



Secretary of State / Archives Building (036)

1500 11th Street, 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 Secretary of State / Archives Building (036).

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 Secretary of State / Archives Building (036) 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 Secretary of State / Archives Building (036) on January 20, 21 & 22, 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	\$207,376,663
Immediate Repair Costs (12 months)	\$9,593,458
1-5 Year Capital Needs	\$29,366,011
6-10 Year Capital Needs	\$2,310,464
Total 10-Year Capital Reserve Needs	\$41,269,933

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

Current Year FCI

$$\text{Current FCI} = \frac{\$9,593,458}{\$207,376,663}$$

Ten-Year FCI

$$\text{Ten-Year FCI} = \frac{\$41,269,933}{\$207,376,663}$$

Current Year FCI	Ten-Year FCI
4.63 % = <i>Good Condition</i>	19.90 % = <i>Poor Condition</i>

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

- Roof replacement is recommended, including new flashings over the Archives portion of the building.
- Re-caulk and seal the expansion joints, and the joints between the glass-fiber reinforced precast panels.
- Replace carpeting in the Secretary of State and Museum portions of the building.
- In the Archives Building, replace chiller #2 and the two boilers, and add a humidifying system.
- Replace the film and media storage vault air-conditioning.

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 Secretary of State / Archives Building (036) complex was designed by Esherick, Homsey, Dodge and Davis Architects of San Francisco. Construction was completed in 1995. The building houses the offices of the Secretary of State, the California State Archives, and the California Museum. The building is located at 1500 11th Street, Sacramento and occupies a full city block. The Secretary of State, a Constitutional Officer, is the single agency tenant. The offices, Archives, and museum are connected by shared spaces and common walls and surround an interior courtyard. The site includes a below-grade parking structure.

The Archives consist of a six-story archival storage of rare documents, laws, and other historical documentation. The storage area is humidity controlled by steam boilers located in the basement of the building. The building was built to accommodate additional floor levels in the future.

A five-story north wing houses the California Museum on the first two floors, which includes exhibit space and a gift and book store. Artifacts are sometimes on loan to the museum for exhibit. The museum also houses the Hall of Fame exhibit. The museum lab is located on the third floor and Archive staff offices are on the upper floors.

A four-story south wing houses shop areas, classrooms, staff areas, and a computer facility. In addition to office space, the building has a six-story north wing, a rotunda, 250-seat auditorium, multi-purpose room, and a full-service cafeteria. The east and south wings include loading facilities and a childcare facility. The central courtyard offers a beautiful setting for employees and visitors, often hosts special events and functions. The predominant feature of the courtyard is the sculptural Constitution Wall.

The gross building area is 531,049 SF with a net usable area of 335,925 SF. The ratio of net usable to gross building area is 63.2 percent. The occupant capacity is 669. The underground parking garage has 151 spaces.

BUILDING DESCRIPTION

The foundation is constructed of reinforced concrete footings and basement walls. The building structural system is a steel superstructure with concrete topped metal floor decks. The Secretary of State and Archive Building roof structure is flat with single ply membrane roofing. The California Museum roof structure is sloped with standing seam metal roofing.

The exterior walls are finished with precast fiber-reinforced concrete panels, stone veneer, and stucco.

The building has painted drywall walls. The floor finishes consist of ceramic tiles, stone tiles, commercial carpet tiles, vinyl composition tiles, and unpainted concrete. Most of the interior ceilings are finished with acoustic ceiling tiles, while the ceilings in the Archive Vaults are open.

The facility is served by 14 traction passenger elevators and 4 hydraulic freight elevators. The machinery and controls are the original installed systems.

HVAC for the building is provided by the off-site DGS Municipal Central Plant, which supplies chilled water and steam. The chilled water is circulated by variable frequency drive pumps. Steam heat exchangers provide the heating system hot water and domestic hot water. There are supplemental cooling systems for the Café's walk-in freezers and coolers, the Archive Stacks, and the computer server room. The Archive Stacks are addressed as a stand-alone building with separate services. The Archive Stacks require controlling the environment at 45 percent relative humidity and 65 degrees Fahrenheit for preservation. There is supplemental heating and cooling equipment for this part of the facility. Most of the electrical infrastructure of the building is original.

The fire sprinkler system is limited to the Café, media vault, and film vault. Fire protection for the remaining portions of the building consists of wet-pipe hose cabinets, dry standpipes, and an alarm system. The Café has an Ansul fire suppression system for the kitchen hoods. The film and media vaults have a halon system. There is an emergency generator.

The building covers nearly the entire site. The perimeter landscaping consist of planters. The interior courtyard and patios consist of trees and shrubs. Landscaped areas are irrigated by an in-ground drip irrigation system.

Parking is provided for 151 cars. All of the parking stalls are located in a subterranean garage.

The sidewalks throughout the property are constructed of cast-in-place concrete. Cast-in-place concrete steps with metal handrails are located at grade changes.

Project Statistics

Item	Description
Project Name	Secretary of State / Archives Building
Building ID	036
Property Type	Administration
Year Built	1995
Number of Stories	6
Occupied	Yes
Land Area (acres)	2.44
Gross Square Feet (GSF)	531,049

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 Secretary of State / Archives Building (036) on January 20, 21 & 22, 2015. The survey included analysis and observation of the building's interior and exterior, including the roofs. The evaluation team interviewed the building maintenance staff to inquire about the subject property's previous repairs and replacements and their costs, level of preventive maintenance exercised, pending repairs and improvements, and frequency of repairs and replacements. Opinions were developed based on the site evaluation, interviews with relevant maintenance providers and facilities managers, and previous experience with comparable properties. The evaluation team questioned those knowledgeable of the subject property's physical condition and operation (or knowledgeable of similar systems) to gain comparative information to use in evaluation of the subject property. In addition, the building staff provided documents and information to the evaluation team that were relevant to the subject property's physical improvements, extent, and type of use and assisted the team in identifying potential discrepancies between reported information and observed conditions.

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

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 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.

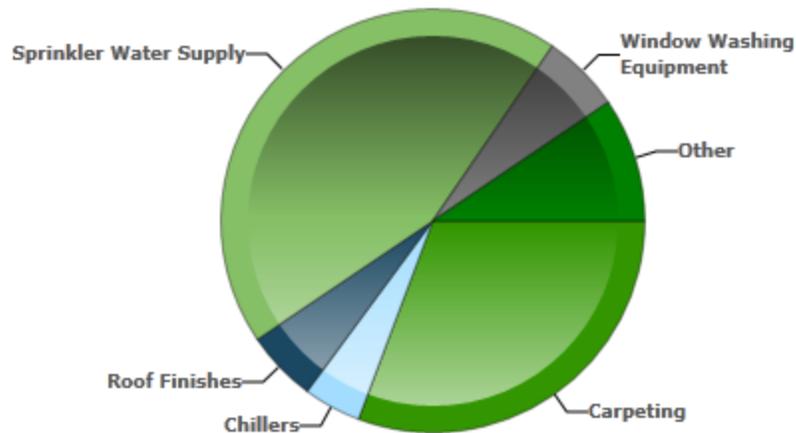
PRIORITY RATIO

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.

