



Jesse M. Unruh Building (002)

915 Capitol Mall, Sacramento, CA 95814

Facility Condition Assessment

June 2015

Prepared for the State of California Department of General Services



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EXECUTIVE SUMMARY

BACKGROUND

This Facility Condition Assessment (FCA), prepared by EMG Corporation (EMG) in collaboration with the Department of General Services (DGS) Real Estate Services Division (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 Jesse M. Unruh Building (002).

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 Jesse M. Unruh Building (002) 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 Jesse M. Unruh Building (002) on February 2 & 3, 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	\$66,383,620
Immediate Repair Costs (12 months)	\$10,876,618
1-5 Year Capital Needs	\$4,455,955
6-10 Year Capital Needs	\$679,699
Total 10-Year Capital Reserve Needs	\$16,012,272

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

Current Year FCI

$$\text{Current FCI} = \frac{\$10,876,618}{\$66,383,620}$$

Ten-Year FCI

$$\text{Ten-Year FCI} = \frac{\$16,012,272}{\$66,383,620}$$

Current Year FCI	Ten-Year FCI
16.38 % = <i>Poor Condition</i>	24.12 % = <i>Poor Condition</i>

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

- Repair and repoint exterior brick veneer.
- Clean and repair exterior granite and terra cotta cladding.
- Re-caulk and paint wooden windows.
- Replace updated aluminum windows.
- Install wet-pipe sprinkler system.
- Remediate lead and asbestos materials from 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

The Jesse M. Unruh Building (002), first occupied in 1929, was designed by Weeks and Day Architects of San Francisco. The building, located at 915 Capital Mall, was constructed on land donated to the state by the city of Sacramento in 1913. The property has been continuously occupied for more than 85 years.

The building is part of the “Capitol Extension Group,” along with the Stanley Mosk Library and Courts Building (003) and the California State Capitol Building (001), and is listed on the National Register of Historic Places. Any renovations to the property are subject to the Secretary of the Interior Standards and Guidelines for the Rehabilitation of Historic Buildings as administered by the State Historic Preservation Office.

The Jesse M. Unruh Building (002) is a steel frame structure clad in granite and glazed terra cotta that simulates granite masonry. The building is roughly square in plan; the facades are symmetrical and organized in classic Beaux Arts composition. Significant historic features and sculptural works adorn the exterior. The interior is organized around a central lobby on each of five occupied floors. The partial sixth floor includes a break room and storage. The lobbies are connected by an open marble staircase and three elevators. The building has four open light wells, a basement, and mechanical floor.

The interior décor consists of significant decorative arts and finishes throughout the central core, with historic fabric wall panels in limited areas of the building. The building consists of executive suites of primarily private offices. The building’s major tenant is the State Treasurer’s Office. Several California agency executive offices are also located in the building.

The gross building area is 164,529 SF with a net usable area of 125,344 SF. The ratio of net usable to gross building area is 76.1 percent. The occupant capacity is 448. The building does not have on-site parking.

BUILDING DESCRIPTION

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

The exterior walls are finished with polished granite terra cotta and glazed curtain wall system.

The interior walls are painted plaster. The floor finishes consist of a mixture of terazzo, carpet tiles, vinyl composition tiles, with ceramic tile in the restrooms. The interior ceiling is finished with painted plaster or acoustic ceiling tiles.

The facility is served by three traction passenger elevators. One hydraulic elevator and a dumbwaiter serve the underground vault from the first floor.

Domestic hot water is provided to the restrooms and break room areas by central steam water heaters. Heating and cooling are provided by an off-site central system with boiler, condenser, and cooling tower.

Life safety systems include hydrants, smoke detectors, alarms, extinguishers, and dry standpipes. Sprinklers are not provided.

The building covers nearly the entire one-block site. Perimeter landscaping consists of trees, shrubs, and lawn areas. Multiple statues adorn this site located across the street from the State of California Capitol Building. Landscaped areas are irrigated by an in-ground overhead spray sprinkler irrigation system.

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

Project Statistics

Item	Description
Project Name	Jesse M. Unruh
Building ID	002
Property Type	Administration
Year Built	1929
Number of Stories	6
Occupied	Yes
Land Area (acres)	2.8
Gross Square Feet (GSF)	164,529

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 Jesse M. Unruh Building (002) on February 2 & 3, 2015. The survey included analysis and observation of the building's interior and exterior, including the roofs. The evaluation team interviewed the building maintenance staff to inquire about the subject property's previous repairs and replacements and their costs, level of preventive maintenance exercised, pending repairs and improvements, and frequency of repairs and replacements. Opinions were developed based on the site evaluation, interviews with relevant maintenance providers and facilities managers, and previous experience with comparable properties. The evaluation team questioned those knowledgeable of the subject property's physical condition and operation (or knowledgeable of similar systems) to gain comparative information to use in evaluation of the subject property. In addition, the building staff provided documents and information to the evaluation team that were relevant to the subject property's physical improvements, extent, and type of use and assisted the team in identifying potential discrepancies between reported information and observed conditions.

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

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

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

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

PRIORITY RANKING

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

PRIORITY RANKING CATEGORIES

Building Mission Ranking

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

Remaining Useful Life Ranking

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

Asset Component Category

Each material or system (asset) evaluated is assigned a unique 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 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.

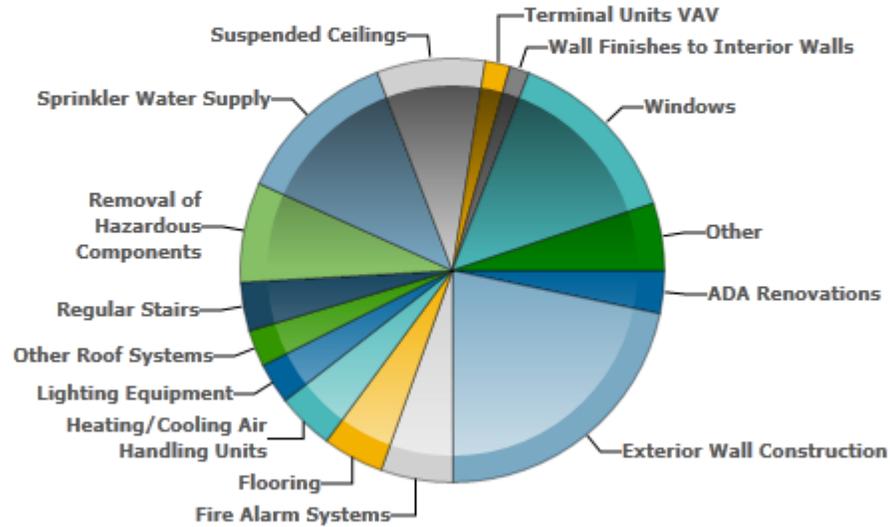
PRIORITY RATIO

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.

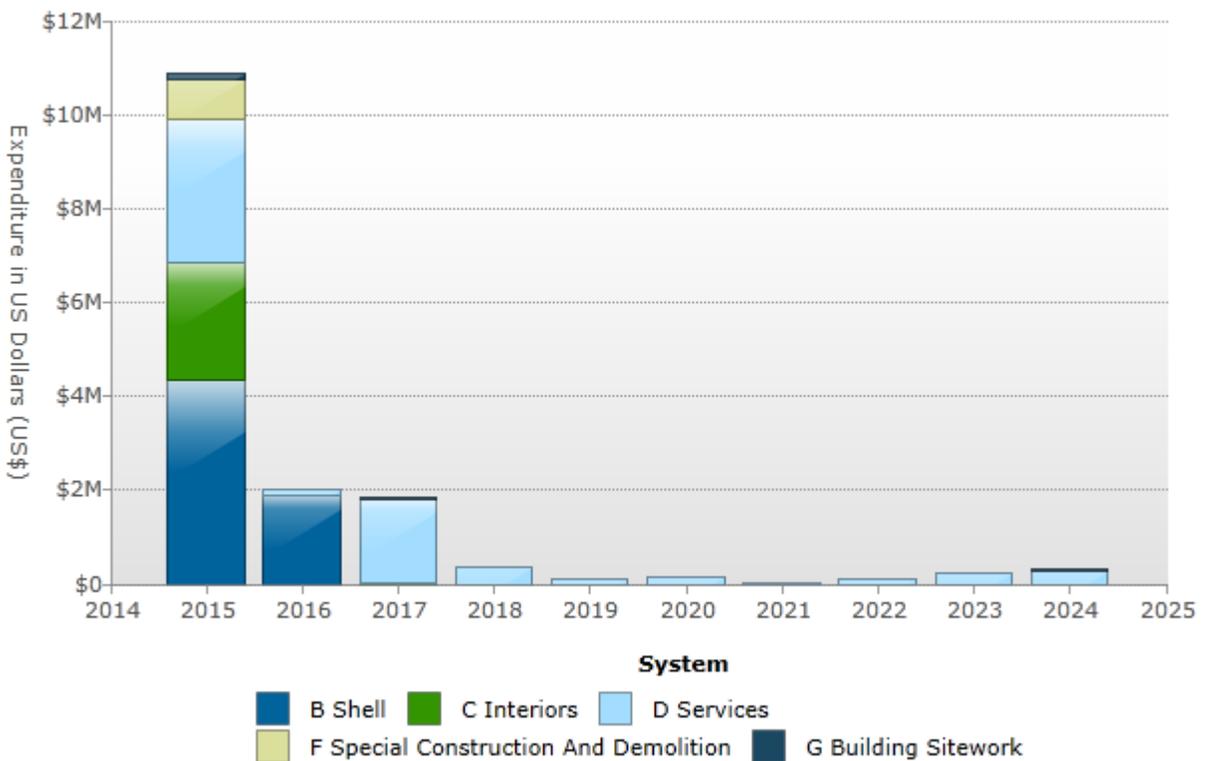
Distribution of Immediate Needs by Building System



Level	Building System	Estimated Cost
B1029	Other Roof Systems	\$303,552
B2011	Exterior Wall Construction	\$2,358,262
B2013	Exterior Louvers, Screens, and Fencing	\$105,258
B2021	Windows	\$1,519,504
B3021	Glazed Roof Openings	\$76,417
C1035	Identifying Devices	\$4,743
C2011	Regular Stairs	\$403,862
C3005	ADA Renovations	\$357,120
C3012	Wall Finishes to Interior Walls	\$163,799
C3024	Flooring	\$507,166
C3025	Carpeting	\$115,734
C3031	Ceiling Finishes	\$54,688
C3032	Suspended Ceilings	\$897,565
D1011	Passenger Elevators	\$64,246

Level	Building System	Estimated Cost
D3041	Terminal Units VAV	\$207,630
D3063	Heating/Cooling Air Handling Units	\$473,541
D4011	Sprinkler Water Supply	\$1,359,010
D5022	Lighting Equipment	\$340,619
D5037	Fire Alarm Systems	\$597,401
D5092	Emergency Light & Power Systems	\$3,500
F2021	Removal of Hazardous Components	\$829,207
G2035	Exterior Steps & Ramps	\$16,999
G4022	Poles	\$116,797
	Total	\$10,876,618

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	\$0	\$4,362,993	\$2,504,676	\$3,045,946	\$0	\$829,207	\$133,795	\$10,876,618
2016	\$0	\$1,906,381	\$0	\$97,085	\$0	\$0	\$0	\$2,003,466
2017	\$0	\$0	\$12,012	\$1,798,811	\$0	\$0	\$21,534	\$1,832,357
2018	\$0	\$0	\$0	\$366,569	\$0	\$0	\$0	\$366,569
2019	\$0	\$0	\$0	\$97,193	\$0	\$0	\$0	\$97,193
2020	\$0	\$0	\$0	\$156,370	\$0	\$0	\$0	\$156,370
2021	\$0	\$0	\$0	\$24,406	\$0	\$0	\$0	\$24,406
2022	\$0	\$0	\$0	\$111,584	\$0	\$0	\$0	\$111,584
2023	\$0	\$0	\$0	\$215,701	\$0	\$0	\$0	\$215,701
2024	\$0	\$0	\$0	\$259,350	\$0	\$0	\$68,658	\$328,008
Total	\$0	\$6,269,373	\$2,516,688	\$6,173,015	\$0	\$829,207	\$223,987	\$16,012,272

CURRENT REPLACEMENT VALUE

The Current Replacement Value has been determined as \$66,383,620 for the Jesse M. Unruh Building Building (002). 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
164,529 GSF	\$403	\$66,383,620

FACILITY CONDITION INDEX

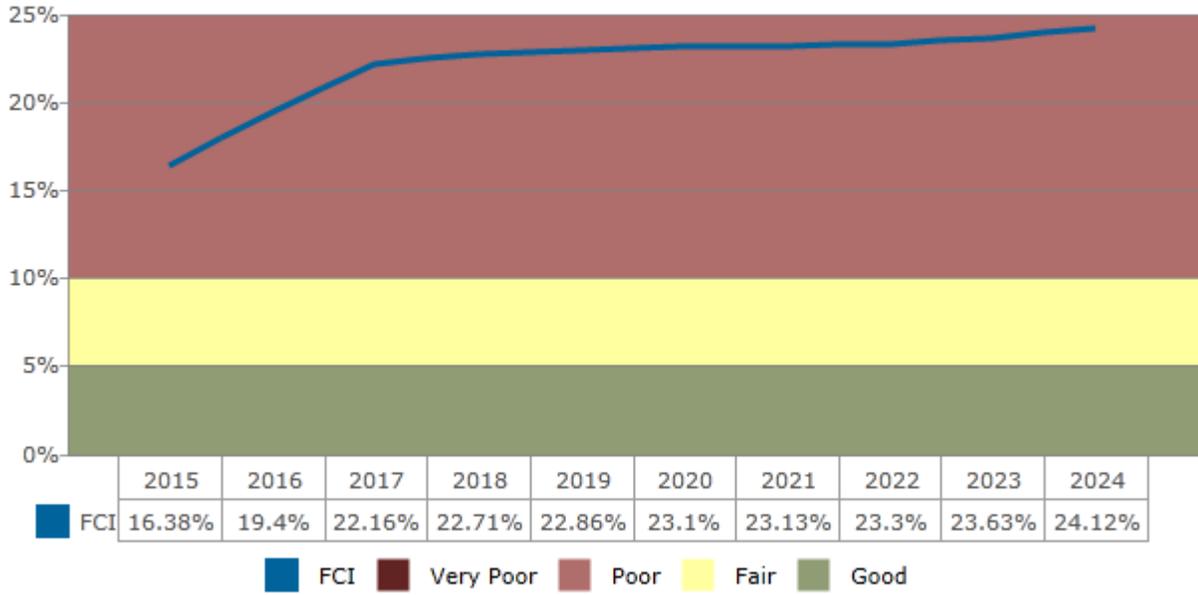
The FCI¹ is an indication of a building’s current and future overall condition. According to industry standards an FCI ratio of 65 percent, or the “rule of two-thirds,” is the threshold for identifying potential candidates for replacement or divestment.² Once the FCI ratio reaches 65 percent, or roughly 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



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APPENDICES

APPENDIX A: ACCESSIBILITY ISSUES

Item	Description
C1035 Identifying Devices	C1035 Directional Signage
Condition	Poor
Qty / UOM	15 / EA
RUL (years)	0
Location	All Floors

Item	Description
C3005 ADA Renovations	C3005 ADA Renovations
Condition	Fair
Qty / UOM	12 / EA
RUL (years)	0
Location	Common bathrooms

Recommendations:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C1035	Replace C1035 Directional Signage	15.0 - EA	316.2	CC - Accessibility	Priority 1	2015	4,743
C3005	Replace C3005 ADA Renovations	12.0 - EA	29760.0	CC - Accessibility	Priority 1	2015	357,120
D1011	Install jamb braille on Car 4. Car 4 does not meet Cal T24.	2.0 - EA	182.0	CC - Accessibility	Priority 1	2015	364

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1011	Install car buttons that are raised.	2.0 - Ea	182.0	CC - Accessibility	Priority 1	2015	364
D1011	Install jamb braille on Cars 1-3.	3.0 - EA	182.0	CC - Accessibility	Priority 1	2015	546
D1011	Install floor passing chime on Cars 1-3	3.0 - EA	4550.0	CC - Accessibility	Priority 1	2015	13,650
D1011	Install car buttons that are raised.	17.0 - EA	182.0	CC - Accessibility	Priority 1	2015	3,094
D1011	Install braille and handles on the phone doors of Cars 1-3 so they are easy to open.	3.0 - EA	546.0	CC - Accessibility	Priority 1	2015	1,638

Cost Summary:

Year	Total Expenditures
2015	\$381,519

APPENDIX B: GENERAL ASSESSMENT INFORMATION

A Substructure Systems

A10 FOUNDATIONS

Item	Description
A1032 Structural Slab on Grade	A1032 Structural Slab on Grade
Condition	Good
Qty / UOM	27000 / SF
RUL (years)	84
Location	First Floor

OBSERVATIONS/COMMENTS:

The foundation appears to be in good condition.

