|---|
| Item | Description |
| Fuel Oil Type | N/A |
| Fuel Gas Type | N/A |
| Solid Fuel Type | N/A |
| District Heat Type | District Steam |
| District Cooling Type | Site Physical Plant Chilled Water |
| Solar Thermal | No |
| Fuel Tank Type | N/A |
| Fuel Tank Size (gallons) | N/A |
| Fuel Tank Location | N/A |
| Gas Meter Location | N/A |
| Electrical Meter Location | Basement |
| Water Meter Location | Basement of adjacent Earl Warren Building |

| Item | Description |
|------------------------|---------------------------------------|
| D3031.2 Cooling Towers | D3031 Cooling Tower, Galvanized Steel |
| Condition | Good |
| Qty / UOM | 3 / EA |
| RUL (years) | 24 |
| Location | Rooftop |

OBSERVATIONS/COMMENTS:

The three cooling towers were replaced in 2014. The cooling water chemical-automated makeup system appears to be partially failing, and the last log entry was from six weeks prior. Reportedly, a change in monitoring personnel was implemented. EMG recommends that a professional third party chemical control technician be brought in to train the maintenance staff to perform chemical maintenance control.

| Item | Description |
|----------------------------|--------------------|
| D3041.1 Air Handling Units | D3041 Interior AHU |
| Condition | Good |
| Qty / UOM | 60 / EA |

| Item | Description |
|-------------|-----------------------|
| RUL (years) | 23 |
| Location | Utility Areas/Closets |

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by 60 interior air handling units (AHUs). Four AHUs per floor feed variable air volume (VAV) boxes located in each space. The AHUs are provided with chilled water from the central system. Perimeter reheat is in place. No further action is required.

| Item | Description |
|----------------------------|---------------------|
| D3041.2 Terminal Units VAV | D3041 VAV Boxes |
| Condition | Fair - Good |
| Qty / UOM | 750 / EA |
| RUL (years) | 8 |
| Location | Throughout Facility |

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by VAV boxes supplied with conditioned air from the central system air handlers. Based on the age of the units, replacements are anticipated during the term.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|-------------------------|------------|----------------|------------------------|------------|------|-------------------|
| D3041 | Replace D3041 VAV Boxes | 750.0 - EA | 2496.7 | IN - Beyond Rated Life | Priority 4 | 2023 | 1,872,536 |

| Item | Description |
|--|-------------------|
| D3042 Exhaust Ventilation Systems | D3042 Exhaust Fan |
| Condition | Good |
| Qty / UOM | 5 / EA |
| RUL (years) | 18 |
| Location | Rooftop |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|---|-----------------------------|
| D3043 Steam Distribution Systems | D2022 Domestic Water Heater |
| Condition | Fair - Good |
| Qty / UOM | 14 / EA |
| RUL (years) | 3 |
| Location | Throughout Facility |

OBSERVATIONS/COMMENTS:

The vertical domestic hot water tanks are original to the 1998 construction. Based on RUL, replacements are anticipated during the assessment term.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|-------------------------------------|-----------|----------------|------------------------|------------|------|-------------------|
| D3043 | Replace D2022 Domestic Water Heater | 14.0 - EA | 5818.1 | IN - Beyond Rated Life | Priority 2 | 2018 | 81,453 |

| Item | Description |
|---------------------|------------------------------|
| D3052 Package Units | D3052 Computer/Sever Room AC |
| Condition | Fair - Good |
| Qty / UOM | 3 / EA |
| RUL (years) | 3 |
| Location | Rooftop |

OBSERVATIONS/COMMENTS:

The main server room has three dedicated air conditioning units original to the 1998 construction. Replacement is recommended.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|--------------------------------------|-----------|----------------|------------------------|------------|------|-------------------|
| D3052 | Replace D3052 Computer/Sever Room AC | 3.0 - EA | 18440.8 | IN - Beyond Rated Life | Priority 2 | 2018 | 55,322 |

| Item | Description |
|--|--------------------------------------|
| D3063 Heating/Cooling Air Handling Units | D3063 Variable Frequency Drive (VFD) |
| Condition | Fair - Good |
| Qty / UOM | 68 / EA |
| RUL (years) | 3 |
| Location | Throughout Facility |

OBSERVATIONS/COMMENTS:

Based on the estimated RUL, replacement of the variable frequency drives (VFDs) will be required during the assessment period.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|-----------------------|-----------|----------------|------------------------|------------|------|-------------------|
| D3063 | D3063 Replace VFDs | 68.0 - EA | 19730.9 | IN - Beyond Rated Life | Priority 2 | 2018 | 1,341,700 |

| Item | Description |
|-----------------------------------|-------------------------------------|
| D3068 Building Automation Systems | D3068 Direct Digital Controls (DDC) |
| Condition | Fair - Good |
| Qty / UOM | 844,500 / SF |
| RUL (years) | 5 |
| Location | Throughout Facility |

OBSERVATIONS/COMMENTS:

Direct digital controls (DDC) are implemented through the facility. Based on RUL, replacement is recommended.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|---|----------------|----------------|------------------------|------------|------|-------------------|
| D3068 | Replace D3068 Direct Digital Controls (DDC) | 844,500.0 - SF | 0.8 | IN - Beyond Rated Life | Priority 3 | 2020 | 691,139 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|----------|------|--------------------|
| D30 HVAC | 2018 | \$1,478,475 |
| D30 HVAC | 2020 | \$691,139 |
| D30 HVAC | 2023 | \$1,872,536 |

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 | N/A |
| Carbon Monoxide Detectors | Yes |
| Heat Detector | Yes |
| Central Fire Alarm Panel Location | Security Desk |
| Annunciator Panel Location | N/A |
| Fire Extinguishers | Yes |
| Fire Extinguisher Inspection Date | N/A |
| Distance to Nearest Fire Hydrant (ft) | N/A |
| Illuminated Exit Signs | Yes |
| Kitchen Suppression Systems | No |
| Halon Gas Systems | No |
| Smoke Evacuation Systems | Yes |
| Fire-rated Stairwells | Yes |
| Fire-rated Stairwell Finish | Drywall |
| Stairwell Discharge | Corridors |
| Stairwell Pressurized | No |
| Fire-Rated Doors Observed | Yes |
| Location of Fire-Rated Doors | Stairwells |
| Fire Alarm Service Company | N/A |
| Date of Last Fire Alarm Service | N/A |
| Are the individual office unit fire alarm systems monitored? | Yes |
| Are the common area fire alarm systems monitored? | Yes |
| Types of Common Areas Monitored | N/A |
| Fire Alarm Monitoring Company | 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 | 844,500 / SF |
| RUL (years) | 23 |
| Location | Throughout Facility |

OBSERVATIONS/COMMENTS:

The sprinkler riser and heads were replaced in 2013. No further action is required.

D50 ELECTRICAL SYSTEMS

| Item | Description |
|-----------------------------------|--|
| D5012 Low Tension Service & Dist. | D5010 Switchgear, Mainframe, 4000 Amps |
| Condition | Fair - Good |
| Qty / UOM | 3 / EA |
| RUL (years) | 23 |
| Location | Main Electrical Room |

OBSERVATIONS/COMMENTS:

The main switchgear is original 1998 General Electric equipment. No further action required.

| Item | Description |
|-----------------------------------|---|
| D5012 Low Tension Service & Dist. | D5012 Breaker Panel 225 Amps, 30 Circuits |
| Condition | Good |
| Qty / UOM | 56 / EA |
| RUL (years) | 23 |
| Location | Utility Areas/Closets |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|--------------------------|-------------------------|
| D5037 Fire Alarm Systems | D5037 Fire Alarm System |
| Condition | Good |
| Qty / UOM | 844,500 / SF |
| RUL (years) | 18 |
| Location | Main Electrical Room |

OBSERVATIONS/COMMENTS:

The fire alarm system was replaced in 2013. No further action is required.

| Item | Description |
|--------------------------|------------------------|
| D5037 Fire Alarm Systems | D5037 Fire Alarm Panel |
| Condition | Fair - Good |
| Qty / UOM | 3 / EA |
| RUL (years) | 3 |
| Location | Fire Control Station |

OBSERVATIONS/COMMENTS:

The fire alarm panel was replaced in 2013, along with major upgrades to the alarm system. No further action required.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|--------------------------------|-----------|----------------|------------------|------------|------|-------------------|
| D5037 | Replace D5037 Fire Alarm Panel | 3.0 - EA | 9402.5 | CC - Life Safety | Priority 1 | 2018 | 28,208 |

| Item | Description |
|---------------------------------------|-----------------------------------|
| D5092 Emergency Light & Power Systems | D5092 Emergency Generator 1500 kW |
| Condition | Good |
| Qty / UOM | 1 / EA |
| RUL (years) | 17 |
| Location | Rooftop |

OBSERVATIONS/COMMENTS:

The emergency generator is located on the roof and is original to the building construction. No further action is required.

| Item | Description |
|---------------------------------------|---------------------------------|
| D5092 Emergency Light & Power Systems | D5092 Emergency Transfer Switch |
| Condition | Fair - Good |
| Qty / UOM | 1 / EA |
| RUL (years) | 10 |
| Location | Main Electrical Room |

OBSERVATIONS/COMMENTS:

The transfer switch for the emergency generator is original equipment, and a conjunctive replacement is recommended when the generator is replaced. No further action is required.