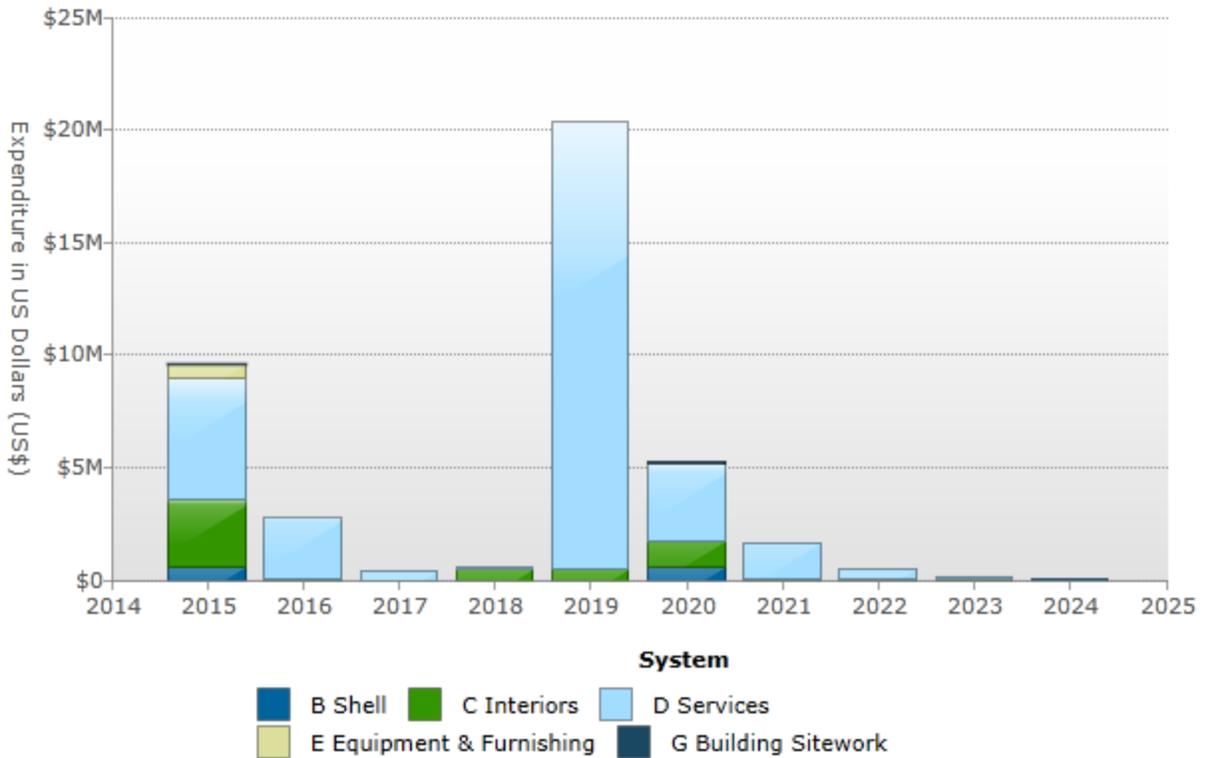
Distribution of Immediate Needs by Building System



Level	Building System	Estimated Cost
B2011	Exterior Wall Construction	\$83,979
B2031	Glazed Doors & Entrances	\$5,250
B3011	Roof Finishes	\$520,801
C1021	Interior Doors	\$11,854
C3024	Flooring	\$23,128
C3025	Carpeting	\$2,946,471
D1011	Passenger Elevators	\$72,000
D1012	Freight Elevators	\$12,000
D2011	Water Closets	\$91,279
D2012	Urinals	\$48,813
D2013	Lavatories	\$150,102
D3031	Chillers	\$422,344
D3032	Direct Expansion Systems	\$166,301
D3043	Steam Distribution Systems	\$52,596

Level	Building System	Estimated Cost
D3068	Building Automation Systems	\$84,960
D4011	Sprinkler Water Supply	\$4,220,860
D5022	Lighting Equipment	\$22,320
D5092	Emergency Light & Power Systems	\$3,500
E1097	Window Washing Equipment	\$575,000
E1099	Other Equipment	\$20
E2012	Fixed Casework	\$73,879
G2031	Paving & Surfacing	\$6,000
	Total	\$9,593,458

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	\$610,031	\$2,981,453	\$5,347,075	\$648,899	\$0	\$6,000	\$9,593,458
2016	\$0	\$0	\$21,328	\$2,720,900	\$0	\$0	\$0	\$2,742,228
2017	\$0	\$0	\$0	\$374,034	\$0	\$0	\$0	\$374,034
2018	\$0	\$0	\$483,028	\$105,191	\$0	\$0	\$0	\$588,219
2019	\$0	\$0	\$449,083	\$19,929,000	\$0	\$0	\$0	\$20,378,083
2020	\$0	\$586,349	\$1,137,590	\$3,487,464	\$0	\$0	\$72,044	\$5,283,447
2021	\$0	\$0	\$63,984	\$1,547,000	\$0	\$0	\$0	\$1,610,984
2022	\$0	\$0	\$21,328	\$455,000	\$0	\$0	\$0	\$476,328
2023	\$0	\$0	\$42,656	\$99,177	\$0	\$0	\$0	\$141,833
2024	\$0	\$81,319	\$0	\$0	\$0	\$0	\$0	\$81,319
Total	\$0	\$1,277,699	\$5,200,451	\$34,064,840	\$648,899	\$0	\$78,044	\$41,269,933

CURRENT REPLACEMENT VALUE

The Current Replacement Value has been determined as \$207,376,663 for the Secretary of State / Archives Building Building (036). 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
531,049 GSF	\$391	\$207,376,663

FACILITY CONDITION INDEX

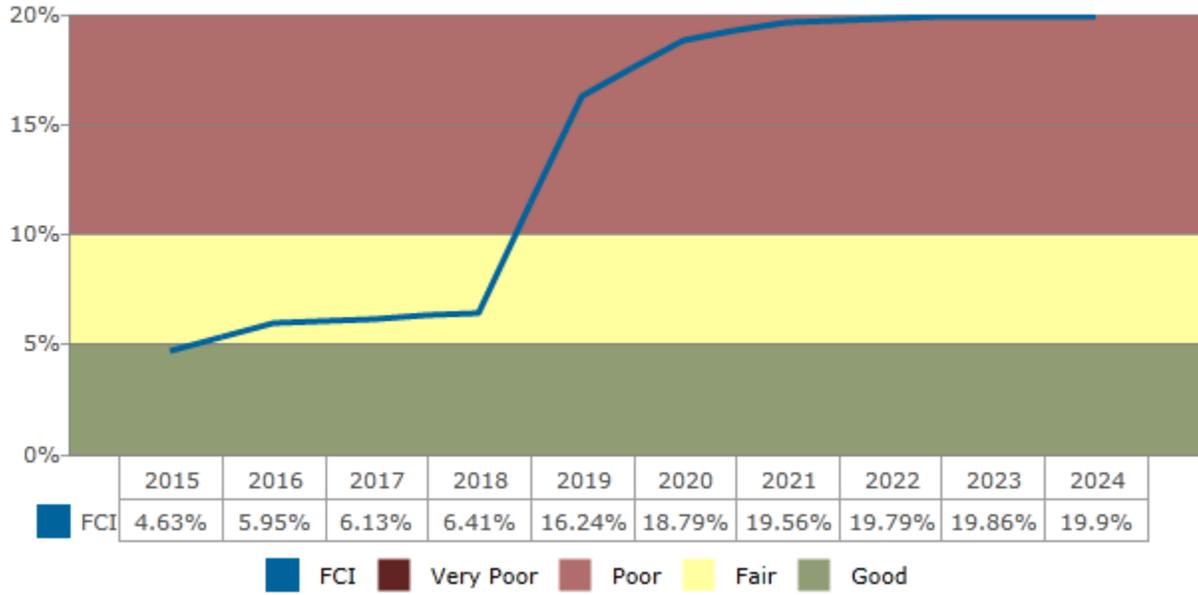
The FCI¹ is an indication of a building’s current and future overall condition. According to industry standards an FCI ratio of 65 percent, or the “rule of two-thirds,” is the threshold for identifying potential candidates for replacement or divestment.² Once the FCI ratio reaches 65 percent, or roughly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

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

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

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

Cumulative Effects of FCI over the Study Period



APPENDICES

APPENDIX A: ACCESSIBILITY ISSUES

Item	Description
E1099 Other Equipment	B2031 Install Auto Door Openers
Condition	Fair
Qty / UOM	8 /
RUL (years)	0
Location	At entries

Item	Description
E2012 Fixed Casework	E2012 Counter Top and Sink
Condition	Poor - Fair
Qty / UOM	15 / EA
RUL (years)	0
Location	Location 34

RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
E1099	B2031 Install Auto Door Openers	8.0 -	2.5	CC - Accessibility	Priority 1	2015	20
E2012	E2010 Replace sink cabinets	15.0 - EA	4925.3	CC - Accessibility	Priority 1	2015	73,879

COST SUMMARY:

Year	Total Expenditures
2015	\$73,899

APPENDIX B: GENERAL ASSESSMENT INFORMATION

A Substructure Systems

A20 BASEMENT CONSTRUCTION

Item	Description
A2021 Basement Wall Construction	A2021 Basement Wall Construction
Condition	Good
Qty / UOM	98400 / SF
RUL (years)	70
Location	Subterranean Garage Floor & Walls

OBSERVATIONS/COMMENTS:

Basement consists of reinforced concrete floor and walls.

B Shell Systems

B10 SUPERSTRUCTURE

Item	Description
B1012 Upper Floors Construction	B1012 Metal Decking with Concrete Topping
Condition	Good
Qty / UOM	460370 / SF
RUL (years)	40
Location	First through sixth floors

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B1021 Flat Roof Construction	B1021 Structural Steel Beams Supporting Corrugated Metal Roof Deck with Lightweight Concrete Topping
Condition	Good
Qty / UOM	97500 / SF
RUL (years)	57
Location	Roofs

OBSERVATIONS/COMMENTS:

No further action is recommended.