B Shell Systems

B10 SUPERSTRUCTURE

Item	Description
B1029 Other Roof Systems	B1029 Cable Unistrut Fall Protection
Condition	Poor
Qty / UOM	720 / LF
RUL (years)	0
Location	Roof
Roofing Type	Flat
Parapet Wall Edge Flashing	Concrete
Attic	No
Roof Access	Stairwell

OBSERVATIONS/COMMENTS:

The roof parapet is too short. It is recommended that a cable unistrut fall-protection system be installed.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B1029	Install B1029 Cable Unistrut Fall Protection	720.0 - LF	421.6	CC - Life Safety	Priority 1	2015	303,552

COST SUMMARY:

Type	Year	Total Expenditures
B10 Superstructure	2015	\$303,552

B20 EXTERIOR ENCLOSURE

Item	Description
B2011 Exterior Wall Construction	B2011 Granite Cladding
Condition	Fair
Qty / UOM	21010 / SF
RUL (years)	0
Location	Exterior Walls

OBSERVATIONS/COMMENTS:

The granite cladding should be cleaned and repaired, especially at the joints and where it abuts the terra cotta masonry work.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2011	B2011 Clean and repoint Granite Cladding	21,010.0 - SF	28.2	IN - Beyond Rated Life	Priority 1	2015	592,953

Item	Description
B2011 Exterior Wall Construction	B2011 Terra Cotta Block Masonry
Condition	Poor
Qty / UOM	10667 / SF
RUL (years)	0
Location	Rooftop and Window Lintels
Parapets	Yes

OBSERVATIONS/COMMENTS:

Based on the previous reports prepared for DGS, the exterior terra cotta coping will require repair, and the addition of copper flashing. Replacement of damaged window header blocks will also be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2011	B2011 Repair and Repoint Terra Cotta Masonry	10,667.0 - SF	165.5	IN - Beyond Rated Life	Priority 1	2015	1,765,310

Item	Description
B2011 Exterior Wall Construction	B2011 Brick Veneer-point
Condition	Fair
Qty / UOM	1014 / CSF
RUL (years)	1
Location	Light Courts
Parapets	Yes

OBSERVATIONS/COMMENTS:

There are four light courts whose exterior walls are brick veneer. They should be repaired and repointed.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2011	B2011 Repair Veneer Repair and Repoint	1,014.0 - CSF	1880.1	IN - Beyond Rated Life	Priority 1	2016	1,906,381

Item	Description
B2013 Exterior Louvers, Screens, and Fencing	B2013 Metal Grate
Condition	Poor
Qty / UOM	1020 / SF
RUL (years)	0
Location	Site
Exterior Wall Construction	Architectural Concrete Block Masonry
Parapets	Yes

OBSERVATIONS/COMMENTS:

There are open area access wells for the basement, located at east and west sides of the building. Installation of metal grates is recommended to prevent falling hazard.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2013	Replace B2013 Metal Grate	1,020.0 - SF	103.2	CC - Life Safety	Priority 1	2015	105,258

Item	Description
B2021 Windows	B2021 Repair and Paint Wood Windows
Condition	Fair
Qty / UOM	25 / EA
RUL (years)	0
Location	All Floors
Window Type	Double Hung
Windows Material	Wood
Windows Glazing	Single Glazed
Window Operation	Manual

OBSERVATIONS/COMMENTS:

There are historical wooden windows that were installed in 1929 as part of the original construction. Based on conversation with the building staff, re-caulking and painting the frames is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2021	Replace B2021 Repair and Paint Wood Windows	25.0 - EA	1205.3	OP - Maintenance	Priority 1	2015	30,132

Item	Description
B2021 Windows	B2021 Updated Aluminum Windows
Condition	Fair
Qty / UOM	214 / EA
RUL (years)	0
Location	Window openings

OBSERVATIONS/COMMENTS:

The existing aluminum windows were added subsequent to the original construction, and are not in keeping with the historic nature of the building. They should be replaced with wood windows.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2021	B2021 Replace Aluminum Windows with Wood Windows	214.0 - EA	6959.7	FN - Modernization	Priority 1	2015	1,489,372

Item	Description
B2031 Glazed Doors & Entrances	B2031 Entrance Double Doors
Condition	Good
Qty / UOM	5 / EA
RUL (years)	29
Location	Lobby
Door Hardware	Push Plate
Door Operation	Manual
Glass Type	Tempered Glass
Door Frame	Metal Framed
Door Use	Entrance

OBSERVATIONS/COMMENTS:

All double entrance doors are in good condition.

COST SUMMARY:

Type	Year	Total Expenditures
B20 Exterior Enclosure	2015	\$3,983,024
B20 Exterior Enclosure	2016	\$1,906,381

B30 ROOFING

Item	Description
B3011 Roof Finishes	B3011 PVC Roof
Condition	Good
Qty / UOM	322 / SQ
RUL (years)	18
Location	Roof
Insulation	Spray
Flashings and Trim	Concrete
Roof Eaves and Soffits	No
Roof Drainage	Internal Building Piping
Roof Warranty	Yes

OBSERVATIONS/COMMENTS:

The building roof is a PVC system, reported to have been replaced in 2013.

Item	Description
B3021 Glazed Roof Openings	B3021 Glass Skylights
Condition	Fair
Qty / UOM	910 / SF
RUL (years)	0
Location	2nd floor - Light Courts
Roof Opening Operation	Fixed

OBSERVATIONS/COMMENTS:

There are two skylights at the Northwest Light Court and three skylights at the Northeast Light Court at second floor. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B3021	Replace B3021 Glass Skylights	910.0 - SF	84.0	IN - Beyond Rated Life	Priority 1	2015	76,417

COST SUMMARY:

Type	Year	Total Expenditures
B30 Roofing	2015	\$76,417

C Interiors Systems

C10 INTERIOR CONSTRUCTION

Item	Description
C1021 Interior Doors	C1021 Interior Doors
Condition	Good
Qty / UOM	690 / EA
RUL (years)	14
Location	All Floors

OBSERVATIONS/COMMENTS:

The doors are operating properly, and require only routine maintenance.

Item	Description
C1035 Identifying Devices	C1035 Directional Signage
Condition	Poor
Qty / UOM	15 / EA
RUL (years)	0
Location	All Floors

OBSERVATIONS/COMMENTS:

Providing directional signage to fire exit stairs at corridors on each floor, and ADA signage for life safety, is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C1035	Replace C1035 Directional Signage	15.0 - EA	316.2	CC - Accessibility	Priority 1	2015	4,743

COST SUMMARY:

Type	Year	Total Expenditures
C10 Interior Construction	2015	\$4,743

C20 STAIRS

Item	Description
C2011 Regular Stairs	C2010 New Exit Stair Construction
Condition	Poor
Qty / UOM	1 / Lump sum
RUL (years)	0
Location	Building interior

OBSERVATIONS/COMMENTS:

The DGS Infrastructure Study, dated September 2013, identified the need for an additional exit stair connecting all floors, to meet the current building and fire codes.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C2011	Replace C2010 New Exit Stair Construction	1.0 - Lump sum	364000.0	CC - Life Safety	Priority 1	2015	364,000

Item	Description
C2011 Regular Stairs	C2011 Metal Steps
Condition	Poor
Qty / UOM	105 / SF
RUL (years)	0
Location	Roof
Stairs Frame	Steel
Stair Riser	Open
Stair Treads	Steel
Stair Railings	Metal
Stair Handrail Finishes	Natural Finish

OBSERVATIONS/COMMENTS:

There are four roofs separated by concrete parapet walls (four to five feet). Per conversation with building staff, the addition of metal steps or a ladder for access over the intermediate roof parapet walls is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C2011	C2011 Install Metal Steps	105.0 - SF	379.6	CC - Life Safety	Priority 1	2015	39,862

COST SUMMARY:

Type	Year	Total Expenditures
C20 Stairs	2015	\$403,862

C30 INTERIOR FINISHES

Item	Description
C3005 ADA Renovations	C3005 ADA Renovations
Condition	Fair
Qty / UOM	12 / EA
RUL (years)	0
Location	Common bathrooms

OBSERVATIONS/COMMENTS:

Based on the 2012 Survey report, renovations of all restrooms to meet ADA requirements is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3005	Replace C3005 ADA Renovations	12.0 - EA	29760.0	CC - Accessibility	Priority 1	2015	357,120

Item	Description
C3012 Wall Finishes to Interior Walls	C3012 Paint Interior Walls, Drywall
Condition	Fair
Qty / UOM	76800 / SF
RUL (years)	0
Location	All Floors

OBSERVATIONS/COMMENTS:

Based on the RUL, the interior walls will require re-painting during the assessment period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3012	Replace C3012 Paint Interior Walls, Drywall	76,800.0 - SF	2.1	IN - Appearance	Priority 2	2015	163,799

Item	Description
C3012 Wall Finishes to Interior Walls	C3012 Wall Finishes - Elevator Lobby
Condition	Good
Qty / UOM	5280 / SF
RUL (years)	2
Location	All Floors

OBSERVATIONS/COMMENTS:

Periodic finish replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3012	Replace C3012 Wall Finishes - Elevator Lobby	5,280.0 - SF	2.3	IN - Appearance	Priority 3	2017	12,012

Item	Description
C3024 Flooring	C3024 Vinyl Tile
Condition	Fair
Qty / UOM	150 / SY
RUL (years)	0
Location	All Floors
Floor Toppings	Light Weight Concrete

OBSERVATIONS/COMMENTS:

The vinyl tile was installed in 1999. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3024	Replace C3024 Vinyl Tile	150.0 - SY	125.8	IN - Appearance	Priority 2	2015	18,867

Item	Description
C3024 Flooring	C3024 Terrazzo
Condition	Fair
Qty / UOM	2963 / SF
RUL (years)	0
Location	Lobby & Corridors
Floor Toppings	Light Weight Concrete

OBSERVATIONS/COMMENTS:

The floors of lobby, corridors, and restrooms are terrazzo. Repair and polish are recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3024	C3024 Repair and Polish Terrazzo	2,963.0 - SF	164.8	IN - Appearance	Priority 2	2015	488,299

Item	Description
C3025 Carpeting	C3025 Carpet Tiles
Condition	Fair
Qty / UOM	1198 / SY
RUL (years)	0
Location	All Floors
Floor Toppings	Light Weight Concrete

OBSERVATIONS/COMMENTS:

All offices and corridors are covered with carpet. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3025	Replace C3025 Carpet Tiles	1,198.0 - SY	96.6	IN - Appearance	Priority 2	2015	115,734

Item	Description
C3031 Ceiling Finishes	C3031 Drywall – Painted Finished Ceilings
Condition	Fair
Qty / UOM	12050 / SF
RUL (years)	0
Location	All Floor

OBSERVATIONS/COMMENTS:

With the installation of fire sprinklers, finish replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3031	Replace C3031 Drywall – Painted Finished Ceilings	12,050.0 - SF	4.5	IN - Appearance	Priority 2	2015	54,688

Item	Description
C3032 Suspended Ceilings	C3032 Acoustical Ceiling Tile
Condition	Fair
Qty / UOM	747 / CSF
RUL (years)	0
Location	All Floors

OBSERVATIONS/COMMENTS:

With the installation of a new fire sprinkler system, acoustic ceiling tile replacement is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3032	Replace C3032 Acoustical Ceiling Tile	747.0 - CSF	1201.6	IN - Appearance	Priority 2	2015	897,565

COST SUMMARY:

Type	Year	Total Expenditures
C30 Interior Finishes	2015	\$2,096,071
C30 Interior Finishes	2017	\$12,012

D Services Systems

D10 CONVEYING SYSTEMS

Item	Description
D1011 Passenger Elevators	D1010 Modernize Hydraulic Elevator
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	8
Location	Elevator No. 4

OBSERVATIONS/COMMENTS:

Modernize hydraulic elevator number four.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1011	Install jamb braille on Car 4. Car 4 does not meet Cal T24.	2.0 - EA	182.0	CC - Accessibility	Priority 1	2015	364
D1011	Install 21" car aprons on hydraulic elevator No. 4	1.0 - EA	4550.0	CC - Building Code	Priority 1	2015	4,550
D1011	Perform five year full load test on the hydraulic elevator. This is currently overdue.	1.0 - EA	5460.0	CC - Building Code	Priority 1	2015	5,460
D1011	Adjust car 4 so it meets design and performance standards.	1.0 - EA	4550.0	OP - Maintenance	Priority 2	2015	4,550
D1011	Install car buttons that are raised.	2.0 - Ea	182.0	CC - Accessibility	Priority 1	2015	364

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1011	Perform five year full load test on the hydraulic elevator. This is currently overdue.	1.0 - EA	5460.0	CC - Building Code	Priority 1	2020	5,460
D1011	Replace D1010 Modernize Hydraulic Elevator	1.0 - EA	182000.0	FN - Modernization	Priority 4	2023	182,000

Item	Description
D1011 Passenger Elevators	D1011 Modernize Traction Elevator
Condition	Fair
Qty / UOM	3 / EA
RUL (years)	2
Location	Elevators 1-3

OBSERVATIONS/COMMENTS:

The traction elevators will require significant repairs during the next year. Modernization of cars one, two, and three with new controllers, SCR drives, fixtures, and door equipment is also recommended during the next few years.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1011	Install jamb braille on Cars 1-3.	3.0 - EA	182.0	CC - Accessibility	Priority 1	2015	546
D1011	Install floor passing chime on Cars 1-3	3.0 - EA	4550.0	CC - Accessibility	Priority 1	2015	13,650
D1011	Install car buttons that are raised.	17.0 - EA	182.0	CC - Accessibility	Priority 1	2015	3,094
D1011	Install braille and handles on the phone doors of Cars 1-3 so they are easy to open.	3.0 - EA	546.0	CC - Accessibility	Priority 1	2015	1,638
D1011	Adjust all cars so they meet design and performance standards.	3.0 - EA	4550.0	OP - Maintenance	Priority 2	2015	13,650

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1011	Perform five year full load tests on traction Cars 1-3. These are exempt from being tested, but recommended for safety.	3.0 - EA	5460.0	OP - Maintenance	Priority 2	2015	16,380
D1011	Replace D1011 Modernize Traction Elevator	3.0 - EA	573300.0	FN - Modernization	Priority 2	2017	1,719,900
D1011	Perform five year full load tests on traction Cars 1-3. These are exempt from being tested, but recommended for safety.	3.0 - EA	5460.0	OP - Maintenance	Priority 2	2020	16,380

Item	Description
D1013 Lifts	D1013 Dumbwaiter
Condition	Good
Qty / UOM	1 / EA
RUL (years)	11
Location	Adjacent to vault elevator

OBSERVATIONS/COMMENTS:

The dumbwaiter is adjacent to the vault elevator, car four, and is in great condition. No work is recommended at this time.