COST SUMMARY:

| Type | Year | Total Expenditures |
|------------------------|------|--------------------|
| D50 Electrical Systems | 2018 | \$28,208 |

G Building Sitework Systems

G20 SITE IMPROVEMENTS

| Site Information | |
|---|---------------------|
| Item | Description |
| Main Ingress and Egress | 455 Golden Gate Ave |
| Access from | N |
| Additional Entrances | Polk Street |
| Access from | SW |
| Parking Count: Open lot | 0 |
| Parking Count: Sheltered by carports | 0 |
| Parking Count: Private garages | 0 |
| Parking Count: Subterranean garage | 50 |
| Parking Count: Freestanding parking structure | 0 |
| Number of ADA Compliant Spaces | 1 |
| Number of ADA Compliant Spaces for Vans | 0 |
| Method of obtaining parking count | Physical count |
| Property Identification Sign-Primary | Structure mounted |
| Property Identification Sign- Secondary | Structure mounted |
| Illuminated Identification Signage | No |
| Building Identification Sign | Yes |
| Illuminated Sign | No |
| Location of Property ID Sign | Main entrance drive |
| Trees Present | Yes |
| Shrubs Present | No |
| Grasses Present | No |
| Flower beds Present | No |
| Decorative Rocks Present | No |
| Lava Rocks Present | No |
| Ponds Present | No |
| Fountains Present | No |
| Topography | Gently sloping |

| Item | Description |
|--------------------------|-------------------------|
| G2031 Paving & Surfacing | G2031 Concrete Pavement |
| Condition | Good |
| Qty / UOM | 4,950 / SF |
| RUL (years) | 10 |
| Location | Site |

OBSERVATIONS/COMMENTS:

No further action is required.

| Item | Description |
|----------------------------------|-------------------|
| G2053 Top Soil and Planting Beds | G2053 Landscaping |
| Condition | Fair |
| Qty / UOM | 3,250 / SF |
| RUL (years) | 10 |
| Location | Site |

OBSERVATIONS/COMMENTS:

According to a landscape forensic study provided by DGS and dated July 2014, there are planter leaks along Golden Gate Avenue and Polk Street that require repairs to prevent further water intrusion into the building.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|----------------------------|-----------|----------------|------------------|------------|------|-------------------|
| G2053 | G2053 Repair planter leaks | 1.0 - EA | 87812.0 | OP - Maintenance | Priority 3 | 2015 | 87,812 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|-----------------------|------|--------------------|
| G20 Site Improvements | 2015 | \$87,812 |

G30 SITE CIVIL/MECHANICAL UTILITIES

| Item | Description |
|---------------------|---------------------------------|
| G3034 Lift Stations | G3034 Waste Water Pump Stations |
| Condition | Good |
| Qty / UOM | 4 / EA |
| RUL (years) | 0 |
| Location | Basement |

OBSERVATIONS/COMMENTS:

There are two sump pits; one sanitary, and one for storm water. Each pit has two automated pumps. Pumps are nearing the end of their expected life. Priority should be given to the proposed water treatment system upgrade project to prevent release of any chemicals, and to comply with environmental requirements.

COST RECOMMENDATIONS:

| Type | Component Description | Qty / UOM | Unit Cost (\$) | Plan Type | Priority | Year | Expenditures (\$) |
|-------|---|-----------|----------------|-------------------------|------------|------|-------------------|
| G3034 | Replace G3034 Waste Water Pump Stations | 4.0 - EA | 4720.0 | EN - Air/ Water Quality | Priority 1 | 2015 | 18,880 |

COST SUMMARY:

| Type | Year | Total Expenditures |
|-------------------------------------|------|--------------------|
| G30 Site Civil/Mechanical Utilities | 2015 | \$18,880 |

The weather at the time of the assessment was:

| Item | Description |
|---|-------------------|
| Approximate Outdoor Temperature (degrees F) | 64 |
| 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 | Yes |
| Termite Inspection Report Reviewed | No |
| Boiler Certificates Reviewed | |
| Document Year Built Information Obtained From | DGS |