B20 EXTERIOR ENCLOSURE

Item	Description
B2011 Exterior Wall Construction	B2011 Granite Veneer
Condition	Fair - Good
Qty / UOM	1000 / SF
RUL (years)	28
Location	Exteriors

OBSERVATIONS/COMMENTS:

Caulk and sealant replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2011	B2011 Replace exterior caulk/sealant	1,000.0 - LF	6.3	IN - Beyond Rated Life	Priority 1	2015	6,310

Item	Description
B2011 Exterior Wall Construction	B2011 2 foot thick poured concrete
Condition	Good
Qty / UOM	9576 / SF
RUL (years)	45
Location	10th Street elevation

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B2011 Exterior Wall Construction	B2011 Stucco and Lath
Condition	Poor - Fair
Qty / UOM	2000 / SF
RUL (years)	0
Location	Wall facing fifth floor roof

OBSERVATIONS/COMMENTS:

The stucco is developing cracks and leaks. Removing and replacing the stucco is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2011	Replace B2011 Stucco and Lath	2,000.0 - SF	18.3	IN - Beyond Rated Life	Priority 1	2015	36,654

Item	Description
B2011 Exterior Wall Construction	B2011 Stucco and Lath
Condition	Fair - Good
Qty / UOM	25000 / SF
RUL (years)	20
Location	Street and court yard exterior elevations

OBSERVATIONS/COMMENTS:

Small cracks and areas needing patching were noted. Patching and painting during the term is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2011	B2011 Patch and paint stucco exteriors	25,000.0 - SF	1.4	IN - Beyond Rated Life	Priority 3	2020	35,500

Item	Description
B2011 Exterior Wall Construction	B2011 Precast veneer panels
Condition	Fair - Good
Qty / UOM	40000 / SF
RUL (years)	25
Location	First through sixth floors

OBSERVATIONS/COMMENTS:

Sealant replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2011	B2011 Replace exterior caulk/sealant at all joints	6,500.0 - LF	6.3	IN - Beyond Rated Life	Priority 1	2015	41,015

Item	Description
B2021 Windows	B2021 Windows
Condition	Fair - Good
Qty / UOM	350 /
RUL (years)	15
Location	Exteriors

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B2031 Glazed Doors & Entrances	B2031 Glazed Entrance Doors
Condition	Fair
Qty / UOM	21 / EA
RUL (years)	18
Location	Doors to courtyard and patios

OBSERVATIONS/COMMENTS:

Paint on the doors leading into the courtyard and patios is faded, and the weather-stripping is failing, allowing moisture penetration.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2031	B2031 Replace weatherstripping	21.0 - EA	250.0	OP - Energy	Priority 1	2015	5,250

Item	Description
B2031 Glazed Doors & Entrances	B2031 Aluminum Glazed Doors 3'-0" X 7'-0"
Condition	Fair - Good
Qty / UOM	16 / EA
RUL (years)	5
Location	Exteriors

OBSERVATIONS/COMMENTS:

Based on RUL, replacement can be anticipated during the reserve period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2031	B2031 Replace doors	16.0 - EA	6203.7	IN - Beyond Rated Life	Priority 3	2020	99,260

Item	Description
B2032 Solid Exterior Doors	B2032 3'-0" X 7'-0" Steel, Painted, Door
Condition	Fair
Qty / UOM	15 / EA
RUL (years)	9
Location	Exteriors

OBSERVATIONS/COMMENTS:

Periodic replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2032	Replace B2032 3'-0" X 7'-0" Steel, Painted, Door	15.0 - EA	2723.0	IN - Beyond Rated Life	Priority 4	2024	40,846

Item	Description
B2032 Solid Exterior Doors	B2032 Solid Exterior Doors, 9'
Condition	Fair - Good
Qty / UOM	2 / PR
RUL (years)	25
Location	Entry Lobby

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B2039 Other Doors & Entrances	B2039 Overhead Coiling Door 20'+ wide
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	9
Location	Loading Dock

OBSERVATIONS/COMMENTS:

Based on RUL, replacement is recommended during the reserve period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2039	B2039 Replace coiling doors	2.0 - EA	20236.8	IN - Beyond Rated Life	Priority 4	2024	40,474

Item	Description
B2039 Other Doors & Entrances	B2039 12' to 14' X 18' Steel Coiling Overhead Door
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	15
Location	Parking Entry

OBSERVATIONS/COMMENTS:

Periodic maintenance will be required for the skylights.

COST SUMMARY:

Type	Year	Total Expenditures
B20 Exterior Enclosure	2015	\$89,229
B20 Exterior Enclosure	2020	\$134,760
B20 Exterior Enclosure	2024	\$81,319

B30 ROOFING

Item	Description
B3011 Roof Finishes	B3011 TPO Roofing
Condition	Fair
Qty / UOM	250 / SF
RUL (years)	5
Location	6th floor, Secretary of State building

OBSERVATIONS/COMMENTS:

Emulsion roofing with a ten-year guarantee was applied in 2010.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B3011	B3011 Complete tear off and replacement and all flashings	250.0 - SF	1806.4	IN - Beyond Rated Life	Priority 3	2020	451,589

Item	Description
B3011 Roof Finishes	B3011 TPO Roofing
Condition	Good
Qty / UOM	855 / SQ
RUL (years)	15
Location	5th floor roof

OBSERVATIONS/COMMENTS:

This TPO roofing was replaced in 2010.

Item	Description
B3011 Roof Finishes	B3011 Single Ply PVC with rock ballast & pavers
Condition	Poor - Fair
Qty / UOM	145 / SQ
RUL (years)	0
Location	Archives, 6th floor roof

OBSERVATIONS/COMMENTS:

This roof is original, and there have been several reports of leaks, some significant. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B3011	B3011 Complete roof tear off and replacement of all flashings	145.0 - SQ	2790.0	IN - Beyond Rated Life	Priority 1	2015	404,550

Item	Description
B3011 Roof Finishes	B3011 Copper Panels (copper roofing, over 10 SQ, 18 oz)
Condition	Fair - Good
Qty / UOM	175 / SQ
RUL (years)	40
Location	6th floor museum / archives

OBSERVATIONS/COMMENTS:

The copper panel roofing is original.

Item	Description
B3011 Roof Finishes	B3011 Single Ply EPDM Fully Adhered 60 Mills, Including Demo
Condition	Poor - Fair
Qty / UOM	70 / SQ
RUL (years)	0
Location	Patios/decks

OBSERVATIONS/COMMENTS:

Several areas are leaking on the deck and patio areas. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B3011	B3011 Replace waterproofing at decks & patios	70.0 - SQ	1660.7	IN - Beyond Rated Life	Priority 1	2015	116,251

Item	Description
B3021 Glazed Roof Openings	B3021 Glass Skylight
Condition	Fair - Good
Qty / UOM	96 / SF
RUL (years)	10
Location	6th floor Secretary of State building

OBSERVATIONS/COMMENTS:

Routine maintenance will be required.

COST SUMMARY:

Type	Year	Total Expenditures
B30 Roofing	2015	\$520,801
B30 Roofing	2020	\$451,589

C Interiors Systems

C10 INTERIOR CONSTRUCTION

Item	Description
C1011 Fixed Partitions	C1011 Fabricated Toilet Partitions
Condition	Fair - Good
Qty / UOM	48 / EA
RUL (years)	5
Location	Restrooms Secretary of State

OBSERVATIONS/COMMENTS:

Based on the estimated RUL, replacement is recommended during the reserve period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C1011	C1031 Replace toilet partitions	48.0 - EA	2328.7	IN - Beyond Rated Life	Priority 4	2020	111,779

Item	Description
C1011 Fixed Partitions	C1011 Fabricated Toilet Partitions
Condition	Fair - Good
Qty / UOM	48 / EA
RUL (years)	5
Location	Restrooms, Archives & Museum

OBSERVATIONS/COMMENTS:

Based on estimated RUL, replacement is recommended during the reserve period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C1011	C1031 Replace toilet partitions	48.0 - EA	2328.7	IN - Beyond Rated Life	Priority 4	2020	111,779

Item	Description
C1021 Interior Doors	C1021 Sliding Steel Doors
Condition	Fair - Good
Qty / UOM	5 / EA
RUL (years)	0
Location	Entry to Archives

OBSERVATIONS/COMMENTS:

Costs have been provided to install electric controls, which open the doors after an emergency closure.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C1021	C1021 Provide electric re-opening controls	5.0 - EA	2370.9	IN - Reliability	Priority 2	2015	11,854

Item	Description
C1021 Interior Doors	C1021 Flush Steel Painted Door
Condition	Fair - Good
Qty / UOM	35 / EA
RUL (years)	10
Location	Interiors

OBSERVATIONS/COMMENTS:

The doors are functioning adequately.