COST SUMMARY:

Type	Year	Total Expenditures
D10 Conveying Systems	2015	\$64,246
D10 Conveying Systems	2017	\$1,719,900
D10 Conveying Systems	2020	\$21,840
D10 Conveying Systems	2023	\$182,000

D20 PLUMBING

Item	Description
D2011 Water Closets	D2011 Commercial Grade Water Closet, 1.6 GPF Unit
Condition	Fair
Qty / UOM	24 / EA
RUL (years)	5
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 hygiene, and possibly to save water. The building staff reports older fixtures have an outdated attachment bolt pattern. Additional work will be required to set the new toilets.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2011	D2013 Commercial Grade Water Closets, Install automatic flush valves.	36.0 - EA	400.0	OP - Energy	Priority 2	2017	14,400
D2011	Replace D2011 Commercial Grade Water Closet, 1.6 GPF Unit	24.0 - EA	1319.2	IN - Beyond Rated Life	Priority 3	2020	31,662

Item	Description
D2012 Urinals	D2012 Urinal
Condition	Fair
Qty / UOM	24 / EA
RUL (years)	7
Location	Throughout Facility
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

Manual flush valves were observed on all the plumbing fixtures. Automatic flush valves are recommended to improve hygiene, and possibly save water.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2012	D2012 Urinals, Install automatic flush valves.	10.0 - EA	400.0	OP - Energy	Priority 2	2017	4,000
D2012	Replace D2012 Urinal	24.0 - EA	2440.7	IN - Beyond Rated Life	Priority 4	2022	58,576

Item	Description
D2013 Lavatories	D2013 Counter Top Sink and Faucet
Condition	Fair
Qty / UOM	12 / EA
RUL (years)	7
Location	Restrooms

OBSERVATIONS/COMMENTS:

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

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2013	D2013 Counter Top Sink, Install automatic faucets with motion sensors	42.0 - EA	400.0	OP - Energy	Priority 2	2017	16,800
D2013	Replace D2013 Counter Top Sink and Faucet	12.0 - EA	1542.0	IN - Beyond Rated Life	Priority 4	2022	18,505

Item	Description
D2023 Domestic Water Supply Equipment	D2023 Domestic Water Booster Pump Station
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	8
Location	Boiler Room

OBSERVATIONS/COMMENTS:

The boiler room has a domestic water booster pump station with an estimated 1974 replacement. The station consists of two pumps that can be operated independently, or in parallel. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2023	Replace D2023 Domestic Water Booster Pump Station	1.0 - EA	33700.8	IN - Beyond Rated Life	Priority 4	2023	33,701

COST SUMMARY:

Type	Year	Total Expenditures
D20 Plumbing	2017	\$35,200
D20 Plumbing	2020	\$31,662
D20 Plumbing	2022	\$77,081
D20 Plumbing	2023	\$33,701

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	District Chilled Water
Solar Thermal	No
Fuel Tank Type	AST
Fuel Tank Size (gallons)	100
Fuel Tank Location	Diesel fuel tank under generator
Gas Meter Location	N/A
Electrical Meter Location	Electric room in basement
Water Meter Location	Vault in street

Item	Description
D3022.1 Circulating Pumps	D3022 HVAC Chilled Water Circulation Pumps
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	6
Location	Boiler Room

OBSERVATIONS/COMMENTS:

The twin chilled water distribution pumps and associated motors replaced in 1994 (estimated), are in functional condition. Variable frequency drives (VFDs) have already been installed for increased performance, control, and efficiency. Pump replacement within the term is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3022	Replace D3022 HVAC Chilled Water Circulation Pumps	2.0 - EA	12202.8	IN - Beyond Rated Life	Priority 3	2021	24,406

Item	Description
D3022.1 Circulating Pumps	D3022 HVAC Heating Water Circulation Pumps
Condition	Fair
Qty / UOM	4 / EA
RUL (years)	2
Location	Boiler Room

OBSERVATIONS/COMMENTS:

The heating water distribution pumps and associated motors appear to be original and in functional condition, although past the end of their lifecycle. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3022	Replace D3022 HVAC Heating Water Circulation Pumps	4.0 - EA	10927.9	IN - Beyond Rated Life	Priority 2	2017	43,711

Item	Description
D3023 Auxiliary Equipment	D3023 Condensate Return System with storage tank
Condition	Poor - Fair
Qty / UOM	1 / EA
RUL (years)	1
Location	Boiler Room

OBSERVATIONS/COMMENTS:

The primary steam station is located within the utility pit/tunnel, and is original to the 1929 building construction. The low-pressure condensate return station is also original, located nearby. The condensate return station is reportedly functioning, but is missing one of two pumps. Modernization is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3023	Replace D3023 Condensate Return System with storage tank	1.0 - EA	24528.2	FN - Modernization	Priority 1	2016	24,528

Item	Description
D3041.1 Air Handling Units	D3041 Interior AHU 14,000-17,000 CFM
Condition	Fair
Qty / UOM	12 / EA
RUL (years)	3
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by 12 interior air handling units, which feed VAV boxes located on each floor. The AHUs are provided with chilled and heated water from the central system, and range from 14,000 CFM to 18,000 CFM nominal capacity. Due to the age of the components, replacement of the motors and associated piping is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace D3041 Interior AHU 14,000-17,000 CFM	12.0 - EA	30547.4	IN - Beyond Rated Life	Priority 2	2018	366,569

Item	Description
D3041.2 Terminal Units VAV	D3041 VAV Boxes
Condition	Fair
Qty / UOM	60 / EA
RUL (years)	0
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by dual-duct variable air volume terminals (VAVs) supplied with conditioned air, from one of the air handlers on each floor. Maintenance reports that the majority of VAVs are most likely 1974 era. Rusty and leaking piping was observed at most building support areas. Additional costs are included to replace rusty piping, in addition to VAV boxes. This work will need to be completed when asbestos is removed.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace D3041 VAV Boxes	60.0 - EA	3460.5	IN - Beyond Rated Life	Priority 1	2015	207,630

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan 2 hp
Condition	Fair
Qty / UOM	10 / EA
RUL (years)	7
Location	Rooftop

OBSERVATIONS/COMMENTS:

Most of the exhaust fans are original to the 1974 modernization, and appear to be in working condition. Replacement is anticipated within the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	Replace D3042 Exhaust Fan 2 hp	10.0 - EA	3450.4	IN - Beyond Rated Life	Priority 4	2022	34,504

Item	Description
D3043 Steam Distribution Systems	D3043 HVAC Heating Water Heat Exchanger
Condition	Fair
Qty / UOM	9 / EA
RUL (years)	1
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

Eight of the twelve air handling units have steam piped directly to them from a steam-to-hot water station. The unit is reportedly still functioning adequately. but is probably very close to the end of its lifecycle, with over 40 years of constant use, and the interior of the unit reportedly never serviced. Replacement is recommended as part of complete HVAC renovations.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3043	Replace D3043 HVAC Heating Water Heat Exchanger	9.0 - EA	8061.8	IN - Beyond Rated Life	Priority 1	2016	72,557

Item	Description
D3043 Steam Distribution Systems	D2022 Domestic Water Heat Exchanger
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	4
Location	Boiler Room

OBSERVATIONS/COMMENTS:

The shell and tube heat exchanger used for domestic water is estimated to have been replaced in 1974. The unit is reportedly still functioning adequately, but is probably very close to the end of its lifecycle, with over 40 years of constant use, and the interior of the unit reportedly never serviced. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3043	Replace D2022 Domestic Water Heat Exchanger	1.0 - EA	31257.8	IN - Beyond Rated Life	Priority 3	2019	31,258

Item	Description
D3052 Package Units	D3052 Computer/Sever Room AC
Condition	Fair - Good
Qty / UOM	3 / EA
RUL (years)	4
Location	Computer / Server Room

OBSERVATIONS/COMMENTS:

The main server room has three dedicated 5-ton air conditioning units, with estimated 1994 installation. Replacement within the term is anticipated.

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 3	2019	55,322

Item	Description
D3063 Heating/Cooling Air Handling Units	D3063 Variable Frequency Drive
Condition	Fair - Good
Qty / UOM	24 / EA
RUL (years)	0
Location	5 hp and larger motors

OBSERVATIONS/COMMENTS:

VFDs are installed for all 5-hp and larger motors. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3063	Add VFD's	24.0 - EA	19730.9	IN - Beyond Rated Life	Priority 1	2015	473,541

Item	Description
D3068 Building Automation Systems	D3068 DDC Controls
Condition	Fair
Qty / UOM	164529 / SF
RUL (years)	11
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

DDC are already installed, and will need only periodic upgrades.

COST SUMMARY:

Type	Year	Total Expenditures
D30 HVAC	2015	\$681,171
D30 HVAC	2016	\$97,085
D30 HVAC	2017	\$43,711
D30 HVAC	2018	\$366,569
D30 HVAC	2019	\$86,580
D30 HVAC	2021	\$24,406
D30 HVAC	2022	\$34,504

D40 FIRE PROTECTION SYSTEMS

Fire and Life Safety System	
Item	Description
Fire Alarm System Components Present	
Smoke detectors	Yes
Pull stations	Yes
Audible alarms	N/A
Strobe lights	N/A
Central fire alarm panel	Yes
Annunciator panel	Yes
Smoke Detectors Power Supply	Hardwired Electric
Carbon Monoxide Detectors	Yes
Heat Detector	Yes
Central Fire Alarm Panel Location	Sprinkler room
Annunciator Panel Location	Basement
Fire Extinguishers	Yes
Fire Extinguisher Inspection Date	N/A
Distance to Nearest Fire Hydrant (ft)	N/A
Illuminated Exit Signs	Yes
Kitchen Suppression Systems	N/A
Halon Gas Systems	No
Smoke Evacuation Systems	No
Fire-rated Stairwells	Yes
Fire-rated Stairwell Finish	Masonry
Stairwell Discharge	Exterior of the building at Grade
Stairwell Pressurized	No
Fire-Rated Doors Observed	Yes
Location of Fire-Rated Doors	Stairwells
Fire Alarm Service Company	Monitored by in house security
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	Lobby, hallways
Fire Alarm Monitoring Company	None

Item	Description
D4011 Sprinkler Water Supply	D4011 Wet Sprinkler System
Condition	Poor - Fair
Qty / UOM	164529 / SF
RUL (years)	0
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The entire facility lacks a fire suppression overhead sprinkler system. EMG recommends that a system be installed. Costs for the installation of the fire sprinklers will be higher than normal, due to the historic nature of the building.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D4011	Install facility-wide sprinkler system	164,529.0 - SF	8.3	CC - Life Safety	Priority 1	2015	1,359,010

COST SUMMARY:

Type	Year	Total Expenditures
D40 Fire Protection Systems	2015	\$1,359,010

D50 ELECTRICAL SYSTEMS

Item	Description
D5012 Low Tension Service & Dist.	D5012 Breaker Panel 225 Amps, 30 Circuits
Condition	Fair
Qty / UOM	50 / EA
RUL (years)	15
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

The majority of the electrical panels are original 1929 Zinsco brand.

Item	Description
D5012 Low Tension Service & Dist.	D5010 Switchgear, Mainframe, 2000 Amps
Condition	Poor - Fair
Qty / UOM	1 / EA
RUL (years)	9
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The switchgear should be replaced, and a new service brought into the electrical room from the adjacent street. Temporary power will be needed during the transition to the new switchgear and electric service.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5012	Replace D5010 Switchgear, Mainframe, 2000 Amps	1.0 - EA	259350.0	IN - Beyond Rated Life	Priority 5	2024	259,350

Item	Description
D5022 Lighting Equipment	D5022 Fluorescent Light Fixtures
Condition	Fair
Qty / UOM	849 / EA
RUL (years)	0
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Light fixtures are original and should be replaced in conjunction with the recommended replacement of suspended ceilings.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5022	Replace D5022 Fluorescent Light Fixtures	849.0 - EA	401.2	FN - Modernization	Priority 1	2015	340,619

Item	Description
D5037 Fire Alarm Systems	D5037 Fire Alarm Panel
Condition	Good
Qty / UOM	1 / EA
RUL (years)	0
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The fire alarm panel was replaced in 2008. It is likely the panel will require replacement when a new addressable fire alarm system is installed.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5037	Replace D5037 Fire Alarm Panel	1.0 - EA	16482.2	CC - Life Safety	Priority 1	2015	16,482

Item	Description
D5037 Fire Alarm Systems	D5037 Fire Alarm System
Condition	Poor
Qty / UOM	164529 / SF
RUL (years)	0
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The fire alarm system lacks a sprinkler system, and has limited sensor devices. System replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5037	Replace D5037 Fire Alarm System	164,529.0 - SF	3.5	CC - Life Safety	Priority 1	2015	580,919

Item	Description
D5092 Emergency Light & Power Systems	D5092 Emergency Transfer Switch
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	4
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The transfer switch associated with the emergency generator is reported to be functioning adequately. The transfer switch is original generator equipment, and replacement is recommended when the generator is replaced.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5092	Replace D5092 Emergency Transfer Switch	1.0 - EA	10613.1	CC - Life Safety	Priority 3	2019	10,613

Item	Description
D5092 Emergency Light & Power Systems	D5092 Emergency Generator 100 kW
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	5
Location	Exterior
Generator Fuel	Diesel
Power Rating kVA	100
Generator Serves	Fire And Life Safety Systems

OBSERVATIONS/COMMENTS:

The emergency generator is located outside along the southeast building corner, and appears to be in working condition. Replacement is anticipated within the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5092	Add/improve secondary containment for day tank	1.0 - EA	3500.0	EN - Air/ Water Quality	Priority 1	2015	3,500
D5092	Replace D5092 Emergency Generator 100 kW	1.0 - EA	102868.0	CC - Life Safety	Priority 3	2020	102,868