APPENDIX C: CERTIFICATION

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

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

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

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

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

Prepared By: Djahan Nabili, Field Observer

Reviewed By: 
Matt Anderson, Program Manager

APPENDIX D: PHOTOS



:- Front Elevation



:- Northwest Elevation



:- Northeast Corner



:- Southwest



A1027 Concrete Slab - Crack Repair



A1027 Concrete Slab - Crack Repair



A2020 Basement Walls - Waterproofing



B2011 Exterior Walls



B2011 Exterior Walls



B2021 Windows /Curtain Walls



B2021 Windows /Curtain Walls



B2021 Windows, Single Pane Metal



B2031 Main Entrance double doors



B3011 Built-up Roof



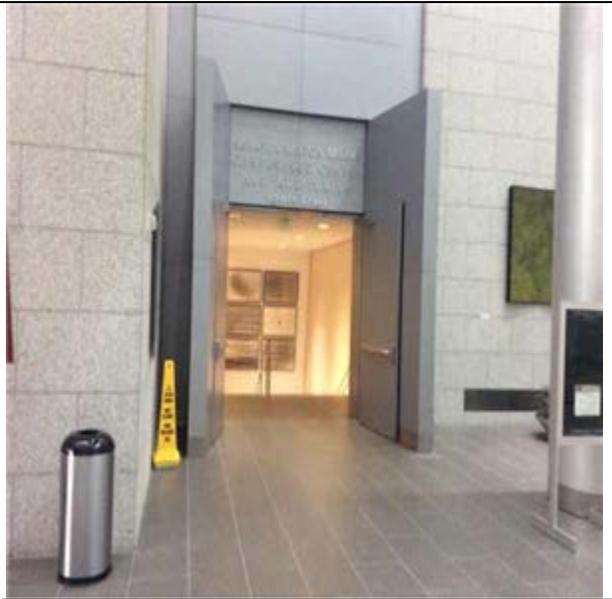
B3021 Glass Skylight



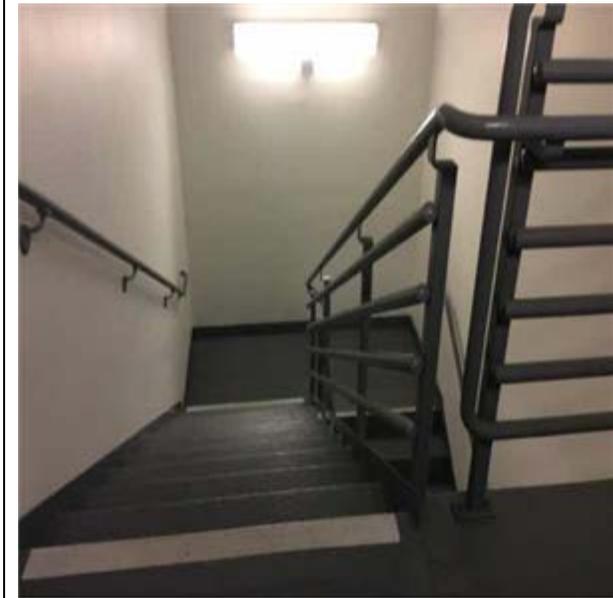
B2031 Solid Wood Door



C1021 Entrance double wood with with Panels



C1035 Directional Signage



C2011 Fire Exit Stairs



C3015 Mold Evaluation



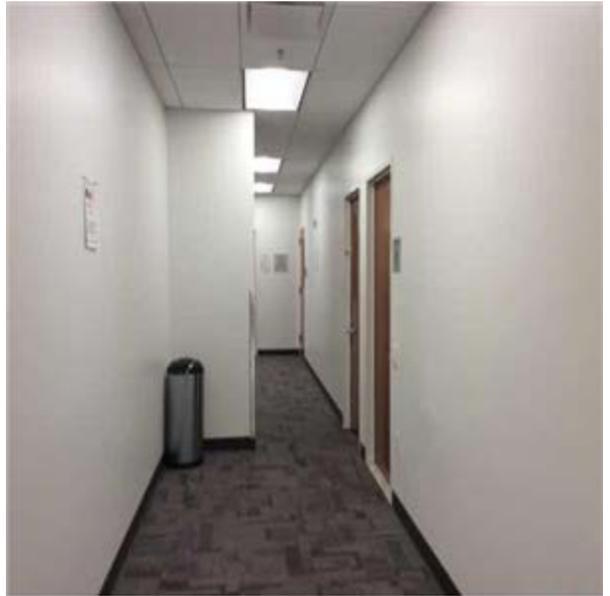
C3005 ADA Restrooms



C3005 ADA Restrooms



C3005 ADA Restrooms



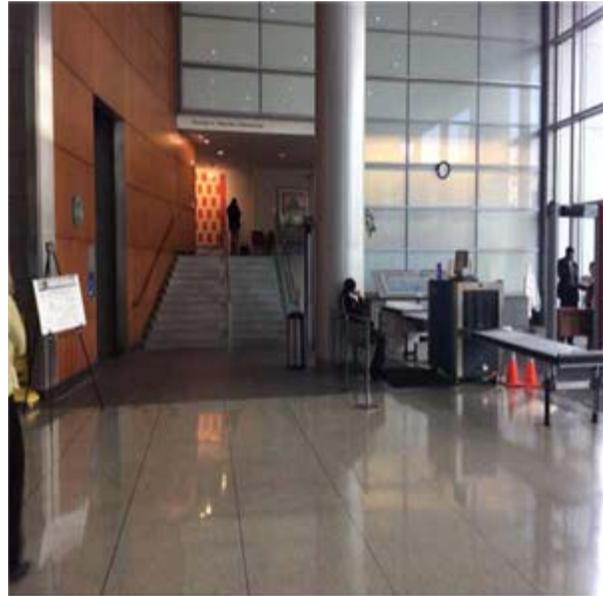
C3012 Interior Painted Walls



C3012 Stained Wood Paneled Walls



C3024 Vinyl Tile



C3024 Terrazzo Flooring



C3025 Carpet Flooring



C3032 Suspended Acoustical Tiles



D2012 Urinal



D3031 Cooling Tower, Galvanized Steel



D3041 Interior AHU



D3041 Interior AHU



D3042 Exhaust Fan



D2022 Domestic Water Heater



D3052 Computer/Sever Room AC



D3063 Variable Frequency Drive (VFD)



D3068 Direct Digital Controls (DDC)



D4011 Sprinkler Heads



D5012 Breaker Panel 225 Amps, 30 Circuits



D5010 Switchgear, Mainframe, 4000 Amps



D5010 Switchgear, Mainframe, 4000 Amps



D5010 Switchgear, Mainframe, 4000 Amps



D5037 Fire Alarm Panel



D5037 Fire Alarm System



D5037 Fire Alarm System



D5092 Emergency Generator 1500 kW



D5092 Emergency Generator 1500 kW



D5092 Emergency Transfer Switch



G2031 Concrete Pavement



G2031 Concrete Pavement



G2053 Landscaping



G2053 Landscaping :- Water Intrusion



G3034 Waste Water Pump Stations

APPENDIX E: TERMINOLOGY AND ABBREVIATIONS

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

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

| TERMINOLOGY and ABBREVIATIONS | |
|--------------------------------------|---|
| Practically Reviewable | Information that is practically reviewable means that the information is provided by the source in a manner and form that, upon examination, yields information relevant to the property without the need for extraordinary analysis of irrelevant data. |
| Practice | A definitive procedure for performing one or more specific operations or functions that does not produce a test result. |
| Primary Improvements | The site and building improvements that are of fundamental importance with respect to the Property. |
| Project Manager | The individual Professional Engineer, Contractor, or Registered Architect having a general, well rounded knowledge of all pertinent site and building systems and components that conducts the on site visit and walk-through observation. |
| Property | The site and building improvements, which are specifically within the scope of the FCA to be prepared in accordance with the agreement between the Client and EMG. |
| Readily Accessible | Those areas of the Property that are promptly made available for observation by the Project Manager without the removal of materials or chattel, or the aid of any instrument, device, or equipment at the time of the Walk-through Survey. |
| Reasonably Ascertainable | Information that is publicly available, provided to EMG's offices from either its source or an information research/retrieval concern, practically reviewable, and available at a nominal cost for either retrieval, reproduction or forwarding. |
| Recreational Facilities | Spas, saunas, steam baths, swimming pools, tennis courts, playground equipment, and other exercise, entertainment, or athletic facilities. |
| Remaining Useful Life (RUL) | <p>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.</p> <p>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.</p> |
| 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 <i>Means</i> and <i>Dodge</i> , 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 employ 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

S.F. CIVIC CENTER RONALD M. GEORGE COMPLEX FACT SHEET

350 McAllister Street and 455 Golden Gate

San Francisco

San Francisco County

Category 4 - Low Priority - Constructed in Last 20 Years, Special Repairs and Maintenance

BUILDING INFORMATION

- Age: 91 years (the Earl Warren building was originally completed in 1922) Renovation of Warren and construction of Hiram W. Johnson building completed in 1998 (15 years)

- Size:* 6 story Earl Warren-California Supreme Court Building and 14 story Hiram Johnson Office Building
1,079,100 GSF 739,589 NUSF 741,757 Assigned SF
2.59 Acre Parcel
50 parking spaces
Capacity - 2,084 occupants



- Financial: San Francisco State Building Authority (a Joint Powers Authority)

Lease-Revenue Bonds 1996 Series A and 2005 Series A - SPI Structure #: 4703

Refinance due December 2021

Original bond \$340,555,000 - Balance as of 6/30/12 \$175,700,000. Real Property #: 680

IRR Rate - \$4.50/month per SF, FY 2013-14 (DGS Price Book) BPM #: 402

\$4.40/month per SF, FY 2014-15 (Proposed DGS Price Book)

- LEED Status: Certified LEED-EB Gold, 2009
- Tenants: 12 Agencies, large tenants include Judicial Council (AOC) (218,500 SF), Department of Justice (135,383 SF), Department of Industrial Relations (111,151 SF) and the Supreme Court (98,155 SF)

COMPLETED STUDIES AND SIGNIFICANT FINDINGS

A. 2010 American Disability Act Accessibility Compliance Survey

Both buildings were found to largely comply with the Americans with Disabilities Act. However, some non-accessible external and internal features were identified requiring major alterations including exterior path of travel issues such as reconfiguring the 455 Golden Gate Avenue entrance, and correcting stair violations at 350 McAllister Street entrance. Interior items included 4 exits and all stairs, and restroom doors as well as signage.

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

Earl Warren Building: Due to the building's recent renovation/retrofit in 1998, no immediate or 1-3 year period repair/replacement items were noted other than minor handrail installations. In the 4-6 year range, modernization of the two passenger elevators was recommended.

Hiram W. Johnson Building: Because the building was constructed in 1998, no immediate repair/replacement project were identified. In the 1-3 year period, minor repair was identified for the cooling tower concrete deck, although more significant projects related to access compliance/upgrades were identified for both buildings. For the 4-6 year period, minor projects related to system software/hardware upgrades and concrete-related waterproofing were identified.

C. 2012 Access Compliance Conceptual Budget/Evaluation

In follow up to the 2010 American Disability Act Accessibility Compliance Survey this report provides the Conceptual Cost and Path of Travel Plans. ADA upgrade plans are under review by the DSA with anticipated approval by Feb 2014 as part of the Statewide ADA/POT project BCP. Total estimated cost for the work is \$3,238,184, with construction estimated to begin late FY 13-14.

ADDITIONAL BUILDING ISSUES

Priority should be given to the Water Treatment System upgrade project to prevent release of any chemicals and comply with environmental requirements.