Item	Description
C1021 Interior Doors	Coiling Counter Door, Stainless Steel, 8' to 10' Wide X 4' High
Condition	Fair - Good
Qty / UOM	22 / EA
RUL (years)	20
Location	Secretary of State public counters

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
C1021 Interior Doors	C1021 Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware
Condition	Fair - Good
Qty / UOM	18 / EA
RUL (years)	4
Location	Museum

OBSERVATIONS/COMMENTS:

Based on RUL, replacement is recommended during the reserve period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C1021	C1021 Replace doors	18.0 - EA	2403.1	IN - Beyond Rated Life	Priority 3	2019	43,256

Item	Description
C1021 Interior Doors	C1021 Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware
Condition	Fair - Good
Qty / UOM	160 / EA
RUL (years)	4
Location	Secretary of State

OBSERVATIONS/COMMENTS:

Based on RUL, replacement is recommended during the reserve period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C1021	C1021 Replace doors	160.0 - EA	2403.1	IN - Beyond Rated Life	Priority 3	2019	384,499

Item	Description
C1021 Interior Doors	C1021 Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware
Condition	Fair - Good
Qty / UOM	34 / EA
RUL (years)	10
Location	Archives

OBSERVATIONS/COMMENTS:

No further action is recommended.

COST SUMMARY:

Type	Year	Total Expenditures
C10 Interior Construction	2015	\$11,854
C10 Interior Construction	2019	\$427,755
C10 Interior Construction	2020	\$223,557

C30 INTERIOR FINISHES

Item	Description
C3012 Wall Finishes to Interior Walls	C3012 Paint Interior Walls, Drywall
Condition	Fair - Good
Qty / UOM	30000 / SF
RUL (years)	6
Location	Secretary of State portion

OBSERVATIONS/COMMENTS:

Periodic painting will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3012	C3012 Paint walls	30,000.0 - SF	2.1	IN - Appearance	Priority 4	2021	63,984

Item	Description
C3012 Wall Finishes to Interior Walls	C3012 Paint Interior Walls, Drywall
Condition	Fair - Good
Qty / UOM	20000 / SF
RUL (years)	8
Location	Archives

OBSERVATIONS/COMMENTS:

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

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3012	C3012 Paint walls	20,000.0 - SF	2.1	IN - Appearance	Priority 4	2023	42,656

Item	Description
C3012 Wall Finishes to Interior Walls	C3012 Paint Interior Walls, Drywall
Condition	Fair - Good
Qty / UOM	10000 / SF
RUL (years)	1
Location	Museum

OBSERVATIONS/COMMENTS:

Periodic repainting will be required. Due to its mission, the museum will require interior painting more frequently.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3012	C3012 Paint walls	10,000.0 - SF	2.1	IN - Appearance	Priority 3	2016	21,328
C3012	C3012 Paint walls	10,000.0 - SF	2.1	IN - Appearance	Priority 3	2019	21,328
C3012	C3012 Paint walls	10,000.0 - SF	2.1	IN - Appearance	Priority 3	2022	21,328

Item	Description
C3024 Flooring	C3024 12 x 12 Ceramic Tile
Condition	Fair - Good
Qty / UOM	2700 / SF
RUL (years)	30
Location	Museum

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
C3024 Flooring	C3024 6 x 6 Ceramic Tile
Condition	Poor - Fair
Qty / UOM	10 / CSF
RUL (years)	0
Location	Entry, hallway, and stairs

OBSERVATIONS/COMMENTS:

Periodic replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3024	C3024 Replace broken tile	10.0 - CSF	2312.8	IN - Appearance	Priority 2	2015	23,128

Item	Description
C3024 Flooring	C3024 2x2 Ceramic Tile
Condition	Good
Qty / UOM	24 / CSF
RUL (years)	10
Location	Restrooms, Secretary of State

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
C3024 Flooring	C3024 Vinyl Tile
Condition	Fair
Qty / UOM	2000 / SY
RUL (years)	5
Location	Archives

OBSERVATIONS/COMMENTS:

Periodic replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3024	Replace C3024 Vinyl Tile	2,000.0 - SY	163.1	IN - Appearance	Priority 4	2020	326,199

Item	Description
C3024 Flooring	C3024 Sheet Vinyl
Condition	Fair
Qty / UOM	155 / SY
RUL (years)	5
Location	Museum

OBSERVATIONS/COMMENTS:

Periodic replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3024	C3024 Replace vinyl tile	155.0 - SY	125.8	IN - Appearance	Priority 4	2020	19,496

Item	Description
C3024 Flooring	C3024 Granite Flooring
Condition	Good
Qty / UOM	1440 / SF
RUL (years)	38
Location	Secretary of State's Entry Lobby

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
C3025 Carpeting	C3025 Carpet Tiles - Standard
Condition	Fair
Qty / UOM	25500 / SY
RUL (years)	0
Location	Secretary of State portion

OBSERVATIONS/COMMENTS:

Periodic replacement of the carpet will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3025	C3025 Replace carpet tile	25,500.0 - SY	96.6	IN - Appearance	Priority 2	2015	2,463,443

Item	Description
C3025 Carpeting	C3025 Carpet Tiles - Standard
Condition	Fair
Qty / UOM	5000 / SY
RUL (years)	3
Location	Archives

OBSERVATIONS/COMMENTS:

Periodic replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3025	C3025 Replace carpet	5,000.0 - SY	96.6	IN - Appearance	Priority 3	2018	483,028

Item	Description
C3025 Carpeting	C3025 Carpet Tiles - Standard
Condition	Fair
Qty / UOM	5000 / SY
RUL (years)	0
Location	Museum

OBSERVATIONS/COMMENTS:

Periodic replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3025	C3025 Replace carpet tile	5,000.0 - SY	96.6	IN - Appearance	Priority 2	2015	483,028

Item	Description
C3032 Suspended Ceilings	C3032 Acoustical Ceiling Tile
Condition	Fair - Good
Qty / UOM	23 / CSF
RUL (years)	5
Location	Secretary of State

OBSERVATIONS/COMMENTS:

Periodic finish replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3032	C3032 Replace ceiling tile	23.0 - CSF	1201.6	IN - Appearance	Priority 4	2020	27,636

Item	Description
C3032 Suspended Ceilings	C3032 Acoustical Ceiling Tile
Condition	Fair - Good
Qty / UOM	450 / CSF
RUL (years)	5
Location	Archives

OBSERVATIONS/COMMENTS:

Periodic replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3032	Replace C3032 Acoustical Ceiling Tile	450.0 - CSF	1201.6	IN - Appearance	Priority 4	2020	540,702

Item	Description
C3032 Suspended Ceilings	C3032 Acoustical Ceiling Tile
Condition	Fair - Good
Qty / UOM	25 / SF
RUL (years)	16
Location	Museum

OBSERVATIONS/COMMENTS:

No further action is recommended.

COST SUMMARY:

Type	Year	Total Expenditures
C30 Interior Finishes	2015	\$2,969,599
C30 Interior Finishes	2016	\$21,328
C30 Interior Finishes	2018	\$483,028
C30 Interior Finishes	2019	\$21,328
C30 Interior Finishes	2020	\$914,033
C30 Interior Finishes	2021	\$63,984
C30 Interior Finishes	2022	\$21,328
C30 Interior Finishes	2023	\$42,656

D Services Systems

D10 CONVEYING SYSTEMS

Item	Description
D1011 Passenger Elevators	D1011 Hydraulic Car 3
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	6
Location	Hydraulic Car 3

OBSERVATIONS/COMMENTS:

Car three is a single hydraulic elevator and serves floors one through four. Reference the full report in the appendices for repair and replacement needs.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1011	Replace D1011 Hydraulic Car 3	1.0 - EA	172900.0	FN - Modernization	Priority 4	2021	172,900

Item	Description
D1011 Passenger Elevators	D1011 Kitchen Car 14
Condition	Good
Qty / UOM	1 / EA
RUL (years)	6
Location	Kitchen Car 14

OBSERVATIONS/COMMENTS:

Car 14 is a "back of house" kitchen elevator. Reference the full report in the appendices for repair and replacement needs.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1011	Replace D1011 Kitchen Car 14	1.0 - EA	172900.0	IN - Beyond Rated Life	Priority 3	2021	172,900