COST SUMMARY:

Type	Year	Total Expenditures
D50 Electrical Systems	2015	\$941,520
D50 Electrical Systems	2019	\$10,613
D50 Electrical Systems	2020	\$102,868
D50 Electrical Systems	2024	\$259,350

F Special Construction And Demolition Systems

F20 SELECTIVE DEMOLITION

Item	Description
F2021 Removal of Hazardous Components	F2021 Asbestos Removal
Condition	Poor
Qty / UOM	19195 / SF
RUL (years)	0
Location	All Floors

OBSERVATIONS/COMMENTS:

Based on the 1999 Asbestos & Lead-Based Paint report, removal of all hazardous materials throughout the building is recommended. Asbestos is present in the above-ceiling spaces, floor mastics, drywall compound, pipe insulation, duct tape, roofing materials, exterior coatings, and sealants.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
F2021	Replace F2021 Asbestos Removal	19,195.0 - SF	31.7	EN - Asbestos	Priority 2	2015	607,867

Item	Description
F2021 Removal of Hazardous Components	F2021 Lead Remediation
Condition	Poor
Qty / UOM	350 / SF
RUL (years)	0
Location	All Floor

OBSERVATIONS/COMMENTS:

Based on the 1999 Asbestos & Lead- Based Paint report, removal of all lead containing materials is recommended. Hazardous materials are known to exist throughout the building. According to the report, most finishes contain lead paint.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
F2021	Replace F2021 Lead Remediation	350.0 - SF	632.4	EN - Lead Visible Observance	Priority 2	2015	221,340

COST SUMMARY:

Type	Year	Total Expenditures
F20 Selective Demolition	2015	\$829,207

G Building Sitework Systems

G20 SITE IMPROVEMENTS

Site Information	
Item	Description
Main Ingress and Egress	Capitol Mall
Access from	S
Additional Entrances	N/A
Access from	N/A
Parking Count: Open lot	34
Parking Count: Sheltered by carports	N/A
Parking Count: Private garages	N/A
Parking Count: Subterranean garage	N/A
Parking Count: Freestanding parking structure	N/A
Number of ADA Compliant Spaces	1
Number of ADA Compliant Spaces for Vans	N/A
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	Front elevation of building
Trees Present	Yes
Shrubs Present	Yes
Grasses Present	Yes
Flower beds Present	No
Decorative Rocks Present	No
Lava Rocks Present	No
Ponds Present	No
Fountains Present	No
Topography	Flat

Item	Description
G2031 Paving & Surfacing	G2031 Concrete Pavement
Condition	Fair
Qty / UOM	950 / SF
RUL (years)	2
Location	Site

OBSERVATIONS/COMMENTS:

There are several cracks on sidewalks around the building, which could cause trip hazards. The cracks widen due to expansion, contraction and load. As part of life safety, replacement of concrete pavement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
G2031	Replace G2031 Concrete Pavement	950.0 - SF	22.7	CC - Life Safety	Priority 2	2017	21,534

Item	Description
G2035 Exterior Steps & Ramps	G2035 Metal Railing Repair and Replacement
Condition	Poor - Fair
Qty / UOM	65 / LF
RUL (years)	0
Location	Exterior

OBSERVATIONS/COMMENTS:

Metal railings are rusting in some areas. At the exterior basement stairs, an unsafe condition exists at the concrete curb, around the perimeter of the stair wall. Railing replacement will be required in some areas, based on the extent of the deterioration.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
G2035	Replace G2035 Metal Railing Repair and Replacement	65.0 - LF	261.5	CC - Life Safety	Priority 1	2015	16,999

Item	Description
G2053 Top Soil and Planting Beds	G2053 Landscaping
Condition	Fair
Qty / UOM	9680 / SF
RUL (years)	9
Location	Site

OBSERVATIONS/COMMENTS:

There are landscaping areas around the building. Replacement is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
G2053	Replace G2053 Landscaping	9,680.0 - SF	7.1	IN - Appearance	Priority 4	2024	68,658

COST SUMMARY:

Type	Year	Total Expenditures
G20 Site Improvements	2015	\$16,999
G20 Site Improvements	2017	\$21,534
G20 Site Improvements	2024	\$68,658

G40 SITE ELECTRICAL UTILITIES

Item	Description
G4022 Poles	G4022 Pole Light, decorative cast historic reproduction, Cast Aluminum Pole, 12', Base, Install
Condition	Poor
Qty / UOM	14 / EA
RUL (years)	0
Location	Exterior

OBSERVATIONS/COMMENTS:

The pole lamps are in poor condition, and will need replacement.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
G4022	Replace G4022 Pole Light, decorative cast historic reproduction, Cast Aluminum Pole, 12', Base, Install	14.0 - EA	8342.6	IN - Beyond Rated Life	Priority 1	2015	116,797

COST SUMMARY:

Type	Year	Total Expenditures
G40 Site Electrical Utilities	2015	\$116,797

The weather at the time of the assessment was:

Item	Description
Approximate Outdoor Temperature (degrees F)	54
Weather Conditions	Cloudy
Snow Covering Ground	No
Wind Conditions	Light Winds

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

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

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.

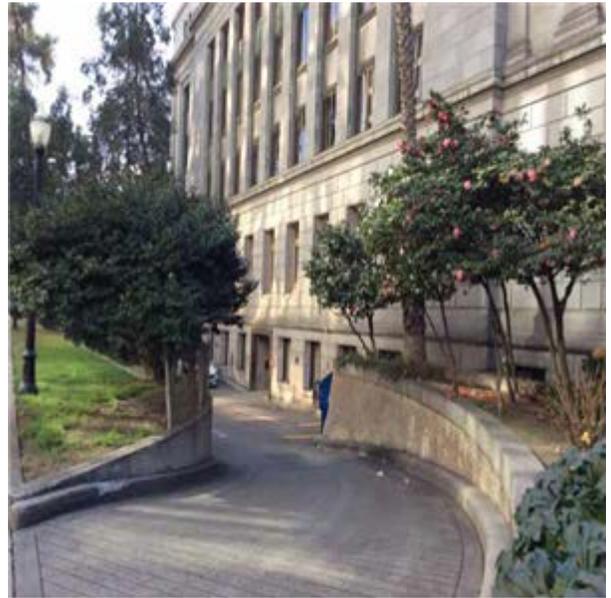
Prepared By: Djahan Nabili, Field Observer

Reviewed By: 
Matt Anderson, Program Manager

APPENDIX D: PHOTOS



:- East Elevation



:- North Elevation



:- South Elevation



:- West Elevation



B1029 Cable Unistrut Fall Protection



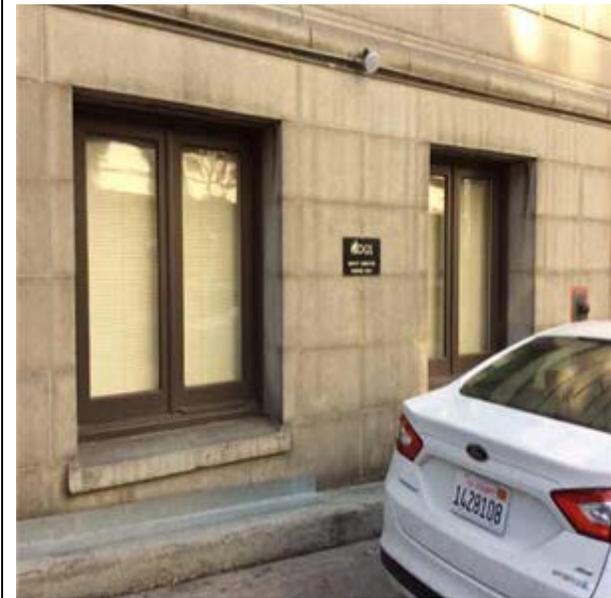
B2011 Terra Cotta Block Masonry



B2011 Brick Veneer-point



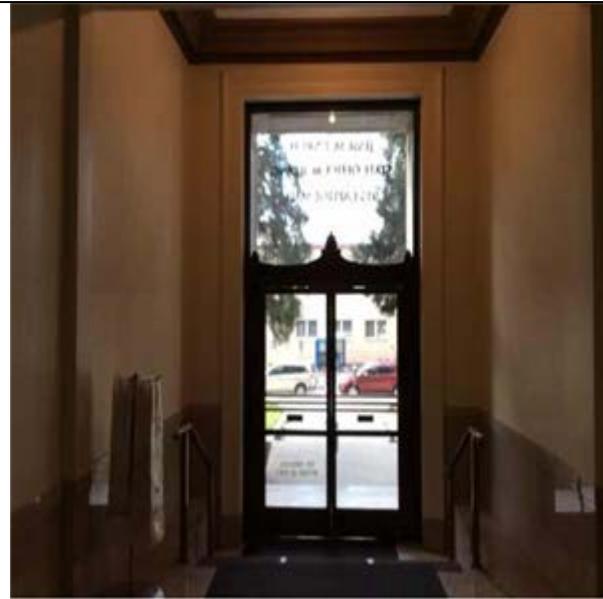
B2013 Metal Grate



B2021 Repair and Paint Wood Windows



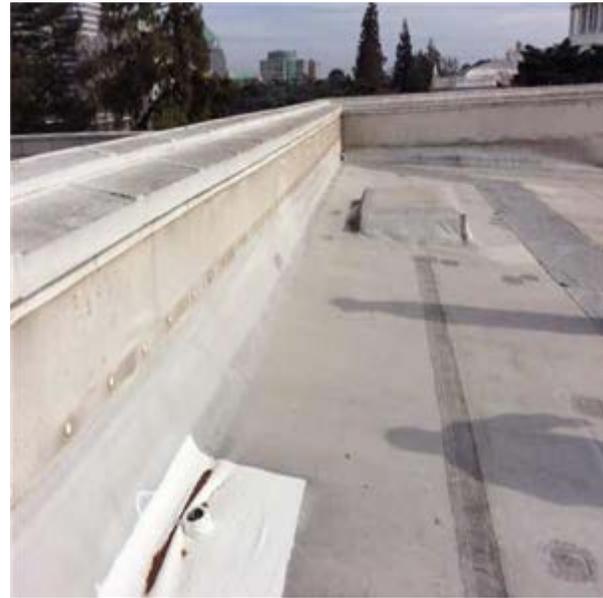
B2021 Repair and Paint Wood Windows



B2031 Entrance Double Doors



B3011 PVC Roof



B3011 PVC Roof



B3011 PVC Roof



B3021 Glass Skylights



B3021 Glass Skylights



C1021 Interior Doors



C1035 Directional Signage



C2011 Metal Steps



C3005 ADA Renovations



C3005 ADA Renovations



C3005 ADA Renovations



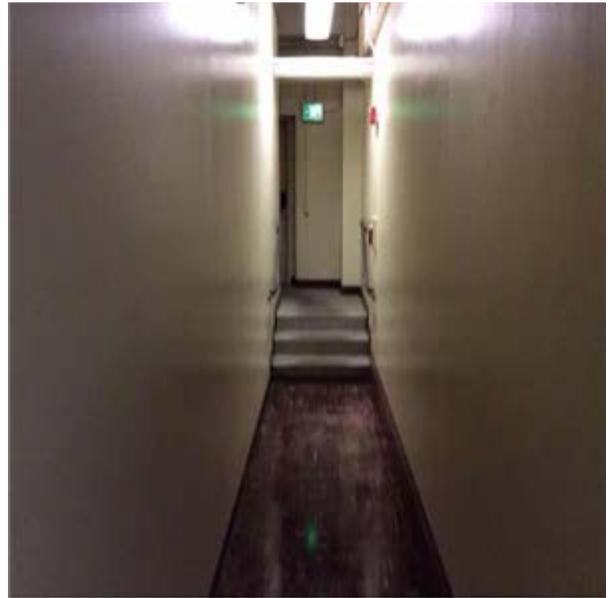
C3012 Wall Finishes - Elevator Lobby



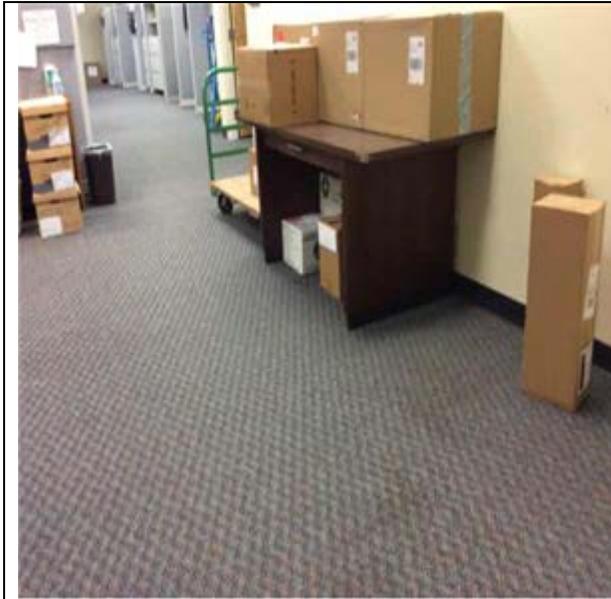
C3012 Paint Interior Walls, Drywall



C3024 Terrazzo



C3024 Vinyl Tile



C3025 Carpet Tiles



C3031 Drywall – Painted Finished Ceilings



C3032 Acoustical Ceiling Tile



D1011 Modernize Traction Elevator:- Original 1929 equipment



D2011 Commercial Grade Water Closet, 1.6 GPF Unit



D2012 Urinal



D2013 Counter Top Sink and Faucet



D2023 Domestic Water Booster Pump Station



D3022 HVAC Chilled Water Circulation Pumps



D3022 HVAC Heating Water Circulation Pumps



D3023 Condensate Return System with storage tank



D3041 Interior AHU 14,000-17,000 CFM



D3042 Exhaust Fan 2 hp



D3043 HVAC Heating Water Heat Exchanger



D3052 Computer/Sever Room AC



D3063 Variable Frequency Drive



D4011 Wet Sprinkler System



D5010 Switchgear, Mainframe, 2000 Amps



D5012 Breaker Panel 225 Amps, 30 Circuits



D5037 Fire Alarm Panel



D5092 Emergency Transfer Switch



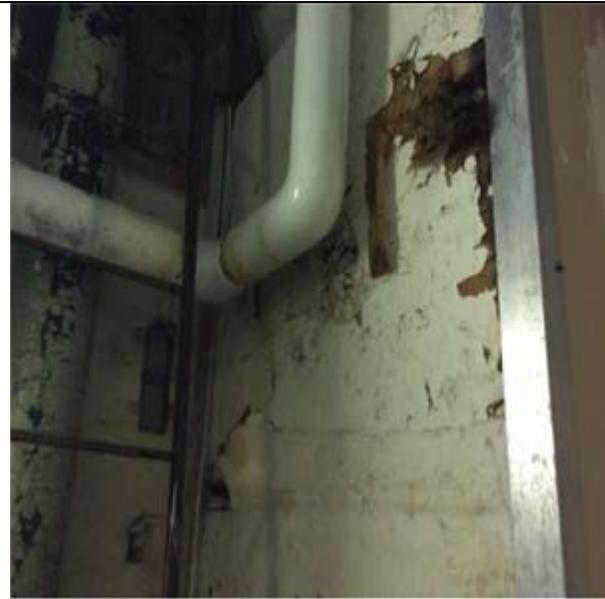
F2021 Lead Remediation



F2021 Lead Remediation



F2021 Asbestos Removal



F2021 Asbestos Removal



G2031 Concrete Pavement



G2053 Landscaping

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

JESSE M. UNRUH BUILDING FACT SHEET

915 Capitol Mall

Sacramento

Sacramento County

Category 1 - High Priority - Critical Infrastructure Deficiencies

BUILDING INFORMATION

- Age: 85 years (completed in 1929)
- Size:*
 - 6-story, historic structure
 - 164,529 GSF 125,344 NUSF 125,344 Assigned SF
 - 4.85 Acre Parcel
 - No parking available
 - Capacity - 448 occupants
- Financial:
 - No Encumbrances
 - BRA Rate - \$1.64/month per SF, FY 2013-14 (DGS Price Book)
 - \$1.69/month per SF, FY 2014-15 (Proposed DGS Price Book)
 - Central Plant rate is an additional \$0.60/month per SF
- LEED Status: Registered for LEED-EB Certification as part of DGS blanket registration in 2008.
- Tenants: 4 tenants, including the State Treasurer's Office (98,075 SF), Business, Consumer Services, and Housing Agency (3,847 SF), Government Operations Agency (5,402 SF), and the Transportation Agency (7,457 SF). Balance of space occupied by DGS-assigned space.