* Source: Statewide Property Inventory

CURRENT UTILIZATION PROJECTS

- BCDC moved into 20,000 SF of DIR's former 10th Floor space in Dec. 2013
- The CPUC moved into vacant Judicial Council of CA (Courts) 7th Floor space (@ 38,500 SF) on a 2+ year temporary space agreement while the Governor Edmund G. "Pat" Brown / CPUC building is undergoing a major MSF replacement project.
- DIR has successfully restacked its 9th and 10th floors and took over the former DFEHC space (2,960 SF) on the 10th floor with staff from its 8th Floor Human Resources program in Fall of 2013.
- DHCS and DOR have both submitted CRUISE Requests to AMB requesting to backfill the Court's 7th Floor space in late 2015

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

Ronald M. George State Office Complex / Hiram W. Johnson
 Building
 455 Golden Gate Ave
 San Francisco, CA



| | | | | |
|--------------------------|-----------------------|------------------------|-------------------|---------------------|
| Useful Life ¹ | Estimated Useful Life | Plan Type ² | OP: Operations | CC: Code Compliance |
| | Remaining Useful Life | | 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 | 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 | | | | | | | |
| A. SUBSTRUCTURE | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A10 FOUNDATIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A1027 | Concrete crack repair, structural repair by epoxy injection, horizontal, vertical and overhead repairs up to 12' deep | A1027 Concrete Slab - Crack Repair | Basement | Replace A1027 Concrete Slab - Crack Repair | 25 | 0 | 150.00 | LF | \$101.52 | OP - Maintenance | Priority 1 | \$15,228 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$15,228 | \$0 | | | | | |
| A20 BASEMENT CONSTRUCTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A2022 | A2022 Moisture Protection | A2020 Basement Walls - Waterproofing | North Basement | Replace A2020 Basement Walls - Waterproofing | 30 | 0 | 1,250.00 | SF | \$4.60 | OP - Maintenance | Priority 1 | \$5,756 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$5,756 | \$0 | | | | | |
| Substructure Subtotal | | | | | | | | | | | | \$20,984 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$20,984 | \$0 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---------------------------------------|----------------------------------|------------------|---|----|---|-----------|----|------------|------------------------|------------|-----------|----------|----------|-----------|-----|-----|----------|----------|-----|-----|-----|-----|-----------|-----|-----------|-----------|
| B. SHELL | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B20 EXTERIOR ENCLOSURE | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B2011 | Terra Cotta Masonry, Load Bearing, 8" | B2011 Exterior Walls | All Floors | Replace damaged joint sealant as needed | 5 | 2 | 12,391.00 | LF | \$7.39 | OP - Maintenance | Priority 2 | \$0 | \$0 | \$91,569 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$183,139 | | | |
| B2021 | 2' X 3' Steel Frame Window | B2021 Windows, Single Pane Metal | All Floors | Replace caulking | 5 | 1 | 3,950.00 | LF | \$15.35 | OP - Maintenance | Priority 2 | \$0 | \$60,633 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$121,265 | | | |
| B2021 | Curtain Wall, Up to 12 Stories | B2021 Windows /Curtain Walls | All Upper Floors | B2021 Re-seal windows and replace gaskets | 7 | 3 | 3,950.00 | LF | \$15.35 | OP - Maintenance | Priority 3 | \$0 | \$0 | \$0 | \$60,633 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$60,633 | | | |
| B30 ROOFING | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B3011 | Built-Up Roofing, Total Roof | B3011 Built-up Roof | Roof | Replace B3011 Built-up Roof | 20 | 3 | 206.00 | SQ | \$1,861.46 | IN - Beyond Rated Life | Priority 2 | \$0 | \$0 | \$0 | \$383,461 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$383,461 | | | |
| B3021 | Glass Skylight | B3021 Glass Skylight | Roof | Replace B3021 Glass Skylight | 30 | 0 | 7,500.00 | SF | \$114.43 | OP - Maintenance | Priority 1 | \$858,204 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$858,204 | | | |
| Shell Subtotal | | | | | | | | | | | | \$858,204 | \$60,633 | \$91,569 | \$444,094 | \$0 | \$0 | \$60,633 | \$91,569 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$858,204 | \$748,498 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|--|----------------------------------|-----------------------|--|----|---|------------|------|-------------|-------------------------|------------|-----------|-------------|---------|-------------|-----|-------------|-----|---------|-----|-----|-----|----------|-------------|-----------|--------------|
| C. INTERIORS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C10 INTERIOR CONSTRUCTION | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C1021 | Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware | B2031 Solid Wood Door | All Floors | B2031 Add ADA automatic door opener | 0 | 0 | 12.00 | EA | \$870.75 | CC - Accessibility | Priority 2 | \$10,449 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$10,449 | \$0 | | |
| C1035 | Directional Signage | C1035 Directional Signage | All Floors | Replace C1035 Directional Signage | 10 | 0 | 14.00 | EACH | \$316.20 | CC - Accessibility | Priority 1 | \$4,427 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$4,427 | | |
| C20 STAIRS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C2011 | Concrete Stairs | C2011 Fire Exit Stairs | Stairs | C2011 Fire exit stairs flooring | 5 | 2 | 991.50 | SF | \$1.02 | IN - Appearance | Priority 3 | \$0 | \$0 | \$1,011 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$2,023 | | |
| C30 INTERIOR FINISHES | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C30 | C30 Interior Finishes | C3015 Mold Evaluation | 5th Floor | Replace C3015 Mold Evaluation | 10 | 0 | 1.00 | EA | \$13,640.00 | EN - Air/ Water Quality | Priority 1 | \$13,640 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$13,640 | | |
| C3005 | C3005 ADA Renovations | C3005 ADA Restrooms | All Floors | Replace C3005 ADA Restrooms | 12 | 0 | 30.00 | EA | \$12,400.00 | CC - Accessibility | Priority 1 | \$372,000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$372,000 | | |
| C3012 | C3012 Wall Finishes to Interior Walls | C3012 Interior Painted Walls | All Floors | Repaint C3012 Interior Painted Walls | 10 | 3 | 245,000.00 | SF | \$2.13 | IN - Appearance | Priority 3 | \$0 | \$0 | \$0 | \$522,536 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$522,536 | | |
| C3024 | Vinyl Tile | C3024 Vinyl Tile | Throughout Facility | Replace C3024 Vinyl Tile | 20 | 5 | 11,000.00 | SY | \$125.78 | IN - Appearance | Priority 4 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,383,582 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,383,582 | | |
| C3025 | Carpet, Standard Commercial, Medium Traffic | C3025 Carpet Flooring | All Floors | Replace C3025 Carpet Flooring | 10 | 1 | 52,645.00 | SY | \$96.61 | IN - Appearance | Priority 3 | \$0 | \$5,085,802 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$5,085,802 | | |
| C3031 | Drywall - Painted Finished Ceilings | C3010 Painted Drywall Ceilings | Restrooms and various | Replace C3010 Painted Drywall Ceilings | 10 | 3 | 72,000.00 | SF | \$4.44 | IN - Appearance | Priority 3 | \$0 | \$0 | \$0 | \$319,622 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$319,622 | | |
| C3032 | Acoustical Tile With Exposed Grid System | C3032 Suspended Acoustical Tiles | Office Areas | Replace C3032 Suspended Acoustical Tiles | 20 | 3 | 5,200.00 | CSF | \$1,201.56 | IN - Appearance | Priority 3 | \$0 | \$0 | \$0 | \$6,248,112 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$6,248,112 | | |
| Interiors Subtotal | | | | | | | | | | | | \$400,516 | \$5,085,802 | \$1,011 | \$7,090,270 | \$0 | \$1,383,582 | \$0 | \$1,011 | \$0 | \$0 | \$0 | \$0 | \$0 | \$400,516 | \$13,561,677 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|----------------------|---|----|---|------------|----|--------------|------------------------|------------|-----|-----------|-----------|-------------|-----|-----------|-----|-----|-------------|-----|-----|-----|-------------|-------------|-------------|
| D. SERVICES | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D10 CONVEYING SYSTEMS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D1011 | Traction Elevator Machinery and Controls | D1011 Passenger Elevators | Elevators 14-15 | Replace D1011 Passenger Elevators | 25 | 2 | 2.00 | EA | \$165,300.00 | IN - Beyond Rated Life | Priority 2 | \$0 | \$0 | \$330,600 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$330,600 | |
| D1011 | Traction Elevator Machinery and Controls | D1011 Passenger Elevators | Elevator 17 | Replace D1011 Passenger Elevators | 25 | 2 | 1.00 | EA | \$145,300.00 | IN - Beyond Rated Life | Priority 2 | \$0 | \$0 | \$145,300 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$145,300 | |
| D1011 | D1011 Passenger Elevators | D1011 Passenger Elevators | Elevators 4-7 | Replace D1011 Passenger Elevators | 25 | 3 | 4.00 | EA | \$275,300.00 | IN - Beyond Rated Life | Priority 2 | \$0 | \$0 | \$0 | \$1,101,200 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,101,200 | |
| D1011 | Traction Elevator Machinery and Controls | D1011 Passenger Elevator | Elevator 13 | Replace D1011 Passenger Elevator | 25 | 3 | 1.00 | EA | \$275,300.00 | IN - Beyond Rated Life | Priority 2 | \$0 | \$0 | \$0 | \$275,300 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$275,300 | |
| D1011 | Traction Elevator Machinery and Controls | D1011 Passenger Elevators | Elevators 8-11 | Replace D1011 Passenger Elevators | 25 | 3 | 4.00 | EA | \$285,300.00 | IN - Beyond Rated Life | Priority 2 | \$0 | \$0 | \$0 | \$1,141,200 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,141,200 | |
| D1012 | Traction Geared Elevator - High Rise | D1012 Freight Elevator | Elevator 12 | Replace D1012 Freight Elevator | 25 | 3 | 1.00 | EA | \$295,300.00 | IN - Beyond Rated Life | Priority 2 | \$0 | \$0 | \$0 | \$295,300 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$295,300 | |
| D20 PLUMBING | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D2011 | Commercial Grade Water Closet With 1.6 Gpf Unit | D2011 Commercial Grade Water Closet, 1.6 GPF Unit | Throughout Facility | D2011 Install automatic flush valves on toilets | 0 | 1 | 105.00 | EA | \$400.00 | OP - Energy | Priority 2 | \$0 | \$42,000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$42,000 | |
| D2012 | Urinal | D2012 Urinal | Throughout Facility | D2012 Install automatic flush valves on urinals | 0 | 1 | 30.00 | EA | \$400.00 | OP - Energy | Priority 2 | \$0 | \$12,000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$12,000 | |
| D2013 | Counter Top Sink and Faucet | D2013 Counter Top Sink and Faucet | Restrooms | D2013 Install automatic faucets with motion sensors | 0 | 1 | 150.00 | EA | \$400.00 | OP - Energy | Priority 2 | \$0 | \$60,000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$60,000 | |
| D30 HVAC | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D3041.2 | Vav Box, 270 to 600 CFM | D3041 VAV Boxes | Throughout Facility | Replace D3041 VAV Boxes | 30 | 8 | 750.00 | EA | \$2,496.72 | IN - Beyond Rated Life | Priority 4 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,872,536 | | |
| D3043 | Heat Exchanger | D2022 Domestic Water Heater | Throughout Facility | Replace D2022 Domestic Water Heater | 20 | 3 | 14.00 | EA | \$5,818.08 | IN - Beyond Rated Life | Priority 2 | \$0 | \$0 | \$0 | \$81,453 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$81,453 | |
| D3052 | Air Conditioner, Dx Package (Liebert) 5-Ton | D3052 Computer/Sever Room AC | Rooftop | Replace D3052 Computer/Sever Room AC | 20 | 3 | 3.00 | EA | \$18,440.78 | IN - Beyond Rated Life | Priority 2 | \$0 | \$0 | \$0 | \$55,322 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$55,322 | |
| D3063 | Variable Frequency Drive, 20 HP Motor | D3063 Variable Frequency Drive (VFD) | Throughout Facility | D3063 Replace VFDs | 15 | 3 | 68.00 | EA | \$19,730.88 | IN - Beyond Rated Life | Priority 2 | \$0 | \$0 | \$0 | \$1,341,700 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,341,700 | |
| D3068 | Direct Digital Controls (DDC) Extensive | D3068 Direct Digital Controls (DDC) | Throughout Facility | Replace D3068 Direct Digital Controls (DDC) | 20 | 5 | 844,500.00 | SF | \$0.82 | IN - Beyond Rated Life | Priority 3 | \$0 | \$0 | \$0 | \$0 | \$0 | \$691,139 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$691,139 | |
| D50 ELECTRICAL SYSTEMS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D5037 | Fire Alarm Panel | D5037 Fire Alarm Panel | Fire Control Station | Replace D5037 Fire Alarm Panel | 15 | 3 | 3.00 | EA | \$9,402.52 | CC - Life Safety | Priority 1 | \$0 | \$0 | \$0 | \$28,208 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$28,208 | |
| Services Subtotal | | | | | | | | | | | | \$0 | \$114,000 | \$475,900 | \$4,319,683 | \$0 | \$691,139 | \$0 | \$0 | \$1,872,536 | \$0 | \$0 | \$0 | \$0 | \$0 | \$7,473,258 |