Item	Description
D1011 Passenger Elevators	D1011 Passenger Cars 8-13
Condition	Fair
Qty / UOM	6 / EACH
RUL (years)	4
Location	Elevators 8-13 See notes

OBSERVATIONS/COMMENTS:

Cars eight and nine are for the State Archives building and Cars ten-thirteen are for the Secretary of State. Car ten is a special two-stop elevator, that provides secure service from the parking level to the sixth floor. Reference the full report in the appendices.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1011	D1011 Install new hoist ropes on Cars 9, 11 and 13. This should be included in the service contract.	3.0 - EA	15000.0	OP - Maintenance	Priority 2	2015	45,000
D1011	D1011 Perform five year full load test on traction cars 8, 9, 11 to 13	5.0 - EA	3000.0	CC - Building Code	Priority 1	2015	15,000
D1011	D1011 Modernize Passenger Cars 8 and 9	2.0 - EA	391300.0	FN - Modernization	Priority 2	2016	782,600
D1011	D1011 Modernize Passenger Cars 11, 12 and 13	3.0 - EA	409500.0	FN - Modernization	Priority 2	2016	1,228,500
D1011	D1011 Modernize Secretary of State Car 10	1.0 - EA	354900.0	FN - Modernization	Priority 2	2016	354,900
D1011	Replace D1011 Passenger Cars 8-13	6.0 - EACH	3321500.0	IN - Beyond Rated Life	Priority 3	2019	19,929,000

Item	Description
D1011 Passenger Elevators	D1011 Museum Cars 1,2
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	6
Location	Museum

OBSERVATIONS/COMMENTS:

Elevators 1-2 are in the museum and work together as a duplex system. Reference the full report in the appendices.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1011	D1011 Perform five year full load test.	4.0 - EA	3000.0	CC - Building Code	Priority 1	2015	12,000
D1011	Replace D1011 Museum Cars 1,2	2.0 - EA	391300.0	FN - Modernization	Priority 4	2021	782,600

Item	Description
D1012 Freight Elevators	D1012 Freight Cars 4-7
Condition	Fair
Qty / UOM	4 / EA
RUL (years)	15
Location	Freight Cars 4-7 see notes

OBSERVATIONS/COMMENTS:

Cars four, five, six, and seven are freight elevators, and provide service from the loading dock for the Museum and State Archives. Car four has a 16,000 lb. capacity, cars five and six have a 5000 lb. capacity, and car seven has a 4,000 lb. capacity. Reference the full report in the appendices.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1012	D1012 Perform five year full load test.	4.0 - EA	3000.0	CC - Building Code	Priority 1	2015	12,000
D1012	D1012 Modernize Freight Elevator 7	1.0 - EA	354900.0	FN - Modernization	Priority 2	2016	354,900
D1012	D1012 Modernize Freight Elevators 5 and 6	1.0 - EA	418600.0	FN - Modernization	Priority 4	2021	418,600
D1012	D1012 Modernize Freight Elevator 4	1.0 - EA	455000.0	FN - Modernization	Priority 4	2022	455,000

COST SUMMARY:

Type	Year	Total Expenditures
D10 Conveying Systems	2015	\$84,000
D10 Conveying Systems	2016	\$2,720,900
D10 Conveying Systems	2019	\$19,929,000
D10 Conveying Systems	2021	\$1,547,000
D10 Conveying Systems	2022	\$455,000

D20 PLUMBING

Item	Description
D2011 Water Closets	D2011 Commercial Water Closet - 1.6 GPF
Condition	Fair
Qty / UOM	11 / EA
RUL (years)	10
Location	Throughout Facility
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

The water closets have been fitted with automatic sensors.

Item	Description
D2011 Water Closets	D2011 Commercial Water Closet - Standard
Condition	Fair
Qty / UOM	70 / EA
RUL (years)	10
Location	Throughout Facility
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

Manual flush valves were observed on the majority of plumbing fixtures. Automatic flush valves are recommended to improve hygiene.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2011	D2011 Install automatic flush valves on toilets	70.0 - EA	1304.0	OP - Energy	Priority 2	2015	91,279

Item	Description
D2012 Urinals	D2012 Urinal - Standard
Condition	Fair
Qty / UOM	24 / EA
RUL (years)	10
Location	Throughout Facility
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

Manual flush valves were observed on the majority of plumbing fixtures. Automatic flush valves are recommended to improve hygiene.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2012	D2012 Install automatic flush valves on urinals	20.0 - EA	2440.7	OP - Energy	Priority 2	2015	48,813

Item	Description
D2013 Lavatories	D2013 Counter Top Sink and Faucet
Condition	Fair
Qty / UOM	12 / EA
RUL (years)	10
Location	Restrooms

OBSERVATIONS/COMMENTS:

The sink faucets have been fitted with automatic sensors.

Item	Description
D2013 Lavatories	D2013 Counter Top Sink and Faucet - Standard
Condition	Fair
Qty / UOM	90 / EA
RUL (years)	10
Location	Restrooms

OBSERVATIONS/COMMENTS:

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

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2013	D2013 Install automatic faucets with motion sensors	90.0 - EA	1667.8	OP - Energy	Priority 2	2015	150,102

COST SUMMARY:

Type	Year	Total Expenditures
D20 Plumbing	2015	\$290,195

D30 HVAC

Energy Supply	
Item	Description
Fuel Oil Type	N/A
Fuel Gas Type	N/A
Solid Fuel Type	N/A
District Heat Type	N/A
District Cooling Type	N/A
Solar Thermal	N/A
Fuel Tank Type	N/A
Fuel Tank Size (gallons)	N/A
Fuel Tank Location	N/A
Gas Meter Location	N/A
Electrical Meter Location	Main Electrical Room
Water Meter Location	Exterior of building above ground in fenced off area.

Item	Description
D3021 Boilers	D3020 Water Boiler, Electric 100Kw
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	10
Location	Mechanical Room South

OBSERVATIONS/COMMENTS:

The HVAC boilers serve the Archives Building, are performing adequately, and appear to be well maintained.

Item	Description
D3022.1 Circulating Pumps	D3022 HVAC Condenser Water - 25 HP
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	8
Location	Mechanical Room South

OBSERVATIONS/COMMENTS:

The 25-hp heating water distribution pumps and associated motors appear to be original and in functional condition, nearing 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 Condenser Water - 25 HP	2.0 - EA	24794.2	IN - Beyond Rated Life	Priority 4	2023	49,588

Item	Description
D3022.1 Circulating Pumps	D3022 HVAC Heating Water Circulation Pumps - 25 HP
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	8
Location	Mechanical Room North

OBSERVATIONS/COMMENTS:

The 25-hp heating water distribution pumps and associated motors appear to be original, and in functional condition. Replacement is recommended, due to beyond rated life.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3022	Replace D3022 HVAC Heating Water Circulation Pumps - 25 HP	2.0 - EA	24794.2	IN - Beyond Rated Life	Priority 4	2023	49,588

Item	Description
D3022.1 Circulating Pumps	D3022 HVAC Chilled Water Circulation Pumps 40 HP
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	10
Location	Mechanical Room North

OBSERVATIONS/COMMENTS:

The two 40-hp chilled water distribution pumps and associated motors appear to be original and in functional condition. One pump is currently being repaired. A shared variable frequency drive (VFD) is utilized.

Item	Description
D3022.1 Circulating Pumps	D3022.1 Condensate Return System 5 HP
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	5
Location	Mechanical Room North

OBSERVATIONS/COMMENTS:

The condensate return station is reportedly functioning adequately. Replacement is recommended, due to beyond rated life.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3022	Replace D3022.1 Condensate Return System 5 HP	2.0 - EA	18877.3	IN - Beyond Rated Life	Priority 3	2020	37,755

Item	Description
D3031.1 Chillers	D3031.1 Chiller, Water Cooled, 160 Ton, Turbo Core
Condition	Good
Qty / UOM	1 / EA
RUL (years)	15
Location	Mechanical Room South

OBSERVATIONS/COMMENTS:

The chiller was upgraded in 2009 with new Turbo-Core Compressors and controls and is performing adequately and appears to be well maintained.