SPI Structure #: 2277
Real Property #: 677
BPM #: 002

COMPLETED STUDIES AND SIGNIFICANT FINDINGS

A. 1996 Seismic Retrofit Survey

The results of this survey led to a structural retrofit of the building, completed in 1999 at a cost of \$10 million.

B. 2008 Infrastructure Study

This study identified a variety of fire and life safety, building code, hazardous materials, building systems and ADA deficiencies, and recommended a full renovation of the building to address all issues and maintain/restore historic elements. Full renovation of the building has been requested for 4 years, but the cost of the project is prohibitive at this time. Repairs for individual aspects of deficiencies are being undertaken incrementally through the Special Repairs program.

C. 2011 American Disability Act Accessibility Compliance Survey

This survey identified numerous accessibility deficiencies including door hardware/clear dimensions, various restroom issues, signage, stair and stair handrails, elevator deficiencies, and path of travel issues. The cost for ADA repairs will be estimated in the future.

D. 2012 Access Compliance Conceptual Budget/Evaluation

In follow up to the 2011 American Disability Act Accessibility Compliance Survey this report provides the Conceptual Cost and Path of Travel Plans. Because a full renovation is planned, this building is not included as part of DGS's ten year ADA Compliance Upgrades and Deferred Special Repairs Program. However, total estimated cost for the work is \$3,753,540.

E. 2013 Infrastructure Study Update

This 2013 study updates the 2008 Carey and Co. Inc. Architecture Infrastructure Study. The 2013 study includes updates to the findings and recommendations of the 2008 study based upon work completed at the building, with a consideration of building code updates since the 2008 study was published. The 2013 study provides updates to the alternatives and cost estimates presented in the 2008 study, while confirming the need for a full, major building renovation of the building to avoid the building falling into an irreversible state of disrepair.

ADDITIONAL BUILDING ISSUES

The Jesse M. Unruh Building is on the National Register of Historic Places along with the State Library and Courts Building located nearby on Capitol Mall. Renovation of the Library and Courts Building was completed in spring 2013. The current estimate for fully renovating the Unruh Building, including historic restoration, is over \$70 million, which has thus far made funding the project difficult considering recent budgetary and financing constraints. The 2013 Infrastructure Study provides updated cost estimates to help inform future plans for full or partial renovation projects.

CURRENT UTILIZATION PROJECTS

No utilization projects planned.

* Source: Statewide Property Inventory

RECENTLY COMPLETED PROJECTS

Cost

TBD

ACTIVE PROJECTS

Cost

TBD

PLANNED SPECIAL REPAIRS BY FISCAL YEAR

Estimated Cost

TBD

DGS STRATEGY: In 2013, DGS completed an update to the 2008 Infrastructure Study, confirming the building's need for major renovation to avoid its falling into an irreversible state of disrepair. A COBCP for full renovation with preliminary planning funding in 2015-16 is included in the Five-Year Plan.

APPENDIX G: COST TABLES

10 YEAR EXPENDITURE FORECAST



Jesse M. Unruh Building
915 Capitol Mall
Sacramento

Useful Life

Estimated Useful Life
Remaining Useful Life

Plan Type

OP: Operations	CC: Code Compliance
EN: Environmental	FN: Functionality
IN: Integrity	

Legend

Deferred
Scheduled

Element #	Component Description	Asset	Location	Action	EUL (Yrs)	RUL (Yrs)	Qty.	Unit Meas.	Unit Cost	Plan Type	Priority	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																																	
Substructure Subtotal												\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B. SHELL																																	
B10 SUPERSTRUCTURE																																	
B1029	B1029 Other Roof Systems	B1029 Cable Unistrut Fall Protection	Roof	Install B1029 Cable Unistrut Fall Protection	50	0	720.00	LF	\$421.60	CC - Life Safety	Priority 1	\$303,552	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$303,552	\$0									
B20 EXTERIOR ENCLOSURE																																	
B2011	Architectural Concrete Block Masonry	B2011 Terra Cotta Block Masonry	Rooftop and Window Lintels	B2011 Repair and Repoint Terra Cotta Masonry	40	0	10,667.00	SF	\$165.49	IN - Beyond Rated Life	Priority 1	\$1,765,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,765,310	\$0									
B2011	Brick Veneer - Upper Level	B2011 Brick Veneer-point	Light Courts	B2011 Repair Veneer Repair and Repoint	40	1	1,014.00	CSF	\$1,880.06	IN - Beyond Rated Life	Priority 1	\$0	\$1,906,381	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,906,381								
B2011	B2011 Exterior Wall Construction	B2011 Granite Cladding	Exterior Walls	B2011 Clean and repoint Granite Cladding	50	0	21,010.00	SF	\$28.22	IN - Beyond Rated Life	Priority 1	\$592,953	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$592,953	\$0									
B2013	Metal Louver	B2013 Metal Grate	Site	Replace B2013 Metal Grate	40	0	1,020.00	SF	\$103.19	CC - Life Safety	Priority 1	\$105,258	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$105,258	\$0									
B2021	B2021 Windows	B2021 Repair and Paint Wood Windows	All Floors	Replace B2021 Repair and Paint Wood Windows	10	0	25.00	EA	\$1,205.28	OP - Maintenance	Priority 1	\$30,132	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30,132	\$0									
B2021	B2021 Windows	B2021 Updated Aluminum Windows	Window openings	B2021 Replace Aluminum Windows with Wood Windows	25	0	214.00	EA	\$6,959.68	FN - Modernization	Priority 1	\$1,489,372	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,489,372	\$0									
B30 ROOFING																																	
B3021	Glass Skylight	B3021 Glass Skylights	2nd floor - Light Courts	Replace B3021 Glass Skylights	30	0	910.00	SF	\$83.97	IN - Beyond Rated Life	Priority 1	\$76,417	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$76,417	\$0									
Shell Subtotal												\$4,362,993	\$1,906,381	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,362,993	\$1,906,381
C. INTERIORS																																	
C10 INTERIOR CONSTRUCTION																																	
C1035	Directional Signage	C1035 Directional Signage	All Floors	Replace C1035 Directional Signage	10	0	15.00	EA	\$316.20	CC - Accessibility	Priority 1	\$4,743	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,743	\$0									
C20 STAIRS																																	
C2011	C2011 Regular Stairs	C2010 New Exit Stair Construction	Building interior	Replace C2010 New Exit Stair Construction	50	0	1.00	Lump sum	\$364,000.00	CC - Life Safety	Priority 1	\$364,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$364,000	\$0									
C2011	Metal Steps	C2011 Metal Steps	Roof	C2011 Install Metal Steps	30	0	105.00	SF	\$379.64	CC - Life Safety	Priority 1	\$39,862	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$39,862	\$0									
C30 INTERIOR FINISHES																																	
C3005	C3005 ADA Renovations	C3005 ADA Renovations	Common bathrooms	Replace C3005 ADA Renovations	20	0	12.00	EA	\$29,760.00	CC - Accessibility	Priority 1	\$357,120	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$357,120	\$0									
C3012	Plaster - Painted Smooth Finish	C3012 Wall Finishes - Elevator Lobby	All Floors	Replace C3012 Wall Finishes - Elevator Lobby	10	2	5,280.00	SF	\$2.28	IN - Appearance	Priority 3	\$0	\$0	\$12,012	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,012								
C3012	Paint Interior Walls, Drywall	C3012 Paint Interior Walls, Drywall	All Floors	Replace C3012 Paint Interior Walls, Drywall	10	0	76,800.00	SF	\$2.13	IN - Appearance	Priority 2	\$163,799	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$163,799	\$0									
C3024	Terrazzo	C3024 Terrazzo	Lobby & Corridors	C3024 Repair and Polish Terrazzo	15	0	2,963.00	SF	\$164.80	IN - Appearance	Priority 2	\$488,299	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$488,299	\$0									
C3024	Vinyl Tile	C3024 Vinyl Tile	All Floors	Replace C3024 Vinyl Tile	18	0	150.00	SY	\$125.78	IN - Appearance	Priority 2	\$18,867	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,867	\$0									
C3025	Carpet Tiles - Standard	C3025 Carpet Tiles	All Floors	Replace C3025 Carpet Tiles	10	0	1,198.00	SY	\$96.61	IN - Appearance	Priority 2	\$115,734	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$115,734	\$0									
C3031	Drywall - Painted Finished Ceilings	C3031 Drywall - Painted Finished Ceilings	All Floor	Replace C3031 Drywall - Painted Finished Ceilings	20	0	12,050.00	SF	\$4.54	IN - Appearance	Priority 2	\$54,688	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$54,688	\$0									
C3032	Acoustical Tile With Exposed Grid System	C3032 Acoustical Ceiling Tile	All Floors	Replace C3032 Acoustical Ceiling Tile	20	0	747.00	CSF	\$1,201.56	IN - Appearance	Priority 2	\$897,565	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$897,565	\$0									
Interiors Subtotal												\$2,504,676	\$0	\$12,012	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,504,676	\$12,012
D. SERVICES																																	
D10 CONVEYING SYSTEMS																																	
D1011	D1011 Passenger Elevators	D1010 Modernize Hydraulic Elevator	Elevator No. 4	Adjust car 4 so it meets design and performance standards.	15	0	1.00	EA	\$4,550.00	OP - Maintenance	Priority 2	\$4,550	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,550	\$0									
	D1011 Passenger Elevators	D1010 Modernize Hydraulic Elevator	Elevator No. 4	Install 21" car aprons on hydraulic elevator No. 4	15	0	1.00	EA	\$4,550.00	CC - Building Code	Priority 1	\$4,550	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,550	\$0									
	D1011 Passenger Elevators	D1010 Modernize Hydraulic Elevator	Elevator No. 4	Install car buttons that are raised.	15	0	2.00	EA	\$182.00	CC - Accessibility	Priority 1	\$364	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$364	\$0									
	D1011 Passenger Elevators	D1010 Modernize Hydraulic Elevator	Elevator No. 4	Install jamb braille on Car 4. Car 4 does not meet Cal T24.	15	0	2.00	EA	\$182.00	CC - Accessibility	Priority 1	\$364	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$364	\$0									
	D1011 Passenger Elevators	D1010 Modernize Hydraulic Elevator	Elevator No. 4	Perform five year full load test on the hydraulic elevator. This is currently overdue.	5	0	1.00	EA	\$5,460.00	CC - Building Code	Priority 1	\$5,460	\$0	\$0	\$0	\$0	\$0	\$5,460	\$0	\$0	\$0	\$0	\$0	\$5,460	\$5,460								
	D1011 Passenger Elevators	D1010 Modernize Hydraulic Elevator	Elevator No. 4	Replace D1010 Modernize Hydraulic Elevator	35	8	1.00	EA	\$182,000.00	FN - Modernization	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$182,000	\$0	\$0	\$182,000	\$0								
D1011	Traction Elevator Machinery and Controls	D1011 Modernize Traction Elevator	Elevators 1-3	Adjust all cars so they meet design and performance standards.	15	0	3.00	EA	\$4,550.00	OP - Maintenance	Priority 2	\$13,650	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,650	\$0									
	Traction Elevator Machinery and Controls	D1011 Modernize Traction Elevator	Elevators 1-3	Install braille and handles on the phone doors of Cars 1-3 so they are easy to open.	15	0	3.00	EA	\$546.00	CC - Accessibility	Priority 1	\$1,638	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,638	\$0									
	Traction Elevator Machinery and Controls	D1011 Modernize Traction Elevator	Elevators 1-3	Install car buttons that are raised.	15	0	17.00	EA	\$182.00	CC - Accessibility	Priority 1	\$3,094	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,094	\$0									
	Traction Elevator Machinery and Controls	D1011 Modernize Traction Elevator	Elevators 1-3	Install floor passing chime on Cars 1-3	15	0	3.00	EA	\$4,550.00	CC - Accessibility	Priority 1	\$13,650	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,650	\$0									
	Traction Elevator Machinery and Controls	D1011 Modernize Traction Elevator	Elevators 1-3	Install jamb braille on Cars 1-3.	15	0	3.00	EA	\$182.00	CC - Accessibility	Priority 1	\$546	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$546	\$0									
	Traction Elevator Machinery and Controls	D1011 Modernize Traction Elevator	Elevators 1-3	Perform five year full load tests on traction Cars 1-3. These are exempt from being tested, but recommended for safety.	5	0	3.00	EA	\$5,460.00	OP - Maintenance	Priority 2	\$16,380	\$0	\$0	\$0	\$0	\$0	\$16,380	\$0	\$0	\$0	\$0	\$0	\$16,380	\$16,380								
	Traction Elevator Machinery and Controls	D1011 Modernize Traction Elevator	Elevators 1-3	Replace D1011 Modernize Traction Elevator	34	2	3.00	EA	\$573,300.00	FN - Modernization	Priority 2	\$0	\$0	\$1,719,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,719,900	\$0							
D20 PLUMBING																																	
D2011	Commercial Grade Water Closet With 1.6 Gpf Unit	D2011 Commercial Grade Water Closet, 1.6 GPF Unit	Throughout Facility	D2013 Commercial Grade Water Closets. Install automatic flush valves.	15	2	36.00	EA	\$400.00	OP - Energy	Priority 2	\$0	\$0	\$14,400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,400									
	Commercial Grade Water Closet With 1.6 Gpf Unit	D2011 Commercial Grade Water Closet, 1.6 GPF Unit	Throughout Facility	Replace D2011 Commercial Grade Water Closet, 1.6 GPF Unit	35	5	24.00	EA	\$1,319.24	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$0	\$31,662	\$0	\$0	\$0	\$0	\$0	\$31,662									
D2012	Urinal	D2012 Urinal	Throughout Facility	D2012 Urinals. Install automatic flush valves.	15	2	10.00	EA	\$400.00	OP - Energy	Priority 2	\$0	\$0	\$4,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,000									
	Urinal	D2012 Urinal	Throughout Facility	Replace D2012 Urinal	35	7	24.00	EA	\$2,440.66	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$58,576	\$0	\$0	\$0	\$0	\$58,576									
D2013	China Wall Hung Lavatory and Faucet	D2013 Counter Top Sink and Faucet	Restrooms	D2013 Counter Top Sink. Install automatic faucets with motion sensors	15	2	42.00	EA	\$400.00	OP - Energy	Priority 2	\$0	\$0	\$16,800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,800									
	China Wall Hung Lavatory and Faucet	D2013 Counter Top Sink and Faucet	Restrooms	Replace D2013 Counter Top Sink and Faucet	35	7	12.00	EA	\$1,542.05	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,505	\$0	\$0	\$0	\$0	\$18,505									
D2023	Hydronic Circulating Pump, 5 HP	D2023 Domestic Water Booster Pump Station	Boiler Room	Replace D2023 Domestic Water Booster Pump Station	20	8	1.00	EA	\$33,700.80	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$33,701	\$0	\$0	\$33,701									
D30 HVAC																																	
D3022.1	Circulation Pump 1 HP	D3022 HVAC Heating Water Circulation Pumps	Boiler Room	Replace D3022 HVAC Heating Water Circulation Pumps	20	2	4.00	EA	\$10,927.87	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$43,711	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,711									
D3022.1	Circulation Pump 1.5 HP	D3022 HVAC Chilled Water Circulation Pumps	Boiler Room	Replace D3022 HVAC Chilled Water Circulation Pumps	20	6	2.00	EA	\$12,202.79	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,406	\$0	\$0	\$0	\$0	\$24,406									
D3023	D3023 Auxiliary Equipment	D3023 Condensate Return System with storage tank	Boiler Room	Replace D3023 Condensate Return System with storage tank	20	1	1.00	EA	\$24,528.19	FN - Modernization	Priority 1	\$0	\$24,528	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,528									
D3041.1	Air Handler 15,100-18,000 CFM	D3041 Interior AHU 14,000-17,000 CFM	Utility Areas/Closets	Replace D3041 Interior AHU 14,000-17,000 CFM	20	3	12.00	EA	\$30,547.45	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$0	\$366,569	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$366,569									
D3041.2	Vav Box , 270 to 600 CFM	D3041 VAV Boxes	Throughout Facility	Replace D3041 VAV Boxes	30	0	60.00	EA	\$3,460.49	IN - Beyond Rated Life	Priority 1	\$207,630	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$207,630	\$0									
D3042	Exhaust Fan 2000 CFM	D3042 Exhaust Fan 2 hp																															