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|--|--|--|--|--|--|--|--|--|--|--|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| E. EQUIPMENT & FURNISHING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Equipment & Furnishing Subtotal | | | | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |

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|---|--|--|--|--|--|--|--|--|--|--|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| F. SPECIAL CONSTRUCTION AND DEMOLITION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Special Construction And Demolition Subtotal | | | | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |

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|--|-----------------------------------|---------------------------------|----------|---|----|---|------|----|-------------|-------------------------|------------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|-----|-----|-----|-----|-----|-----|-----|
| G. BUILDING SITEWORK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G20 SITE IMPROVEMENTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G2053 | Landscaping Allowance, Large Area | G2053 Landscaping | Site | G2053 Repair planter leaks | 0 | 0 | 1.00 | EA | \$87,812.00 | OP - Maintenance | Priority 3 | \$87,812 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$87,812 | | | | | | | |
| G30 SITE CIVIL/MECHANICAL UTILITIES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G3034 | G3034 Lift Stations | G3034 Waste Water Pump Stations | Basement | Replace G3034 Waste Water Pump Stations | 20 | 0 | 4.00 | EA | \$4,720.00 | EN - Air/ Water Quality | Priority 1 | \$18,880 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$18,880 | | | | | | | |
| Building Sitework Subtotal | | | | | | | | | | | | \$106,692 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|--|--|--|--|--|--|--|--|--|--|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Z. GENERAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| General Subtotal | | | | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |

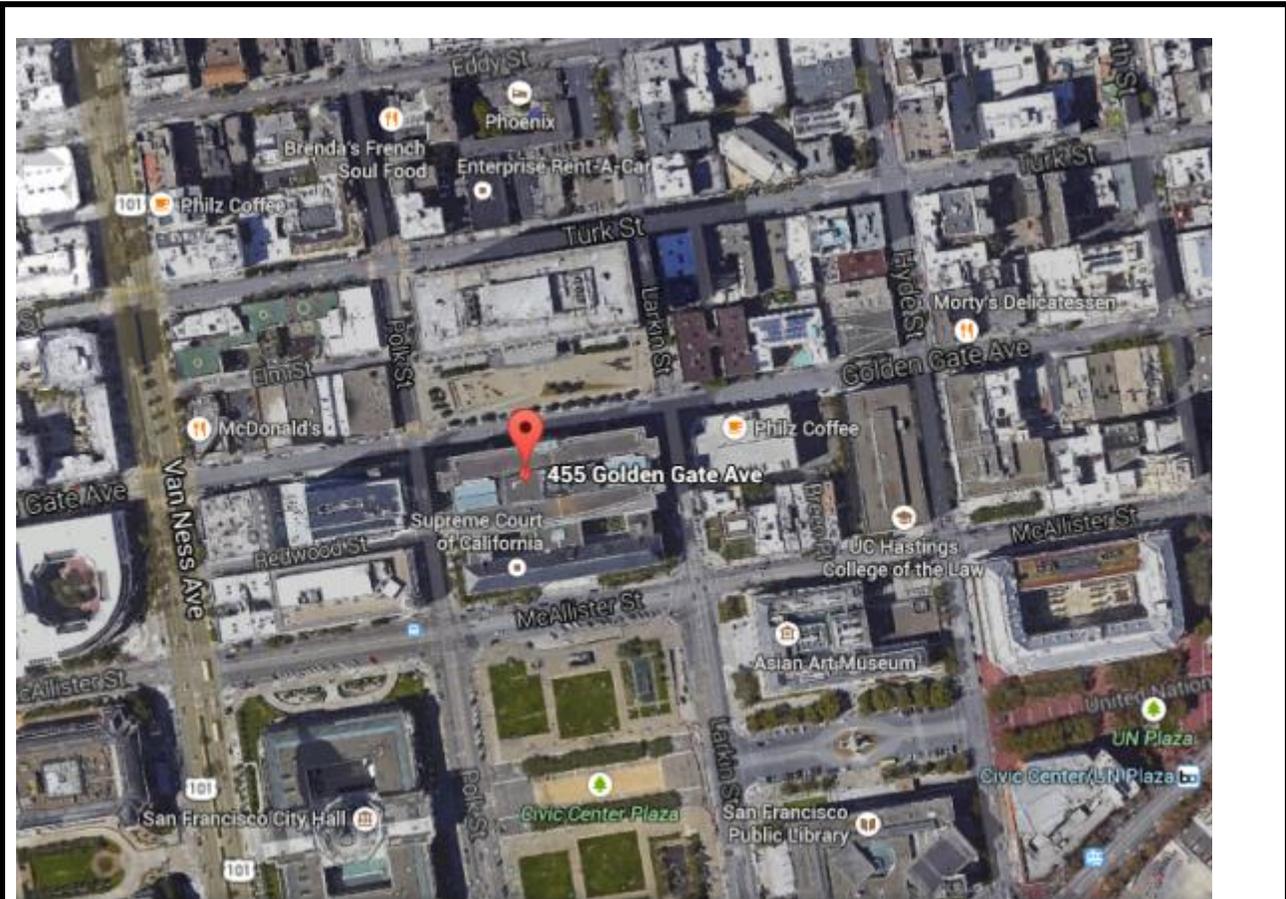
| | | | | | | | | | | | | |
|------------------------------------|-------------|-------------|-----------|--------------|-----|-------------|----------|-----------|-------------|-----|-------------|--------------|
| Expenditure Totals per Year | \$1,386,395 | \$5,260,434 | \$568,481 | \$11,854,047 | \$0 | \$2,074,721 | \$60,633 | \$92,581 | \$1,872,536 | \$0 | \$1,386,395 | \$21,783,431 |
| Total Cost (Inflated @ 5% per Yr.) | \$1,386,395 | \$5,523,456 | \$626,750 | \$13,722,541 | \$0 | \$2,647,928 | \$81,253 | \$130,271 | \$2,766,589 | \$0 | Total * | \$23,169,829 |

* - Present Value Currency

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

Current Repl. Value \$521,857,435

APPENDIX H: SUPPORTING DOCUMENTATION



Source:
 The north arrow indicator is an approximation of 0° North.