Item	Description
D3031.1 Chillers	D3031.1 Chiller, Water Cooled, 160 Ton
Condition	Poor
Qty / UOM	1 / EA
RUL (years)	0
Location	Mechanical Room South

OBSERVATIONS/COMMENTS:

The chiller was upgraded in 2009, but had a catastrophic failure of the turbo core compressor. The chiller is currently unusable. Replacement is required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3031	Replace D3031.1 Chiller, Water Cooled, 160 Ton	1.0 - EA	422344.0	IN - Reliability	Priority 1	2015	422,344

Item	Description
D3031.2 Cooling Towers	D3031.2 Cooling Tower, Galvanized Steel, 170 Ton
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	2
Location	Rooftop 4th Floor

OBSERVATIONS/COMMENTS:

The cooling towers are original to the 1995 construction, reportedly still functioning and performing adequately, with no major signs of deterioration on the exterior encasements of the units. A comprehensive refurbishment project is recommended, to maintain the performance and prolong the lifespan of the cooling towers.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3031	D3031.2 Renovate Cooling Tower, Galvanized Steel, 170 Ton	2.0 - EA	187016.8	IN - Beyond Rated Life	Priority 2	2017	374,034

Item	Description
D3032 Direct Expansion Systems	D3032 Roof Mounted Condenser 20-Ton
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	0
Location	Rooftop Fifth Floor

OBSERVATIONS/COMMENTS:

Direct expansion (DX) compressors with 20 Kw heat strips for media vault. Condenser replacement is recommended, due to beyond rated life.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3032	Replace D3032 Roof Mounted Condenser 20-Ton	2.0 - EA	44857.4	IN - Beyond Rated Life	Priority 1	2015	89,715

Item	Description
D3032 Direct Expansion Systems	D3032 Condenser 6-Ton
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	0
Location	Rooftop fifth Floor

OBSERVATIONS/COMMENTS:

DX compressors with 5 Kw heat strips for walk-in freezer. Condenser replacement is recommended, due to beyond rated life.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3032	Replace D3032 Condenser 6-Ton	2.0 - EA	17348.0	IN - Beyond Rated Life	Priority 1	2015	34,696

Item	Description
D3032 Direct Expansion Systems	D3032 Roof Mounted Condenser 10-Ton
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	0
Location	Rooftop Fifth Floor

OBSERVATIONS/COMMENTS:

DX compressors with 10 Kw heat strips for film vault. Condenser replacement is recommended, due to beyond rated life.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3032	Replace D3032 Roof Mounted Condenser 10-Ton	2.0 - EA	20945.1	IN - Beyond Rated Life	Priority 1	2015	41,890

Item	Description
D3032 Direct Expansion Systems	D3032 Cafe Condenser 15-Ton
Condition	Good
Qty / UOM	2 / EA
RUL (years)	5
Location	Cafe Coolers and Freezers

OBSERVATIONS/COMMENTS:

DX compressors for Café coolers and freezers. Condenser replacement is recommended, due to beyond rated life.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3032	Replace D3032 Cafe Condenser 15-Ton	2.0 - EA	45608.7	IN - Beyond Rated Life	Priority 3	2020	91,217

Item	Description
D3041.1 Air Handling Units	D3041 Interior AHU 28,220 CFM
Condition	Fair
Qty / UOM	5 / EA
RUL (years)	15
Location	AH Stacks Basement

OBSERVATIONS/COMMENTS:

The stacks area is heated and cooled by five interior air handling units, which feed VAV boxes located in each space. The AHUs are provided with heated and chilled water from a separate system located in mechanical room south, and range from 600 CFM to 28,200 CFM nominal capacity. Fan motor replacement is recommended, due to beyond rated life.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	D3041 Replace fan motors	5.0 - EA	2000.0	IN - Beyond Rated Life	Priority 3	2020	10,000

Item	Description
D3041.1 Air Handling Units	D3041 Interior AHU 12,200 CFM w/ VFD
Condition	Fair
Qty / UOM	3 / EA
RUL (years)	15
Location	Basement

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by three interior air handling units, which feed VAV boxes located in each space. The AHUs are provided with heated and chilled water from the central system, and range from 8,940 CFM to 12,400 CFM nominal capacity. Fan motor replacement is recommended, due to beyond rated life.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	D3041 Replace fan motors	3.0 - EA	2000.0	IN - Beyond Rated Life	Priority 3	2020	6,000

Item	Description
D3041.1 Air Handling Units	D3041 Rooftop AHU 9K-40K CFM w/ VFD
Condition	Fair
Qty / UOM	12 / EA
RUL (years)	5
Location	Rooftop Fifth Floor

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by four rooftop packaged air handling units, which feed VAV boxes located in each space. The AHUs are provided with chilled water from the central system, and range from 42,000 CFM to 48,000 CFM nominal capacity, with VFD fan motors. Replacement is recommended, due to beyond rated life.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace D3041 Rooftop AHU 9K-40K CFM w/ VFD	12.0 - EA	263584.3	IN - Beyond Rated Life	Priority 3	2020	3,163,012

Item	Description
D3041.1 Air Handling Units	D3041 Rooftop AHU 2900 - 20,000 CFM
Condition	Fair
Qty / UOM	4 / EA
RUL (years)	5
Location	Rooftop Fifth Floor

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by four rooftop packaged air handling units which feed VAV boxes located in each space. The AHUs are provided with chilled water from the central system and range from 2900 CFM to 18000 CFM nominal capacity. These units are not VFD driven and should be upgraded. Replacement is recommended due to beyond rated life.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace D3041 Rooftop AHU 2900 - 20,000 CFM	4.0 - EA	25330.0	IN - Beyond Rated Life	Priority 3	2020	101,320

Item	Description
D3041.1 Air Handling Units	D3041 Interior Fan Coil Units
Condition	Fair
Qty / UOM	18 / EA
RUL (years)	15
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by 18 interior fan coil units, and provided with heated and chilled water from the central system. Motors are recommended to be replaced.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	D3041 Replace fan motors	18.0 - EA	2000.0	IN - Beyond Rated Life	Priority 3	2020	36,000

Item	Description
D3041.2 Terminal Units VAV	D3041 VAV Boxes
Condition	Fair
Qty / UOM	382 / EA
RUL (years)	15
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by variable air volume terminals (VAVs), supplied with conditioned air from the central system air handlers. Building staff reports that the vast majority of VAVs are most likely original to the 1995 construction.

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan 26,000 CFM
Condition	Fair - Good
Qty / UOM	3 / EA
RUL (years)	10
Location	Basement

OBSERVATIONS/COMMENTS:

Most of the miscellaneous rooftop exhaust fans are original to the 1995 construction and appear to be in working condition.

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan 40,000 CFM
Condition	Fair - Good
Qty / UOM	4 / EA
RUL (years)	10
Location	Rooftop

OBSERVATIONS/COMMENTS:

Most of the miscellaneous rooftop exhaust fans are original to the 1995 construction, and appear to be in working condition.

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan < 15,000 CFM
Condition	Fair
Qty / UOM	30 / EA
RUL (years)	10
Location	Rooftop

OBSERVATIONS/COMMENTS:

Most of the miscellaneous rooftop exhaust fans are original to the 1995 construction, and appear to be in working condition.

Item	Description
D3043 Steam Distribution Systems	D3043 Steam-to-Water Heat Exchanger
Condition	Fair - Good
Qty / UOM	4 / EA
RUL (years)	3
Location	Mechanical Room North

OBSERVATIONS/COMMENTS:

The steam-to-hot water heat exchangers appear to be original, and are in functional condition. They are nearing the end of their lifecycle, and replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3043	Replace D3043 Steam-to-Water Heat Exchanger	4.0 - EA	26297.8	IN - Beyond Rated Life	Priority 2	2018	105,191

Item	Description
D3043 Steam Distribution Systems	D3043 Steam to Water Heat Exchanger
Condition	Poor - Fair
Qty / UOM	2 / EA
RUL (years)	0
Location	Mechanical Room North

OBSERVATIONS/COMMENTS:

The steam-to-domestic water heat exchangers appear to be original, and in functional condition with pneumatic controls. Due to beyond rated life, heat exchanger is recommended to be replaced.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3043	Replace D3043 Steam to Water Heat Exchanger	2.0 - EA	26297.8	IN - Beyond Rated Life	Priority 1	2015	52,596

Item	Description
D3047 Glycol Distribution Systems	D3047 Glycol Chill Water - 25HP
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	5
Location	Mechanical Room South

OBSERVATIONS/COMMENTS:

The glycol condensate return station is reportedly functioning adequately, but due to beyond rated life, replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3047	Replace D3047 Glycol Chill Water - 25HP	2.0 - EA	21080.0	IN - Beyond Rated Life	Priority 3	2020	42,160

Item	Description
D3052 Package Units	D3052 Computer/Sever Room AC
Condition	Good
Qty / UOM	531049 / EA
RUL (years)	10
Location	Computer Room

OBSERVATIONS/COMMENTS:

The main server room has five dedicated air conditioning units that appear to be newer than the 1995 construction. The units are supplied with chilled water from the central plant.