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			
D3043	Steam Heat Exchanger 10 Gpm	D3043 HVAC Heating Water Heat Exchanger	Utility Areas/Closets	Replace D3043 HVAC Heating Water Heat Exchanger	30	1	9.00	EA	\$8,061.84	IN - Beyond Rated Life	Priority 1	\$0	\$72,557	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$72,557
D3043	Multi-pass shell and tube (Cast iron heads, 40 to 180 deg., steam 10 psi, 96 GPM)	D2022 Domestic Water Heat Exchanger	Boiler Room	Replace D2022 Domestic Water Heat Exchanger	30	4	1.00	EA	\$31,257.80	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$31,258	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$31,258
D3052	Air Conditioner, Dx Package (Liebert) 5-Ton	D3052 Computer/Sever Room AC	Computer / Server Room	Replace D3052 Computer/Sever Room AC	20	4	3.00	EA	\$18,440.78	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$55,322	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$55,322
D3063	Variable Frequency Drive, 20 HP Motor	D3063 Variable Frequency Drive	5 hp and larger motors	Add VFD's	15	0	24.00	EA	\$19,730.88	IN - Beyond Rated Life	Priority 1	\$473,541	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$473,541	\$0
D40 FIRE PROTECTION SYSTEMS																								
D4011	Wet Pipe Sprinkler System - Light Hazard	D4011 Wet Sprinkler System	Throughout Facility	Install facility-wide sprinkler system	35	0	164,529.00	SF	\$8.26	CC - Life Safety	Priority 1	\$1,359,010	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,359,010	\$0
D50 ELECTRICAL SYSTEMS																								
D5012	Switchgear, Mainframe, 1600 Amps	D5010 Switchgear, Mainframe, 2000 Amps	Main Electrical Room	Replace D5010 Switchgear, Mainframe, 2000 Amps	40	9	1.00	EA	\$259,350.00	IN - Beyond Rated Life	Priority 5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$259,350	\$0	\$259,350
D5022	D5022 Lighting Equipment	D5022 Fluorescent Light Fixtures	Throughout Facility	Replace D5022 Fluorescent Light Fixtures	20	0	849.00	EA	\$401.20	FN - Modernization	Priority 1	\$340,619	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$340,619	\$0
D5037	Fire Alarm System, Install New	D5037 Fire Alarm System	Throughout Facility	Replace D5037 Fire Alarm System	25	0	164,529.00	SF	\$3.53	CC - Life Safety	Priority 1	\$580,919	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$580,919	\$0
D5037	Fire Alarm Panel	D5037 Fire Alarm Panel	Main Electrical Room	Replace D5037 Fire Alarm Panel	15	0	1.00	EA	\$16,482.24	CC - Life Safety	Priority 1	\$16,482	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,482	\$0
D5092	Diesel Generator 100 kW	D5092 Emergency Generator 100 kW	Exterior	Add/improve secondary containment for day tank	15	0	1.00	EA	\$3,500.00	EN - Air/ Water Quality	Priority 1	\$3,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,500	\$0
D5092	Diesel Generator 100 kW	D5092 Emergency Generator 100 kW	Exterior	Replace D5092 Emergency Generator 100 kW	25	5	1.00	EA	\$102,867.96	CC - Life Safety	Priority 3	\$0	\$0	\$0	\$0	\$0	\$102,868	\$0	\$0	\$0	\$0	\$0	\$0	\$102,868
D5092	Transfer Switch	D5092 Emergency Transfer Switch	Main Electrical Room	Replace D5092 Emergency Transfer Switch	25	4	1.00	EA	\$10,613.06	CC - Life Safety	Priority 3	\$0	\$0	\$0	\$0	\$10,613	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,613
Services Subtotal												\$3,045,946	\$97,085	\$1,798,811	\$366,569	\$97,193	\$156,370	\$24,406	\$111,584	\$215,701	\$259,350	\$3,045,946	\$3,127,069	

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

F. SPECIAL CONSTRUCTION AND DEMOLITION																							
F20 SELECTIVE DEMOLITION																							
F2021	Lead Remediation	F2021 Lead Remediation	All Floor	Replace F2021 Lead Remediation	50	0	350.00	SF	\$632.40	EN - Lead Visible Observance	Priority 2	\$221,340	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$221,340	\$0
F2021	F2021 Removal of Hazardous Components	F2021 Asbestos Removal	All Floors	Replace F2021 Asbestos Removal	25	0	19,195.00	SF	\$31.67	EN - Asbestos	Priority 2	\$607,867	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$607,867	\$0
Special Construction And Demolition Subtotal												\$829,207	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$829,207	\$0

G. BUILDING SITEWORK																								
G20 SITE IMPROVEMENTS																								
G2031	Concrete Sidewalk	G2031 Concrete Pavement	Site	Replace G2031 Concrete Pavement	25	2	950.00	SF	\$22.67	CC - Life Safety	Priority 2	\$0	\$0	\$21,534	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$21,534
G2035	G2035 Exterior Steps & Ramps	G2035 Metal Railing Repair and Replacement	Exterior	Replace G2035 Metal Railing Repair and Replacement	30	0	65.00	LF	\$261.52	CC - Life Safety	Priority 1	\$16,999	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,999	\$0
G2053	Landscaping Allowance, Large Area	G2053 Landscaping	Site	Replace G2053 Landscaping	25	9	9,680.00	SF	\$7.09	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$68,658	\$0	\$68,658	
G40 SITE ELECTRICAL UTILITIES																								
G4022	Pole Light and Decorative Cast Aluminum Pole, 12', Base, Install	G4022 Pole Light, decorative cast historic reproduction, Cast Aluminum Pole, 12', Base, Install	Exterior	Replace G4022 Pole Light, decorative cast historic reproduction, Cast Aluminum Pole, 12', Base, Install	15	0	14.00	EA	\$8,342.62	IN - Beyond Rated Life	Priority 1	\$116,797	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$116,797	\$0
Building Sitework Subtotal												\$133,795	\$0	\$21,534	\$0	\$0	\$0	\$0	\$0	\$0	\$68,658	\$133,795	\$90,192	

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

Expenditure Totals per Year	\$10,876,618	\$2,003,466	\$1,832,357	\$366,569	\$97,193	\$156,370	\$24,406	\$111,584	\$215,701	\$328,008	\$10,876,618	\$5,135,654
Total Cost (Inflated @ 5% per Yr.)	\$10,876,618	\$2,103,639	\$2,020,174	\$424,350	\$118,139	\$199,572	\$32,706	\$157,010	\$318,688	\$508,849	Total *	\$16,012,272

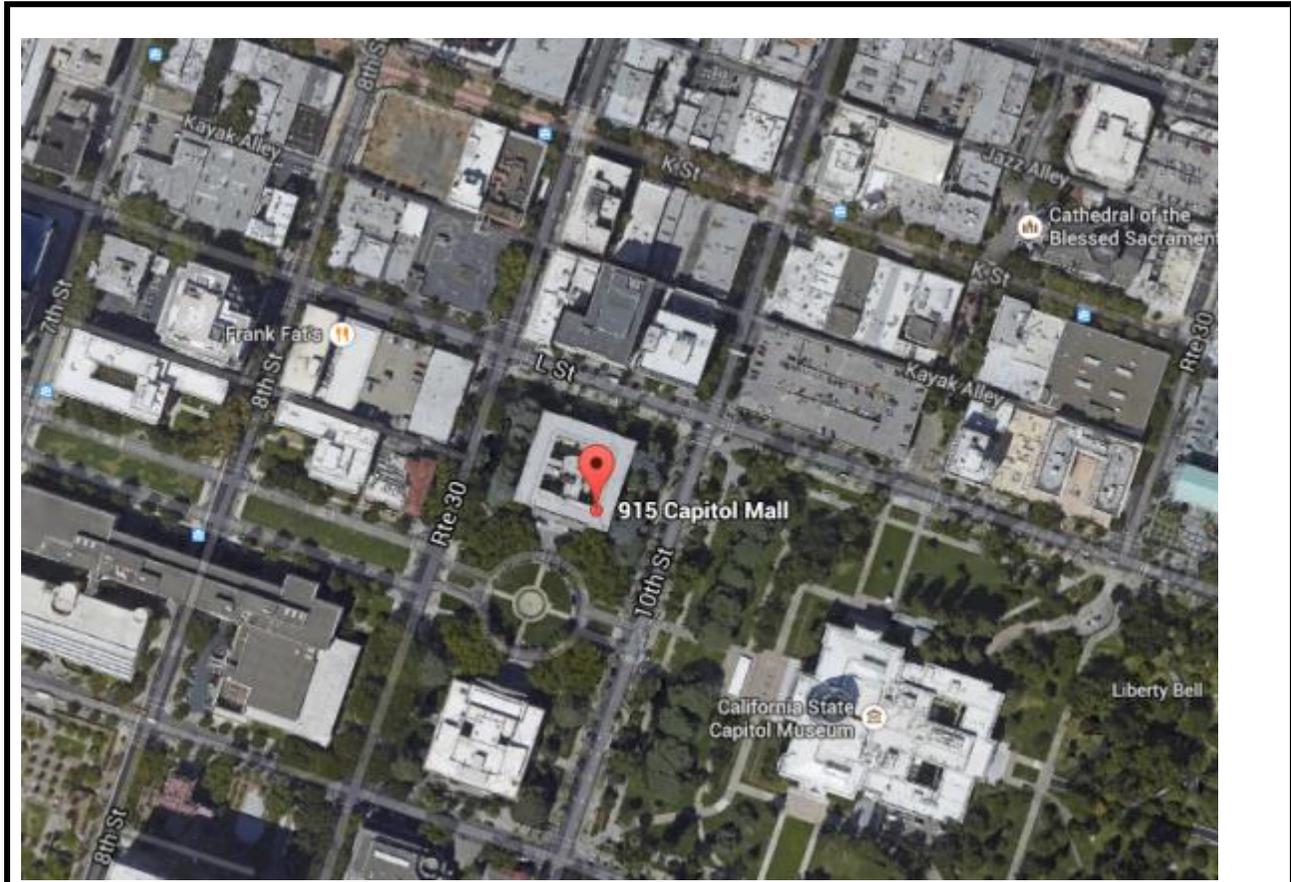
* - Present Value Currency

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

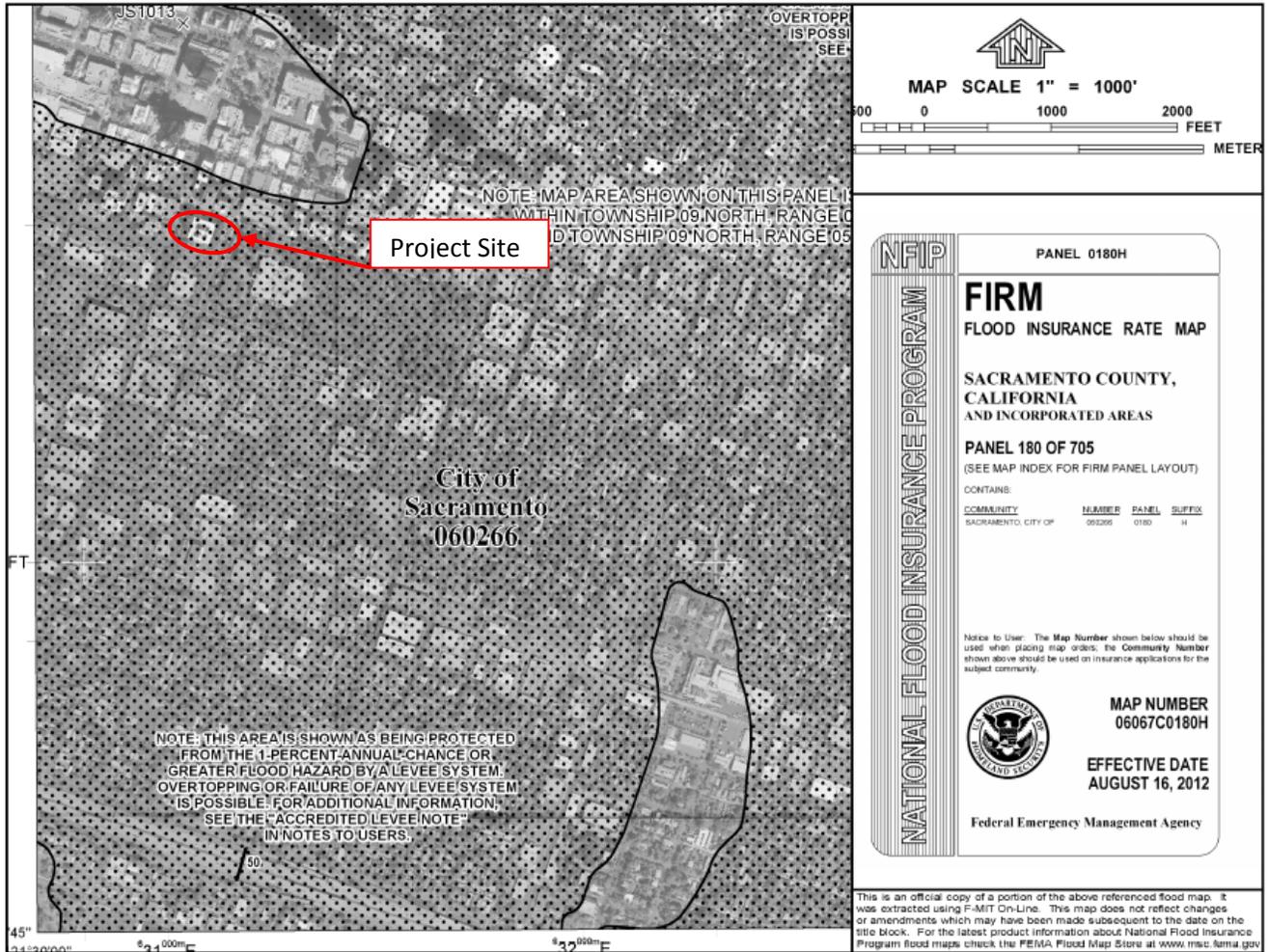
Current Repl.Value \$46,383,620

APPENDIX H: SUPPORTING DOCUMENTATION



	<p>Source:</p> <p>The north arrow indicator is an approximation of 0° North.</p>	<p>Project Number:</p> <p>111326.14R.009.305</p> <p>Project Name:</p> <p>Jesse M. Unruh Building</p>
		