Project Number:
 111326.14R.036.305
Project Name:
 Ronald M. George State Office Complex / Hiram W. Johnson Building



On-Site Date:
 February 9-11, 2015

Estimate of Structures Cost Using Marshall Cost Systems

Hiram W. Johnson

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 Type Total |
|-------------------|-------------|----------------|----------------------|
| Main Building | \$506.35 | 818,651 | \$414,525,549 |
| Parking Structure | \$89.77 | 25,849 | \$2,320,400 |
| | \$0.00 | 0 | \$0 |
| | \$0.00 | 0 | \$0 |
| | \$0.00 | 0 | \$0 |
| Total | | 844,500 | \$416,845,948 |

Estimate of Adjustments for Fees:

| Description | % increase | |
|---|------------|---------------|
| Soft Costs | 25.00% | |
| Parking Structure | 25.00% | |
| | | |
| | | |
| Total Fees/ Interest included in Marshall System | | 25.00% |

Total Structure Estimate:

| Description | Unit | Fee Adjust | Adjusted Totals |
|--------------------|-----------------|-----------------------|----------------------|
| Main Building | \$414,525,549 | 25.00% | \$518,156,936 |
| | \$2,320,400 | 25.00% | \$2,900,499 |
| | \$0 | 25.00% | \$0 |
| | \$0 | 25.00% | \$0 |
| | \$0 | 25.00% | \$0 |
| Cost Per SF | \$617.00 | Total Estimate | \$521,057,435 |

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

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

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

PLAN TYPE DEFINITION

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

Code Compliance (CC)

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

Operations (OP)

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

Environmental (EN)

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

Functionality (FN)

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

Integrity (IN)

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

ADA Checklist

Property Name: Hiram Johnson Building

Date: 02/09/2015

Project Number: 111326.14R-036.305

| EMG Abbreviated Accessibility Checklist | | | | | |
|---|--|-----|----|-----|--|
| | Building History | Yes | No | N/A | Comments |
| 1. | Has the management previously completed an ADA review? | ✓ | | | October 2014 |
| 2. | Have any ADA improvements been made to the property? | ✓ | | | |
| 3. | Does a Barrier Removal Plan exist for the property? | | ✓ | | |
| 4. | Has the Barrier Removal Plan been reviewed/approved by an arms-length third party such as an engineering firm, architectural firm, building department, other agencies, etc.? | ✓ | | | The Access Barrier plans are in Bid Processing, Construction will start summer of 2015 |
| 5. | Has building ownership or management received any ADA related complaints that have not been resolved? | | ✓ | | |
| 6. | Is any litigation pending related to ADA issues? | | | ✓ | |
| | Parking | Yes | No | N/A | Comments |
| 1. | Are there sufficient parking spaces with respect to the total number of reported spaces? | ✓ | | | There are 50 parking stalls at Southwest including one ADA stall |
| 2. | Are there sufficient van-accessible parking spaces available (96" wide/ 96" aisle for van)? | | | ✓ | |
| 3. | Are accessible spaces marked with the International Symbol of Accessibility? Are there signs reading "Van Accessible" at van spaces? | ✓ | | | |
| 4. | Is there at least one accessible route provided within the boundary of the site from public transportation stops, accessible parking spaces, passenger loading zones, if provided, and public streets and sidewalks? | ✓ | | | |
| 5. | Do curbs on the accessible route have depressed, ramped curb cuts at drives, paths, and drop-offs? | ✓ | | | |
| 6. | Does signage exist directing you to accessible parking and an accessible building entrance? | ✓ | | | |

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

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

| | Restrooms | Yes | No | N/A | Comments |
|-----|--|------------|-----------|------------|-----------------|
| 11. | Are exposed pipes under sink sufficiently insulated against contact? | ✓ | | | |
| 12. | Are soap dispensers, towel, etc. reachable (48" from floor for frontal approach, 54" for side approach)? | ✓ | | | |
| 13. | Is the base of the mirror no more than 40" from the floor? | ✓ | | | |

APPENDIX I: PRE-SURVEY QUESTIONNAIRE

Property Condition Assessment: Pre-Survey Questionnaire

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

Name of person completing questionnaire: Samuel Flores

Building name: Earl Warren/Hiram W. Johnson Building (402)

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

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

Phone number: 415-703-4100

Please provide information about inspections relating to the following items

| Inspections | Date Last Inspected | List Name & Contact for Maintenance Contractor, if any. |
|---|--------------------------|---|
| 1. Elevators | Monthly Maintenance only | Thysssen Krupp |
| 2. HVAC, Mechanical, Electric, Plumbing | Monthly Maintenance | HVAC, Mechanical Honeywell, Enovity |
| 3. Life-Safety/Fire | Monthly Maintenance | Siemens |
| 4. Roofs | N/A | Unkown |

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

Cooling Towers

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

ESCO Project ADA Project Skylight Project

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

18 years

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

ESCO Project will address HAVC System, Lighting issue at the RMGSOC, and improve energy savings

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 | | | | Talk a Phone in the stair well not working condition in the process of repair. |
| 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 | | | | Cooling tower condensate lines showing erosion issues |

| Question | Y | N | N/A | Unk | Comments |
|---|----------|----------|-----|----------|--|
| 12. Is the property served by a private water well? | | x | | | |
| 13. Is the property served by a private septic system or other waste treatment systems? | | x | | | |
| 14. Are there any problems with foundations or structures? | x | | | | 350 entrance stairs showing movement/ shifting |
| 15. Is there any water infiltration in basements or crawl spaces? | x | | | | west side of building water intrusion into basement area |
| 16. Are there any wall, or window leaks? | x | | | | Skylight west side leaking Breezy way eastside 10 floor leaking |
| 17. Are there any roof leaks? | x | | | | 350 east side of building leaking |
| 18. Is the roofing covered by a warranty or bond? | | | | x | |
| 19. Are there any poorly insulated areas? | | | | x | |
| 20. Is Fire Retardant Treated (FRT) plywood used? | | | | x | |
| 21. Is exterior insulation and finish system (EIFS) or a synthetic stucco finish used? | | x | | | |
| 22. Are there any problems with the utilities, such as inadequate capacities? | | x | | | |
| 23. Are there any problems with the landscape irrigation systems? | | x | | | |
| 24. Has a termite/wood boring insect inspection been performed within the last year? | | | | x | |
| 25. Do any of the HVAC systems use R-11, 12, or 22 refrigerants? | x | | | | R-22 Crack unit in 3rd floor computer room |
| 26. Has any part of the property ever contained visible suspect mold growth? | x | | | | 5th floor has sign of mold in the process of Remediation |
| 27. Is there a mold Operations and Maintenance Plan? | x | | | | in the process, working with e-shop on getting a program in place. |
| 28. Have there been indoor air quality or mold related complaints from tenants? | | x | | | |

| Question | Y | N | N/A | Unk | Comments |
|---|----------|----------|-----|----------|--|
| 29. Is polybutylene piping used? | | x | | | |
| 30. Are there any plumbing leaks or water pressure problems? | | x | | | |
| 31. Are there any leaks or pressure problems with natural gas service? | | x | | | |
| 32. Does any part of the electrical system use aluminum wiring? | | x | | | |
| 33. Are there transformers inside the building? | x | | | | |
| 34. Do any Commercial units have less than 200-Amp service? | | | | x | |
| 35. Are there any recalled fire sprinkler heads (Star, GEM, Central, Omega)? | | x | | | |
| 36. Is there any pending litigation concerning the property? | | | | x | |
| 37. Has the State previously completed an ADA or 'Title 24 review? | x | | | | |
| 38. Have any ADA or Title 24 improvements been made to the property? | | x | | | process has began to implement ADA |
| 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 | | | | Wait time and break down off equipment |
| 43. Are there any problems with exterior lighting? | | x | | | |
| 44. Are there any other significant issues/hazards with the property? | x | | | | City of San Francisco trees are blocking camera views and steel grates around tree base coming a trip hazard |
| 45. Are there any unresolved construction defects at the property? | x | | | | Landscape issue in front of 455 Golden Gate flower bed have been abandon, causing leaks into building. Creating eye sore for front of building |