Flood Map



	SOURCE: FEMA	Project Number: 111326.14R-009.305
		Project Name: Jesse M. Unruh Building
Not drawn to scale. The north arrow indicator is an approximation of 0° North.		

Estimate of Structures Cost Using Marshall Cost Systems

Jesse M. Unruh Building (002)

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	\$322.78	164,529	\$53,106,896
	\$0.00	0	\$0
	\$0.00	0	\$0
	\$0.00	0	\$0
	\$0.00	0	\$0
Total		164,529	\$53,106,896

Estimate of Adjustments for Fees:

Description	% increase	
Soft Costs	25.00%	
	0.00%	
	0.00%	
Total Fees/ Interest included in Marshall System		25.00%

Total Structure Estimate:

Description	Unit	Fee Adjust	Adjusted Totals
main building	\$53,106,896	25.00%	\$66,383,620
	\$0	25.00%	\$0
	\$0	25.00%	\$0
	\$0	25.00%	\$0
	\$0	25.00%	\$0
Cost Per SF	\$403.48	Total Estimate	\$66,383,620

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: Jesse M. Unruh Building

Date: 02/02/2015

Project Number: 111326.14R-009.305

EMG Abbreviated Accessibility Checklist					
	Building History	Yes	No	N/A	Comments
1.	Has the management previously completed an ADA review?	✓			
2.	Have any ADA improvements been made to the property?	✓			
3.	Does a Barrier Removal Plan exist for the property?		✓		
4.	Has the Barrier Removal Plan been reviewed/approved by an arms-length third party such as an engineering firm, architectural firm, building department, other agencies, etc.?	✓			In follow up to the 2011 ADA accessibility Compliance Survey, ADA upgrades have been proposed as part of DGS ten year ADA Compliance with total of \$3,753,540.
5.	Has building ownership or management received any ADA related complaints that have not been resolved?		✓		
6.	Is any litigation pending related to ADA issues?			✓	
	Parking	Yes	No	N/A	Comments
1.	Are there sufficient parking spaces with respect to the total number of reported spaces?		✓		
2.	Are there sufficient van-accessible parking spaces available (96" wide/ 96" aisle for van)?			✓	
3.	Are accessible spaces marked with the International Symbol of Accessibility? Are there signs reading "Van Accessible" at van spaces?			✓	
4.	Is there at least one accessible route provided within the boundary of the site from public transportation stops, accessible parking spaces, passenger loading zones, if provided, and public streets and sidewalks?	✓			
5.	Do curbs on the accessible route have depressed, ramped curb cuts at drives, paths, and drop-offs?	✓			

EMG Abbreviated Accessibility Checklist					
	Parking	Yes	No	N/A	Comments
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?	✓			

EMG Abbreviated Accessibility Checklist					
	Paths of Travel	Yes	No	N/A	Comments
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?		✓		

EMG Abbreviated Accessibility Checklist					
	Restrooms	Yes	No	N/A	Comments
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?	✓			
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: Joan Armstrong

Building name: Jesse M. Unruh Building (002)

What is your association with this property? Building Manager

What is the length of your association with this property? 3 years

Phone number: 916-445-2605

Please provide information about inspections relating to the following items

Inspections	Date Last Inspected	List Name & Contact for Maintenance Contractor, if any.
1. Elevators	2/2014	Thyssen Krupp
2. HVAC, Mechanical, Electric, Plumbing	January 2015	DGS
3. Life-Safety/Fire	January 2015	DGS
4. Roofs	January 2015	DGS

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

n/a

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

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

At least 20 years

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

Windows, roof, repointing the granite blocks, Painting the exterior window frames

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				ADA issues
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				Front steps have an artisal well under the steps

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

Question	Y	N	N/A	Unk	Comments
29. Is polybutylene piping used?		x			
30. Are there any plumbing leaks or water pressure problems?		x			
31. Are there any leaks or pressure problems with natural gas service?		x			
32. Does any part of the electrical system use aluminum wiring?		x			
33. Are there transformers inside the building?	x				
34. Do any Commercial units have less than 200-Amp service?				x	
35. Are there any recalled fire sprinkler heads (Star, GEM, Central, Omega)?				x	
36. Is there any pending litigation concerning the property?		x			
37. Has the State previously completed an ADA or 'Title 24 review?	x				
38. Have any ADA or Title 24 improvements been made to the property?		x			Some - not all
39. Does a Barrier Removal Plan exist for the property?		x			
40. Has the Barrier Removal Plan been approved by a credentialed third party?	x				
41. Have there been any ADA or Title 24 related complaints?		x			
42. Have there been any complaints about the elevators or wait times?		x			
43. Are there any problems with exterior lighting?		x			
44. Are there any other significant issues/hazards with the property?		x			
45. Are there any unresolved construction defects at the property?		x			

APPENDIX J: ELEVATOR REPORT



Jesse M. Unruh Building
915 Capitol Mall
Sacramento, CA

Due Diligence
Elevator Report

February 13, 2015

Prepared for:

Ms. Karla Rodriquez
EMG Corporation
Hunt Valley, MD 21212

Prepared by:

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

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Section I: Executive Summary

A. Introduction

On February 3, 2015 Bob Nicholson of Architectural Elevator Consulting, LLC (AEC) surveyed all the vertical transportation systems at the Jesse M. Unruh Building, 915 Capitol Mall, Sacramento, CA. There are three (3) traction elevators, one (1) Hydraulic elevator and one (1) dumbwaiter. The three main passenger elevators, Cars 1-3, provide vertical transportation to the office floors on levels 1-5. The hydraulic elevator and dumbwaiter are located in the vault and have very limited access and limited use. The purpose of the survey was to review the major components, to identify upgrades needed over the next ten years and check for compliance with various codes. In addition to reviewing the major components of the elevators we checked the performance parameters of the equipment and tested safety devices such as door restrictors, electric edges and emergency phones.

Elevators 1 and 2 appear to have been manufactured and installed during the original building construction in 1929. They were full modernized and/or replaced in 1961 by Montgomery Elevator and made fully automatic. The elevators were again modernized in 1989 with Schindler Haughton Goldflight controllers. Car 3 appears to be a new elevator that was added to an existing shaft in the 1970s and then modernized in 1991 as part of the modernization of Cars 1 and 2. Car 3 has a geared traction machine while Cars 1 and 2 have gearless machines. Hydraulic elevator 4 appears to have been added as a new elevator in 1976 by Montgomery Elevator when the building underwent a major renovation.

During our survey we noted that the elevators were being poorly maintained by ThyssenKrupp Elevator (TKE) with several areas that need work. Housekeeping in the machine rooms was poor, as were the car tops and pits. The motor generators were really noisy. Door performance is below average and should be improved. The performance needs to be adjusted to achieve the designed times and speeds. None of the elevators have test tags on the governors and do not appear to have been tested for annual or a five year full load test since they were installed and/or modernized. Because they were installed under Group II they are exempt from having the tests performed, however, Cars 1 and 2 should have been tested when they were modernized in 1989 as the code in effect at that time required them to be tested. We recommend all of them have a five year full load test.

B. Elevator Layout

The main passenger elevators, Cars 1-3, work as a three car group and provide service to the office floors on 1-5. In addition Car 1 provides service to the basement and 6th floor. Cars 1 and 2 are next to each other while Car 3 is on the opposite side of the lobby. Hydraulic elevator, Car 4 and the dumbwaiter provide service from the 1st floor to the vault located in the basement. All the elevators have two speed side opening doors. The number, speed and size of the elevators appear to be adequate to provide satisfactory service for the building.

Elevator Summary				
Elevator Bank	Elevator Speed	Floors Served	Capacity	Door Type
Car 1	450 FPM	B, 1-6	2,750 lbs.	Side
Car 2	450 FPM	1-5	2,750 lbs.	Side
Car 3	400 FPM	1-5	3,000 lbs.	Side
Car 4	125 FPM	B-1	2,500 lbs.	Side
Dumbwaiter	50 FPM	B-1	200 lbs.	Vert.

C. Condition/Components

Most the major components of the elevators were found to be in worn condition and poorly maintained. Cars 1-3 have Schindler Goldflight controllers that are twenty six years old. Parts and service support for these controllers is limited. The MAC door operators are worn out and providing marginal service. The car and all signal fixtures were in good condition and match the historical nature of the building. The machines are also showing some wear. Car 3 has a rough ride that appears to be related to the gear box. In *Section II* of this report we provide an in-depth review of each of the major components of the elevators with photographs.

D. Maintenance/Performance

The elevators are currently being maintained by ThyssenKrupp Elevator. The level of maintenance was noted to be poor in most areas, and has room for significant improvement. The performance was observed to be below the designed times and speeds. This needs to be remedied. The full load test is overdue on Car 4. All the pits and car tops were found to be dirty with parts strewn across them. In *Appendix C* of this report we provide a summary of the performance times for each elevator followed by a maintenance deficiency list. We recommend this list be provided to the elevator service provider so they can correct these items.

E. Code Review:

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

1. **Americans with Disability Act (ADA)/California T24:** In 1990 the federal government enacted ADA to make public spaces more accessible to disabled persons. California has a few specific accessibility requirements in addition to ADA. All of the elevators meet most ADA and California Title 24 requirements. The sizes of the passenger elevators meet ADA for new and existing elevators. All the cars had proper hall lanterns and gongs. *Appendix A* provides a complete listing of the ADA/T24 requirements. The following is a list of which items need to be corrected to meet ADA:
 - a. **Jamb Braille:** Cars 1-3 are missing braille or have really small braille tags at the wrong height. Car 4 has ADA jamb braille, but it does not meet Cal T24.
 - b. **Car Buttons:** None of the car buttons are raised as required by Cal T24.
 - c. **Car Lanterns:** The car lanterns needed at the lobby are not visible from the hall call station.
 - d. **Floor passing chimes:** Add to Cars 1-3.
2. **Retro Active Codes for Existing Elevators:** We reviewed the elevators for compliance to A17.3 Code, the national safety code for existing elevators. This code requires all elevators, no matter age or installation date, to meet a minimum level of safety. A17.3 is not adopted in California, thus not required by the State, but highly recommended. A complete check list for this retro-active code is included in *Appendix B* of this report. The elevators have been retro-actively upgraded for most of these codes. The following is a list of items that are not in compliance:

- a. **Fire Service:** Passenger Cars 1-3 do not have “hold” feature that is required for A17.3. We recommend this be added when the elevators are modernized.
 - b. **Car Aprons:** Car 4 has 12” long aprons. A17.3 requires 21” minimum. These should be installed immediately. This is for the front and rear entrance.
3. **Seismic:** The traction elevators were installed prior to adoption of seismic code. Seismic features were added when the elevators were modernized by Schindler/Haughton in 1989. The traction elevators have a seismic switch, ring and string derailment, and seismic retainers on the counterweights. The fishplates on the car and counterweight rails are non-seismic, but the counterweight rails have been reinforced. The hydraulic elevator, Car 4, has a seismic rupture valve.

F. Recommendation:

We recommend further research to determine the last time the five year full load tests were performed on Cars 1 and 2. Neither of the governors had the code required test tags and appear to have been last tested when the elevators were installed/modernized in 1961. We recommend all the elevators have a five year full load test performed as soon as possible. Car #3 has a test tag of 1990 when installed and/or modernized by Schindler. The State of California exempts older elevators from being tested, but we believe this is a major oversight by the State. The hydraulic elevator, Car 4, is required to have a five year full load test and that is currently overdue and should be a state violation if it is not. All four elevators should be modernized in the next 1-3 years. The Schindler Goldflight controllers installed on Cars 1-3 are obsolete and the motor generators are old technology that should be updated with solid-state drives. The maintenance being provided by TKE can and should be improved.

Section II : Component Review

A. MACHINE ROOM:

Controllers:

The controllers for Cars 1-3 were manufactured by Schindler/Haughton and installed in 1989 during the 2nd modernization. The controllers utilize motor generator sets. The boards are obsolete and support for service is diminishing. We recommend these be replaced with new solid state controllers and SCR drives.



Gearless Machines:

Cars 1 and 2 have Gearless machines that appear to have been installed when the elevators were 1st modernized in 1961. Car 3 has a newer Hollister Whitney machine that was installed when Car 3 was replaced in 1991.



Motor Generator Sets:

Cars 1 and 2 had motor generators installed when last modernized in 1989. Newer Car 3 also has a motor generator set. These are worn out, noisy and not very energy efficient. We recommend these be removed as part of the modernization.



B. HOISTWAY:

Hoistway Construction:

The hoistway (elevator shaft) is the main area where the elevators go up and down. The hoistways are mostly built of lath and plaster and have several holes that should be filled. Some minor work is recommended when the elevators are modernized.

Car Guide Rails:

The car rails are in good condition but do not have seismic fish plates. However, the counterweight rails had rail backing added to provide additional strength. Upgrading the guide rails to current seismic standards is voluntary and can be addressed when the elevators are modernized.

Pits:

The pits are walk in type for Cars 2 and 3. Cars 1 and 4 have pit ladders. The pits were found to be dry but in dirty condition.

C. CAR TOP:

Door Operator:

The door operators for Cars 1-3 are MAC type that have been installed during the modernization in 1989. They were provided with door restrictors. Car 2 door restrictor is shown at right and is not adjusted properly. This should be repaired immediately.



Car Roller/Slide Guides:

On both sides of the elevators and on the top and bottom roller guides keep the elevators riding up and down the steel guide rails. The existing ride quality was noted to be good. High quality ELSCO rollers are installed on the passenger elevators, Cars 1-3.

D. SIGNAL FIXTURES:

Car Operating Panels:

All the elevators have newer Car Operating Panels (COP's) that were installed during the elevator modernizations. The panels are in good condition and meet most ADA and T24 but the buttons are not raised. We recommend the buttons be replaced with raised caps.



Hall Lanterns:

Hall lanterns inform persons waiting in the hall of which direction the elevator is about to travel in next. ADA requires that the hall lanterns illuminate and sound for the waiting passengers. Passenger elevators, Cars 1-3 have hall lanterns for each car at the typical floors. The lanterns have the proper gong for up and down. They also have car lanterns to address the lack of hall lanterns at the main lobby. Car 4 has code complying car lanterns.

Hall Call Pushbuttons:

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



E. CAB INTERIOR:

Wall Finish:

The existing cab interiors have high-end wood finishes that match the historical décor of the building. No work is anticipated on the cab interiors.



Ceilings:

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



Hydraulic Pit:

Elevator 4 has an in-ground jack and seismic rupture valve. The pit was noted to be clean and in good condition.



Car 4 Cab:

Passenger elevator, Car 4 is in good condition as it appears to be very lightly used. This is an important elevator for the vault, but because it is lightly used the modernization is not as urgent as for Cars 1-3.



Dumbwaiter:

The dumbwaiter is adjacent to the vault elevator, Car 4 and is in great condition. No work is needed at this time nor recommended.



Vertical Transportation

Jesse M. Unruh Building - 915 Capitol Mall

Item No.	Recommendation	Rating	Quantity	Unit	Unit Cost	Immediate Code Items	Immediate - Repair	Years 1-3	Years 4-6	Years 7-10	Totals
1	Install braille and handles on the phone doors of Cars 1-3 so they are easy to open.	1	3	EA	\$300.00	\$900					\$900
2	Perform five year full load tests on traction Cars 1-3. These are exempt from being tested, but recommended for safety.	1	3	EA	\$3,000.00	\$9,000					\$9,000
3	Install jamb braille on Cars 1-4. Cars 1-3 don't have any and Car 4 does not meet Cal T24.	1	19	EA	\$100.00	\$1,900					\$1,900
4	Peform five year full load test on the hydraulic elevator. This is required by the state and is currently overdue.	1	1	EA	\$3,000.00	\$3,000					\$3,000
5	Install floor passing chime on Cars 1-3	1	3	EA	\$2,500.00	\$7,500					\$7,500
6	Modernize Cars 1-3 with new controllers, SCR drives, fixtures and door equipment.	3	3	EA	\$315,000.00			\$945,000			\$945,000
7	Adjust all cars so they meet design and performance standards.	2	4	EA	\$2,500.00		\$10,000				\$10,000
8	Install car buttons that are raised.	1	17	EA	\$100.00	\$1,700					\$1,700
9	Install 21" car aprons on hydraulic elevator No. 4	1	1	EA	\$2,500.00	\$2,500					\$2,500
10	Modernize Car 4	3	1	EA	\$100,000.00					\$100,000	\$100,000
11											
12											
	Subtotal					\$26,500	\$10,000	\$945,000	\$0	\$100,000	\$1,081,500
		1	\$26,500	Code and Safety							
		2	\$10,000	Deferred Maintenance & Repair							
		3		Capital Expenditure							
		4	\$1,045,000	Modernization / Improvements							
		5	\$1,081,500	Total							

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

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

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

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

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

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		Cars 1-4
4.10.12	Floor buttons must be no higher than 48 in. when located in front return. Buttons must be no higher than 54 in. when a side approach provided.	Yes
4.10.12	Emergency controls, including emergency alarm and emergency stop (if provided) must be grouped at the bottom of the panel and have centerlines no less than 35 in. above the finished floor.	Yes
4.10.12	Controls must be on the front return wall with center-opening doors. They may be on the front return or strike jamb sidewall with side doors.	Yes
	CAR POSITION INDICATORS	
4.10.13	Visual car position indicator must be provided above control panel or over door.	Yes
4.10.13	Car position indicator numerals must be a minimum of 1/2 in. high.	Yes
4.10.13	Audible signal to sound as the car passes or stops at a floor and a corresponding floor designation must illuminate. Audible signal must be at least 20 dB with a frequency no higher than 1,500 Hz.	No
4.10.13	A button to activate audible signal only for desired trip may be provided.	N/A
4.10.13	An automatic verbal announcement the floor at which a car stops may be substituted for the audible signal.	N/A
	EMERGENCY COMMUNICATIONS	
4.10.14	If provided, emergency two-way communication systems between the elevator and a point outside the hoistway must comply with ASME A17.1-1990, Rule 211.1.	Yes
4.10.14	The highest operable part must be a maximum of 48 in. from the car floor.	Yes
4.10.14	Emergency communication identification must be provided and located adjacent to the device. Characters must be a minimum of 5/8 in. high raised 1/32 in., upper case serif (block letters) or simple serif type, and accompanied by Grade II Braille.	No on Door cover Cars 1-3
4.10.13	If a handset is provided the cord must be at least 29 in. long.	N/A
4.27.4	If located in a closed compartment, the door must be operable with one hand. It must not require tight grasping, pinching or twisting of the wrist. The force required to open the door must not exceed 5 lb/f.	No – Cars 1-3
4.10.13	The system must not require voice communication.	Yes

Appendix “B”
A17.3 Code for Existing Traction Elevators

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

Appendix “B”
A17.3 Code for Existing Traction Elevators

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

Appendix “B”
A17.3 Code for Existing Traction Elevators

A17.3	Code Item	Cars: 1-4
	for frt.)	
3.7.5	Signs on Freight Elevators (NOT A PASS ELEV...etc. ½” high letters)	N/A
3.8	DRIVING MACHINES AND SHEAVES	
3.8.1	General Requirements (Must be cast iron or steel, fin. Grooves no set screws)	Yes
3.8.2	Winding Drum Machines (Must have slack rope switch; Chain, belt, or rope-driven mechanisms shall not be used.)	N/A
3.8.3	Indirect-Drive Machines (Must be at least 3 belts, safety factor of 10)	Yes
3.8.4	Brakes (Must be released electrically and have spring or gravity and friction)	Yes
3.9	TERMINAL STOPPING DEVICES	
3.9.1	Normal and Terminal Stopping Devices (Locate at upper and lower terminals. If in machine room provide broken rope, tape or chain switch)	Yes
3.9.2	Final Terminal Stopping Devices (Winding drum machines- on machines and in hoistway; Traction – in the hoistway operated by the car.)	Yes
3.10	OPERATING DEVICES AND CONTROL EQUIPMENT	
3.10.1	Types of Operating Devices (Rope or rod devices shall not be used.)	Yes
3.10.2	Car-Switch Operation Elevators (If provided must return to stop position if released by hand)	Yes
3.10.3	Top-of-Car Operating Devices (Continuous pressure <150FPM; between crosshead & door)	Yes
3.10.4	Electrical Provisions	
	(a) Slack Rope Switch	N/A
	(b) Motor-Generator Running Switch	N/A
	(c) Compensating Rope Sheave Switch	N/A
	(d) Broken rope, tape or chain	Yes
	(e) Stop Switch – Top of Car- marked “stop” & “run”	Yes
	(f) Car-Safety Mechanism Switch	Yes
	(g) Speed Gov. Overspeed Switch	Yes
	(h) Final Terminal Stopping Devices	Yes
	(i) Emergency Terminal Stopping Devices (reduced stroke)	Yes
	(j) Motor Generator Overspeed Protection	N/A
	(k) Motor Field Sensing Means (not required w/ static drive)	Yes
	(m) Buffer Switches for Oil Buffers (type c safety)	N/A
	(n) Hoistway Door Interlocks or Hoistway Door Contacts	Yes
	(p) Car Door or Gate Electric Contacts	Yes
	(q) Normal Terminal Stopping Devices	Yes
	(r) Car Side Emergency Exit Electric Contact	N/A
	(s) Electric Contacts for Hinged Car Platform Sills	N/A
	(t) In-Car Stop Switch (Must be keyed, if provided)	Yes
	(u) Emergency Stop Switch (Must be provided for freight cars)	Yes
	(v) Stop Switch in Pit	Yes
	(w) Buffer Switches for Gas Spring Return Oil Buffers	N/A
3.10.5	Power Supply Line Disconnecting Means (Provided w/ overcurrent protection, within site, and numbered)	Yes
3.10.6	Phase Reversal and Failure Protection (Means to prevent starting if out of phase)	Yes
3.10.7	Devices for Making Hoistway Door Interlocks or Electric Contacts, or Car Door or Gate Electric Contacts Inoperative (These devices are prohibited)	Yes
3.10.8	Release and Application of Driving Machine Brakes (If ungrounded or if stop switch is pulled shall release brake)	Yes
3.10.9	Control and Operating Circuit Requirements (The failure of any single magnetically operated switch)	Yes
3.10.10	Absorption of Regenerated Power (Provide means to absorb energy during overhauling)	Yes

Appendix “B”
A17.3 Code for Existing Traction Elevators

A17.3	Code Item	Cars: 1-4
3.11	EMERGENCY OPERATION AND SIGNALING DEVICES	
3.11.1	Car Emergency Signaling Devices (Audible signal, two-way communication, on emerg. power)	Yes
3.11.2	Operations of Elevators Under Standby (Emergency) Power (If provided must be able to absorb regenerative power)	Yes
3.11.3	Firefighters’ Service (A17.1-1987 Rules 211.3 through 211.8- appendix C; phase I and II switches shall be the same in each bldg)	No – Cars 1-3 Yes Car 4
3.12	SUSPENSION MEANS AND THEIR CONNECTIONS	
3.12.1	Suspension Means (Must be wire rope made of iron or steel- Elevator ropes only)	Yes
3.12.2	Rope Data Tag	Yes
3.12.3	Factor of Safety ($f = S \times N / W$ or table 3.12.3)	Yes
3.12.4	Minimum Number and Diameter of Suspension Ropes (3 for traction; 2 for drum; minimum diameter = 3/8”)	Yes
3.12.5	Suspension Rope Equalizers (When provided shall be of the individual-compression spring type)	Yes
3.12.6	Securing of Suspension Wire Ropes to Winding Drums (rope must be secured by clamps or tapered babbitted sockets.)	N/A
3.12.7	Spare Turns on Winding Drums (Not less than one turn of the rope when car is on buffer)	N/A
3.12.8	Suspension Rope Fastenings (Spliced eyes by return loop may continue in service)	Yes
3.12.9	Auxiliary Rope Fastening Devices	N/A

Appendix “C”

Performance Review and Maintenance Deficiency List

Performance Review:

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

Part A: Definitions

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

- Car Door Dwell Time: When an elevator is responding to a car call, the code requires the elevator doors to stay open a minimum of 3.0 seconds. This is to allow ample time for the passengers to exit.
- Hall Call Dwell Time: When an elevator is responding to a hall call, the code requires the elevator doors to stay open a minimum of 5.0 seconds. This is to allow ample time for the passengers to enter the elevator.
- Floor-To-Floor Time: This measures the time that it takes an elevator to go from one floor to the next floor. Door open and close times are calculated into this time to provide a meaningful measurement. The stopwatch is started when the doors start to close and is stopped when the elevator is level at the next floor with the doors $\frac{3}{4}$ open for center opening doors, and $\frac{1}{2}$ open for side opening doors.
- Door Open Time: The door open time is measured when the doors start to open until they are fully open.
- Door Close Time: The door close time is measured when the doors start to close until they are fully closed.
- Full Speed: Full speed of an elevator is measured in the machine room utilizing a tachometer or in the car using an accelerometer.
- Door Closing Pressure: The force required to prevent the doors from closing. This pressure is measured with a spring gauge.
- Ride Quality: Acceleration, deceleration, side-to-side sway and noise level are evaluated in this section.

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

Appendix “C”

Performance Review and Maintenance Deficiency List

915 Capitol Mall								
	PERFORMANCE TIMES	Design 1-2	Car 1	Car 2	Design 3	Car 3	Design 4	Car 4
7.1	Door Open Time	2.5	4.9	5.4	2.5	3.4	2.5	5.0/5.1
7.2	Door Close Time	4.6	4.8	5.6	4.4	4.5	4.6	4.3/4.2
7.3	Floor to Floor Up	12.0	15.8	14.0	12.0	12.8	15.5	21.5
9.6	Floor to Floor Down	12.0	16.2	14.1	12.0	12.1	15.5	18.8
7.5	Full Speed Up	450 FPM	405	328	400 FPM	349	125 FPM	132
7.6	Full Speed Down	450 FPM	322	330	400 FPM	352	125 FPM	120
7.7	Jerk Rate Up	< 7.0	9.5	9.8	< 7.0	7.7	< 7.0	12.4
7.8	Jerk Rate Down	<7.0	12.1	19.7	<7.0	10.3	<7.0	5.7
7.9	Power Closing of Door (Pressure Gauge)	<30lbs	23 lbs	26 lbs	<30lbs	21 lbs	<30lbs	20 lbs
7.10	Interrupted Ray	.5sec	1.9	1.5	.5sec	2.7	.5sec	DNC
7.11	Car Dwell Time	3.0	8.9	8.3	3.0	9.3	3.0	3.5/4.3
7.12	Hall Call Dwell Time	5.0	DNC	2.3	5.0	7.5	5.0	5.3
7.13	Hall/Car Lantern Time	8.0	DNC	7.5	8.0	9.3	8.0	7.9
	Nudging	20.0	DNC	DNC	20.0	DNC	20.0	DNC
	Test Emergency Phone	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Items in Red do not comply and should be adjusted.

Car #	GENERAL MAINTENANCE DEFICIENCIES
	Car 1
1.1	Machine is very dirty. Covered in dust.
1.2	Car top is very dirty.
1.3	Spare hanger rollers left on top of car.
1.4	Car doors are scratched.
1.5	MG sets are very noisy.
	Car 2
2.1	Governor is dirty.
2.2	Machine is dirty.

Appendix “C”
Performance Review and Maintenance Deficiency List

2.3	Hoist ropes have rouge and should be replaced.
2.4	Doors are extremely slow.
2.5	Car jerks to start and stop.
2.6	Up hall lantern does not work at 3 rd floor.
	Car 3
3.1	Capacity permit says 3,000 lbs, engraving says 2,750. Engraving is wrong.
3.2	Car top is dirty.
3.3	Rope clips are too far apart on the car and counterweight.
3.4	Door restrictor does not work.
3.5	Cover on electrical box on car top is off.
3.6	Pit is dirty.
3.7	
	Car 4
4.1	West side door restrictor does not work.
4.2	Machine room needs to be cleaned.
4.3	State mandated five year full load test is overdue.



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