APPENDIX J: ELEVATOR REPORT



Elevator Assessment

**Building 402 – Ronald M. George
455 Golden Gate
San Francisco, CA**

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Appendix A – Elevator Equipment Summary

The following chart provides an “at a glance” summary of all of the elevator equipment at the subject property.

| Bank/Elevator Description | Elevator Number | Speed | Capacity | Floors Served | Date of Original Install | Date of Last Mod | Next Mod Due | Elevator Type | Machine/ Power Unit Manuf. | Motor Control | Control Manuf. | Door Size/ Style | Door Equip. Manuf. |
|---|-----------------|---------|--------------|---------------|--------------------------|------------------|--------------|----------------------------|----------------------------|---------------|----------------|-------------------------|--------------------|
| Elevators 1-2 (Duplex – ID# 30280, 30323) | 1 | 500 fpm | 2,500 pounds | B, 1-6 | 1955 | 1998 | 2-4 years | Overhead Gearless Traction | Otis | Generator | Northern | 50”x 84” Side Opening | ECI |
| | 2 | 500 fpm | 2,500 pounds | B, 1-6 | 1955 | 1998 | 2-4 years | Overhead Gearless Traction | Otis | Generator | Northern | 50”x 84” Side Opening | ECI |
| Elevator 3 (Simplex – ID# 114113) | 3 | 350 fpm | 4,500 pounds | B, 1-6 | 1998 | N/A | 2-4 years | Overhead Geared Traction | Northern | VVVF | Northern | 54”x 84” Side Opening | ECI |
| Elevators 4-7 (Group – ID# 114114-114117) | 4 | 350 fpm | 3,500 pounds | 1-8 | 1998 | N/A | 2-4 years | Overhead Geared Traction | Northern | VVVF | Northern | 42”x 84” Center Opening | ECI |
| | 5 | 350 fpm | 3,500 pounds | 1-8 | 1998 | N/A | 2-4 years | Overhead Geared Traction | Northern | VVVF | Northern | 42”x 84” Center Opening | ECI |
| | 6 | 350 fpm | 3,500 pounds | 1-8 | 1998 | N/A | 2-4 years | Overhead Geared Traction | Northern | VVVF | Northern | 42”x 84” Center Opening | ECI |
| | 7 | 350 fpm | 3,500 pounds | 1-8 | 1998 | N/A | 2-4 years | Overhead Geared Traction | Northern | VVVF | Northern | 42”x 84” Center Opening | ECI |
| Elevators 8-11 (Group – ID# 114118-114121) | 8 | 450 fpm | 3,500 pounds | 1, 2, 8-14 | 1998 | N/A | 2-4 years | Overhead Geared Traction | Northern | VVVF | Northern | 42”x 84” Center Opening | ECI |
| | 9 | 450 fpm | 3,500 pounds | 1, 2, 8-14 | 1998 | N/A | 2-4 years | Overhead Geared Traction | Northern | VVVF | Northern | 42”x 84” Center Opening | ECI |
| | 10 | 450 fpm | 3,500 pounds | 1, 2, 8-14 | 1998 | N/A | 2-4 years | Overhead Geared Traction | Northern | VVVF | Northern | 42”x 84” Center Opening | ECI |
| | 11 | 450 fpm | 3,500 pounds | 1, 2, 8-14 | 1998 | N/A | 2-4 years | Overhead Geared Traction | Northern | VVVF | Northern | 42”x 84” Center Opening | ECI |
| Elevator 12 (Simplex – ID# 114122) | 12 | 350 fpm | 4,500 pounds | B, 1-14, PH | 1998 | N/A | 2-4 years | Overhead Geared Traction | Northern | VVVF | Northern | 52”x 84” Side Opening | ECI |
| Elevator 13 (Simplex – ID# 114123) | 13 | 350 fpm | 2,000 pounds | B, 1-6 | 1998 | N/A | 2-4 years | Overhead Geared Traction | Northern | VVVF | Northern | 36”x 84” Side Opening | ECI |
| Elevators 14, 15, 17 (Three Simplex Units – ID# 114124, 114125, 114127) | 14 | 125 fpm | 3,500 pounds | B, 1, G(R), 2 | 1998 | N/A | 2-4 years | Inground Hydraulic | US Elevator | EM Starter | Northern | 42”x 84” Center Opening | GAL |
| | 15 | 125 fpm | 3,500 pounds | B, 1, G(R), 2 | 1998 | N/A | 2-4 years | Inground Hydraulic | US Elevator | EM Starter | Northern | 42”x 84” Center Opening | GAL |
| | 17 | 125 fpm | 3,500 pounds | 1-2 | 1998 | N/A | 2-4 years | Inground Hydraulic | US Elevator | EM Starter | Northern | 42”x 84” Center Opening | GAL |

Appendix A – Elevator Equipment Summary

| Elevator Number | State Inspection Date | State Inspection Status | 5-Year Test Date | 5-Year Test Status | Annual Test Date | Annual Test Status | Fire Service Testing Logs | Machine Room Maintenance Logs | Overall Level of Maintenance | Modernization Priority |
|-----------------|-----------------------|-------------------------|------------------|--------------------|------------------|--------------------|---------------------------|-------------------------------|------------------------------|------------------------|
| 1 | 2/2014 | Just Expired | Not Required | Not Required | Not Required | Not Required | Current | Current | Average | High |
| 2 | 2/2014 | Just Expired | Not Required | Not Required | Not Required | Not Required | Current | Current | Average | High |
| 3 | 2/2014 | Just Expired | Not Required | Not Required | Not Required | Not Required | Current | Current | Average | High |
| 4 | 2/2014 | Just Expired | Not Required | Not Required | Not Required | Not Required | Current | Current | Average | High |
| 5 | 2/2014 | Just Expired | Not Required | Not Required | Not Required | Not Required | Current | Current | Average | High |
| 6 | 2/2014 | Just Expired | Not Required | Not Required | Not Required | Not Required | Current | Current | Average | High |
| 7 | 2/2014 | Just Expired | Not Required | Not Required | Not Required | Not Required | Current | Current | Average | High |
| 8 | 2/2014 | Just Expired | Not Required | Not Required | Not Required | Not Required | Current | Current | Average | High |
| 9 | 2/2014 | Just Expired | Not Required | Not Required | Not Required | Not Required | Current | Current | Average | High |
| 10 | 2/2014 | Just Expired | Not Required | Not Required | Not Required | Not Required | Current | Current | Average | High |
| 11 | 2/2014 | Just Expired | Not Required | Not Required | Not Required | Not Required | Current | Current | Average | High |
| 12 | 1/2014 | Just Expired | Not Required | Not Required | Not Required | Not Required | Current | Current | Average | High |
| 13 | 2/2014 | Just Expired | Not Required | Not Required | Not Required | Not Required | Current | Current | Average | High |
| 14 | 2/2014 | Just Expired | 2/2012 | Current | Not Required | Not Required | Current | Current | Average | High |
| 15 | 2/2014 | Just Expired | 2/2012 | Current | Not Required | Not Required | Current | Current | Average | High |
| 17 | 2/2014 | Just Expired | 2/2012 | Current | Not Required | Not Required | Current | Current | Average | High |

Appendix B – Repair Items

The following chart details items that must be scheduled for repair prior to the end of the current maintenance contract. Contractor shall provide a schedule to Owner and Consultant within two weeks of receipt of this report.

| Building 402 – Ronald M. George | | | | |
|--|---|-----------------------|---|-----------------|
| Current Items | | | These Columns For Use by Contractor and in Future ECA Visits | |
| Item # | Item Description | Units Affected | Item Complete | Comments |
| 1 | Hoist ropes have heavy rouge – change ropes | 7, 10 | | |

Appendix C – Maintenance Corrections

The following chart details minor maintenance items (cleaning, lubrication, adjustments, etc.) which should be addressed to the greatest extent possible prior to the building walkthroughs for the elevator maintenance bid process, projected to take place the first two weeks of April, 2015.

| Building 402 – Ronald M. George | | | | |
|--|---|-----------------------|---|-----------------|
| Current Items | | | These Columns For Use by Contractor and in Future ECA Visits | |
| Item # | Item Description | Units Affected | Item Complete | Comments |
| 1 | Brakes are squeaking – service brakes | 1-2 | | |
| 2 | Provide rope tag on machine room shackles | 1-2 | | |
| 3 | Monitor high bar on commutator | 1 | | |
| 4 | Clean machine room | 1-3, 14, 15, 17 | | |
| 5 | Paint machine room floor | 1-2 | | |
| 6 | Place state ID# on disconnects | 1-2 | | |
| 7 | Clean carbon from generator end bell | 1-2 | | |
| 8 | Clean tops of cars | 1-2 | | |
| 9 | Adjust cabs – hitting fascia | 1-2, 4-11 | | |
| 10 | Clean pits | 1-2, 12, 13, 17 | | |
| 11 | Hoist ropes have some rouge - monitor | 4-6 | | |
| 12 | Clean machine bed plates | 4-7 | | |
| 13 | Sweep pits | 4-11 | | |
| 14 | Remove ladder from pit | 4-5 | | |
| 15 | Clean oil from hoist machines and monitor leaks | 8-11 | | |
| 16 | Clean rope filings from floor | 10-11 | | |
| 17 | Clean rouge from machine | 10 | | |
| 18 | Remove used parts from bottom of controller | 8 | | |
| 19 | Adjust grab on hall rollers | 8-11 | | |
| 20 | Mark unit numbers on pit equipment | 8-11 | | |
| 21 | Clean top sheave – dusty | 12 | | |
| 22 | Seal machine leaks | 12 | | |
| 23 | Clean overhead sheave area | 12 | | |
| 24 | Clean oil from trough under shaft | 12 | | |
| 25 | Machine oil has leaked onto machine room floor under secondary room - clean | 12 | | |

Appendix C – Maintenance Corrections - Continued

| Building 402 – Ronald M. George | | | | |
|--|--|-----------------------|---|-----------------|
| Current Items | | | These Columns For Use by Contractor and in Future ECA Visits | |
| Item # | Item Description | Units Affected | Item Complete | Comments |
| 26 | Clean and lubricate hall door closer | 12 | | |
| 27 | Clean top of car | 12 | | |
| 28 | Fan not running in cab – turn on or repair | 12 | | |
| 29 | Remove paper from controller | 13 | | |
| 30 | Clean interior of controller | 13 | | |
| 31 | Move plastic away from computer | 13 | | |
| 32 | Properly dispose of old parts | 13 | | |
| 33 | Clean hall door hardware | 13 | | |
| 34 | Properly store old parts in machine room | 14, 17 | | |
| 35 | Clean fuzz from door hardware | 14-15 | | |

Appendix D – Owner’s Maintenance Items

The following items are not part of your elevator contract, and thus are typically corrected by building engineering or another non-elevator sub-contractor. ECA is happy to discuss any of these items at any time. Please feel free to call or e-mail Matt Ensley or Sean Colgan with any questions you may have.

Sean Colgan: 916-337-3572 – sean.colgan@elevatorconsultingassociates.com

Matt Ensley: 213-247-8992 – matt.ensley@elevatorconsultingassociates.com

| Building 402 – Ronald M. George | | | | |
|--|--|-----------------------|---|-----------------|
| Current Items | | | These Columns For Use by University and in Future ECA Visits | |
| Item # | Item Description | Units Affected | Item Complete | Comments |
| 1 | The annual inspection certificates in the elevators have expired. If new certificates have been received, post in elevators as soon as possible. | All | | |
| 2 | Properly label machine room door – “Elevator Equipment Room – Authorized Personnel Only” | All | | |
| 3 | Properly label pit door | 8-11 | | |

Appendix E – Modernization Recommendation

It is commonly held in the industry that elevator equipment should be modernized every 20-25 years. While this is a valid generalization, the actual time for modernization can vary greatly from property to property, depending on the type of equipment installed, its age, the level of usage, etc. In this case, your equipment was installed/modernized in 1998 (17 years ago). However, the installed controls were manufactured by Northern, a division of ThyssenKrupp that no longer makes elevator controls. So all support for these controls is through ThyssenKrupp, and there are some maintainability issues for other contractors. Also, a major component of the elevator controls, the drive system, is by Baldor, a company that stopped making elevator drives about 10 years ago. Therefore, there are no new drives available, and very few refurbished drives for purchase. There are a few places that will repair drives, but the results of those repairs are very hit-and-miss (we give repairs about a 50/50 chance of working). Further, when a drive is pulled for repair, it can be 2-3 weeks before it is back and running (the drive has to be shipped to Washington or another location for repair). It is possible to upgrade the controls to a Magnetek drive or another drive that is still commercially available, but this is a complicated process that would take several weeks and roughly \$20,000, as the upgrade would not be covered under a standard maintenance contract. In short, there is some risk related to these drives which will become more and more likely to result in cost/downtime as the equipment continues to age. The equipment is otherwise not too bad, so there is some life left, but our recommendation is to begin budgeting for modernization of these elevators to bring in more serviceable control systems. At this time, we are recommending modernization in the 2-4 year window.

The following table shows the scope of the modernization based on our current observations. Note that the scope may change slightly by the time the elevators are modernized based on the condition of the equipment at that time, changes in code or ADA, etc.

| Elevator Modernization Plan | | |
|------------------------------------|--------------------|---|
| Item | Elevator(s) | Action |
| Elevator Control | All | New Solid State |
| Motor Control (Drive) | Traction | New |
| Solid State Starter | Hydraulic | New |
| Dispatching | New | Standard |
| Battery Lowering Operation | Hydraulic | New |
| Traction Machine | Traction | Refurbish |
| Secondary/Deflector Sheaves | Traction | Refurbish |
| Hoist Motor | Geared Traction | New |
| Power Unit | Hydraulic | New |
| Governor | Traction | Refurbish |
| Hoist Ropes | Traction | Replace only if needed due to measured size |
| Car Safety | Traction | Retain |
| Load Weighing Operation | Traction | New |
| Car Button Station | All | New |

| | | |
|--|-----------|-------------------------|
| Car Position Indicator | All | New |
| In-Car Communication (ADA Phone) | All | New |
| Car/Hall Lanterns | All | New |
| Hall Button Stations | All | New |
| Alarm Bells | All | New |
| Hoistway Limits | All | New |
| Wiring | All | New |
| Car Guides | All | Refurbish |
| Counterweight Guides | Traction | Refurbish |
| Counterweight | Traction | Retain |
| Guide Rails | All | Retain |
| Door Operation | All | New Closed Loop |
| Car and Hall Door Equipment | All | New/Refurbish as needed |
| Door Restrictor | All | New |
| Door Detector Edge | All | New |
| Pit Switch | All | New |
| Pit Springs/Buffers | All | Retain |
| Piston and Casing | Hydraulic | Retain |
| Earthquake Operation | Traction | New |
| Protection Against Ascending Car Overspeed and Unintended Car Movement (Rope Gripper) | Traction | New |
| Compliance with then-current elevator code | All | Included |
| Compliance with ADA | All | Included |
| Cab Interiors | All | Optional |

The breakdown of modernization costs is as follows:

Elevators 1-2: \$225,000 per elevator - \$450,000 total
Elevator 3: \$225,000
Elevators 4-7: \$225,000 per elevator - \$900,000 total
Elevators 8-11: \$235,000 per elevator: \$940,000 total
Elevator 12: \$250,000
Elevator 13: \$225,000
Elevators 14-15: \$115,000 per elevator - \$230,000 total
Elevator 17: \$100,000

The total recommended budget for the elevator portion of this modernization without cab interiors is \$3,320,000. If you choose to refurbish the cab interiors (floors, side and back walls and ceiling), we would recommend a budget of \$425,000 (\$25,000 per elevator). This budget assumes fairly standard finishes for the cab interiors. If you feel that you may want custom or “better than average” cabs, you may wish to add a contingency of 20% to this budget.

Please note that the given budget is in 2015 dollars. For each year after 2015 that the modernization is budgeted, we recommend adding 5-7% to our budget numbers. This is to account both for increases in union labor and also for continued recovery in the elevator modernization market, which has been on the upswing for the past few years.

Not included in the above is work by other trades. When an elevator modernization occurs, it often precipitates the requirement for work in other related areas, either due to code changes since installation, different requirements for the new control systems, desired changes in look of the systems, etc. The most common required work is electrical work (new or modified disconnects in the machine room, increase in lighting, etc.), fire and life safety work (addition of smoke detectors in elevator areas, addition or removal of sprinklers, etc.), general contracting (modifications for access to machine areas, cutting and patching for new fixtures, etc.) and potentially other areas. It is difficult for ECA to provide accurate budgets at this time, as our expertise is in the area of elevators and not necessarily in these other areas. However, we can estimate in this case that the required work by other trades will be roughly \$250,000. We think this is a fairly conservative estimate and, combined with our other budgets should provide you a placeholder to allocate the proper funds (we don't want this work to be a surprise for you down the road).

Finally, as the State typically employs an elevator consultant for assistance with elevator modernization projects, we would recommend adding \$75,000 to the budget for that purpose.

The total budget for the recommended modernization project is \$3,645,000. This includes the elevator contractor's portion of the work, work by other trades, and elevator consulting. It does not include cab interior refurbishment, which would add \$425,000 to the total project cost.

We would be happy to discuss this modernization recommendation or any other aspect of this report at any time. Please contact Sean Colgan at 916-337-3572, or by email at sean.colgan@elevatorconsultingassociates.com.



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