Item	Description
D3068 Building Automation Systems	D3068 Pneumatic HVAC Controls
Condition	Poor
Qty / UOM	2 / EA
RUL (years)	0
Location	Mechanical Room North

OBSERVATIONS/COMMENTS:

The building control system is an antiquated pneumatic system, relying on simple two-input controllers for two heat exchangers. It should be upgraded or replaced, and new controls added to the existing web-based electronic DDC platform.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3068	Replace D3068 Pneumatic HVAC Controls	2.0 - EA	42480.0	FN - Modernization	Priority 1	2015	84,960

Item	Description
D3068 Building Automation Systems	D3068 DDC Controls
Condition	Good
Qty / UOM	542000 / SF
RUL (years)	15
Location	Maintenance Administration Offices

OBSERVATIONS/COMMENTS:

The Direct Digital Control (DDC) system was upgraded in 2014.

COST SUMMARY:

Type	Year	Total Expenditures
D30 HVAC	2015	\$726,201
D30 HVAC	2017	\$374,034
D30 HVAC	2018	\$105,191
D30 HVAC	2020	\$3,487,464
D30 HVAC	2023	\$99,177

D40 FIRE PROTECTION SYSTEMS

Fire and Life Safety System	
Item	Description
Fire Alarm System Components Present	
Smoke detectors	Yes
Pull stations	Yes
Audible alarms	Yes
Strobe lights	Yes
Central fire alarm panel	Yes
Annunciator panel	Yes
Smoke Detectors Power Supply	Hardwired Electric
Carbon Monoxide Detectors	Yes
Heat Detector	Yes
Central Fire Alarm Panel Location	Electrical Room
Annunciator Panel Location	First floor south entrance adjacent to DGS offices.
Fire Extinguishers	Yes
Fire Extinguisher Inspection Date	N/A
Distance to Nearest Fire Hydrant (ft)	N/A
Illuminated Exit Signs	N/A
Kitchen Suppression Systems	Yes
Halon Gas Systems	Yes
Smoke Evacuation Systems	No
Fire-rated Stairwells	Yes
Fire-rated Stairwell Finish	N/A
Stairwell Discharge	Exterior of the building at Grade
Stairwell Pressurized	No
Fire-Rated Doors Observed	Yes
Location of Fire-Rated Doors	Other
Fire Alarm Service Company	Quality Sound
Date of Last Fire Alarm Service	December 1, 2014
Are the individual office unit fire alarm systems monitored?	Yes
Are the common area fire alarm systems monitored?	Yes
Types of Common Areas Monitored	Entire building
Fire Alarm Monitoring Company	Quality Sound

Item	Description
D4011 Sprinkler Water Supply	D4011 Wet-Pipe Sprinkler System
Condition	Fair
Qty / UOM	511000 / SF
RUL (years)	0
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Only the Café, media vault, and film vault are covered by fire suppression . Protection for the building is wet-pipe hose cabinets, dry standpipes, and an alarm system (with panel replaced in 2012). The fire pump is a 50-hp diesel 750 GPM at 100 psi. Sprinkler heads are current, and all fire extinguishers were inspected in October 2014. The Café has an ancillary fire suppression system for the kitchen hoods, installed in 2014. The film and media vaults have a halon system. The installation of a facility-wide fire suppression retrofit is recommended as a life-safety improvement.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D4011	D4011 Install facility-wide sprinkler system	511,000.0 - SF	8.3	CC - Life Safety	Priority 1	2015	4,220,860

Item	Description
D4011 Sprinkler Water Supply	D4011 Sprinkler Heads
Condition	Good
Qty / UOM	20049 / SF
RUL (years)	15
Location	Cafe, media vault and film vault

OBSERVATIONS/COMMENTS:

No further action is recommended.

COST SUMMARY:

Type	Year	Total Expenditures
D40 Fire Protection Systems	2015	\$4,220,860

D50 ELECTRICAL SYSTEMS

Item	Description
D5012 Low Tension Service & Dist.	D5010 Switchgear, Mainframe, 1200 Amps
Condition	Fair
Qty / UOM	3 / EA
RUL (years)	15
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The main switchgear is original Square D equipment. The electrical service is reportedly adequate for the facility's needs and the switchgear is in working condition. A full infrared scan, cleaning, and tightening effort was performed in 2014.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Breaker Panel 225 Amps, 30 Circuits
Condition	Fair
Qty / UOM	100 / EA
RUL (years)	15
Location	Electrical Riser Room

OBSERVATIONS/COMMENTS:

The majority of the electrical panels are original 1995 Square D panels.

Item	Description
D5012 Low Tension Service & Dist.	D5010 Switchgear, Mainframe, >1600 Amps
Condition	Fair
Qty / UOM	9 / EA
RUL (years)	15
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The main switchgear is original Square D equipment. The electrical service is reportedly adequate for the facility's needs, and the switchgear is in working condition. A full infrared scan, cleaning, and tightening effort was performed in 2014.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Secondary Dry Transformer 45 kVA
Condition	Fair
Qty / UOM	10 / EA
RUL (years)	15
Location	Electrical Riser Room

OBSERVATIONS/COMMENTS:

The majority of the step-down transformers are original.

Item	Description
D5012 Low Tension Service & Dist.	D5010 Switchgear, Mainframe, >1000 Amps
Condition	Fair
Qty / UOM	5 / EA
RUL (years)	15
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The main switchgear is original Square D equipment. The electrical service is reportedly adequate for the facility's needs, and the switchgear is in working condition. A full infrared scan, cleaning, and tightening effort was performed in 2014.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Secondary Dry Transformer 75 kVA
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	15
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The majority of the step-down transformers are original.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Secondary Dry Transformer 35 kVA
Condition	Fair
Qty / UOM	20 / EA
RUL (years)	15
Location	Electrical Room

OBSERVATIONS/COMMENTS:

The majority of the step-down transformers are original.

Item	Description
D5022 Lighting Equipment	D5022 Exterior lighting
Condition	Poor - Fair
Qty / UOM	10 / EA
RUL (years)	0
Location	Exterior Courtyard

OBSERVATIONS/COMMENTS:

Courtyard lighting fixtures are damaged and not functional. Legacy fixtures and parts are unavailable. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5022	Replace D5022 Exterior lighting	10.0 - EA	2232.0	IN - Beyond Rated Life	Priority 1	2015	22,320

Item	Description
D5022 Lighting Equipment	D5022 Lighting Equipment
Condition	Good
Qty / UOM	1 / EA
RUL (years)	24
Location	

OBSERVATIONS/COMMENTS:

The lighting system is adequate and functioning properly. No action is needed.

Item	Description
D5037 Fire Alarm Systems	D5037 Fire Alarm Panel
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	15
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The fire alarm panel was replaced on December 1, 2014, along with some minor upgrades to the alarm system.

Item	Description
D5037 Fire Alarm Systems	D5037 Fire Alarm System
Condition	Fair
Qty / UOM	531049 / SF
RUL (years)	15
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The fire alarm system was installed on December 1, 2014. It appears adequate and comprehensive, with strobes and an adequate number of devices placed throughout the spaces.

Item	Description
D5092 Emergency Light & Power Systems	D5092 Emergency Generator 1750 kW
Condition	Good
Qty / UOM	1 / EA
RUL (years)	15
Location	Emergency Generator Room

OBSERVATIONS/COMMENTS:

The 1750 KW emergency generator is located on the lower level emergency generator room, with batteries replaced in 2014. It is original to the building construction, and appears to be in working condition. Upgrades to the secondary containment are recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5092	D5092 Add/improve secondary containment for day tank	1.0 - EA	3500.0	EN - Air/ Water Quality	Priority 1	2015	3,500

Item	Description
D5092 Emergency Light & Power Systems	D5092 Emergency Transfer Switch
Condition	Good
Qty / UOM	1 / EA
RUL (years)	15
Location	Electrical Riser Room

OBSERVATIONS/COMMENTS:

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

COST SUMMARY:

Type	Year	Total Expenditures
D50 Electrical Systems	2015	\$25,820

E Equipment & Furnishing Systems

E10 EQUIPMENT

Item	Description
E1097 Window Washing Equipment	E1090 Window Washing Equipment
Condition	Poor
Qty / UOM	1 /
RUL (years)	0
Location	Roofs

OBSERVATIONS/COMMENTS:

The existing window washing system does not comply with current code, nor meet current California OSHA requirements. There is currently no way to wash the windows, nor to do maintenance that requires the use of the swing stages. Installation of a compliant system is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
E1097	Replace E1090 Window Washing Equipment	1.0 -	575000.0	IN - Beyond Rated Life	Priority 2	2015	575,000

Item	Description
E1099 Other Equipment	B2031 Install Auto Door Openers
Condition	Fair
Qty / UOM	8 /
RUL (years)	0
Location	At entries

OBSERVATIONS/COMMENTS:

Recommend the coiling doors be fitted with automatic door openers.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
E1099	B2031 Install Auto Door Openers	8.0 -	2.5	CC - Accessibility	Priority 1	2015	20

COST SUMMARY:

Type	Year	Total Expenditures
E10 Equipment	2015	\$575,020

E20 FURNISHINGS

Common Area Fixtures Furnishings and Equipment (FF&E)	
Item	Description
Dining Room Chairs Present	N/A
Desks Present	N/A
Tables Present	N/A
Entertainment Center Present	N/A
Sofa Present	N/A
Living Room Chairs Present	N/A
Exercise Equipment Present	N/A
Fixed Artwork Present	N/A
Fixed Casework Present	N/A
Blinds and Other Window Treatments Present	N/A

Item	Description
E2012 Fixed Casework	E2012 Counter Top and Sink
Condition	Poor - Fair
Qty / UOM	15 / EA
RUL (years)	0
Location	Location 34

OBSERVATIONS/COMMENTS:

Sink cabinets in the break rooms do not comply with accessibility standards. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
E2012	E2010 Replace sink cabinets	15.0 - EA	4925.3	CC - Accessibility	Priority 1	2015	73,879

COST SUMMARY:

Type	Year	Total Expenditures
E20 Furnishings	2015	\$73,879

G Building Sitework Systems

G20 SITE IMPROVEMENTS

Site Information	
Item	Description
Main Ingress and Egress	11th Street
Access from	NE
Additional Entrances	11th Street
Access from	NE
Parking Count: Open lot	N/A
Parking Count: Sheltered by carports	N/A
Parking Count: Private garages	N/A
Parking Count: Subterranean garage	166
Parking Count: Freestanding parking structure	N/A
Number of ADA Compliant Spaces	4
Number of ADA Compliant Spaces for Vans	0
Method of obtaining parking count	Point of contact
Property Identification Sign-Primary	Structure mounted
Property Identification Sign- Secondary	Structure mounted
Illuminated Identification Signage	N/A
Building Identification Sign	Yes
Illuminated Sign	N/A
Location of Property ID Sign	Front elevation of building
Trees Present	Yes
Shrubs Present	Yes
Grasses Present	No
Flower beds Present	No
Decorative Rocks Present	Yes
Lava Rocks Present	No
Ponds Present	No
Fountains Present	Yes
Topography	Flat

Item	Description
G2031 Paving & Surfacing	G2031 Crushed Granite
Condition	Fair
Qty / UOM	5000 / SF
RUL (years)	5
Location	Courtyard

OBSERVATIONS/COMMENTS:

Based on RUL, replacement is recommended during the reserve period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
G2031	G2031 Replace uneven surfacing material with something less hazardous	60.0 - SF	100.0	CC - Life Safety	Priority 1	2015	6,000
G2031	G2031 Replace crushed granite	5,000.0 - SF	14.4	IN - Beyond Rated Life	Priority 3	2020	72,044

COST SUMMARY:

Type	Year	Total Expenditures
G20 Site Improvements	2015	\$6,000
G20 Site Improvements	2020	\$72,044

G90 OTHER SITE CONSTRUCTION

Item	Description
G9011 Service Tunnels	G9010 Service Tunnels
Condition	Good
Qty / UOM	100 /
RUL (years)	70
Location	Garage

OBSERVATIONS/COMMENTS:

No further action is recommended.

The weather at the time of the assessment was:

Item	Description
Approximate Outdoor Temperature (degrees F)	58
Weather Conditions	Cloudy
Snow Covering Ground	No
Wind Conditions	Little to no wind

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

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

APPENDIX C: CERTIFICATION

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

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

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

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

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

Prepared By: Kay Vanderhave, Field Observer

Reviewed By: 
Matt Anderson, Program Manager

APPENDIX D: PHOTOS



:- Museum entry



:- Street view



:- Courtyard view from roof



:- Street view



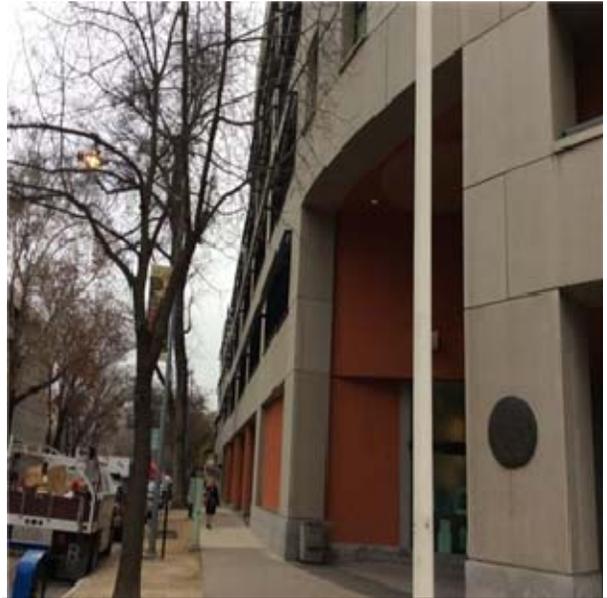
B2011 Stucco and Lath



B2011 Granite Veneer



B2011 Precast veneer panels



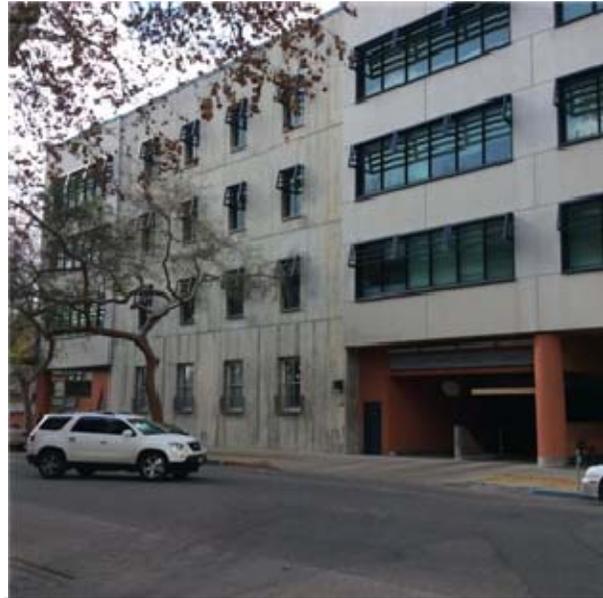
B2011 Precast veneer panels



B2011 2 foot thick poured concrete



B2011 Stucco and Lath:- Partial view of courtyard



B2021 Windows



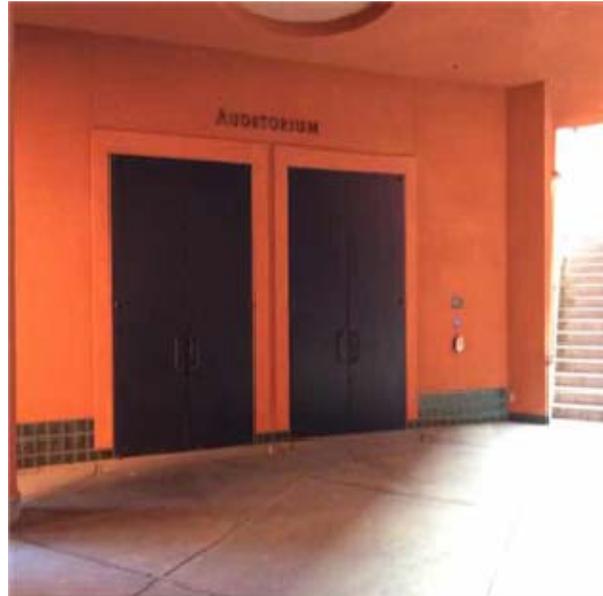
B2031 Glazed Entrance Doors



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



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



B2032 Solid Exterior Doors, 9'



B2032 3'-0" X 7'-0" Steel, Painted, Door



B2039 12' to 14' X 18' Steel Coiling Overhead Door



B2039 Overhead Coiling Door 20'+ wide



B3011 Single Ply EPDM Fully Adhered 60 Mills, Including Demo



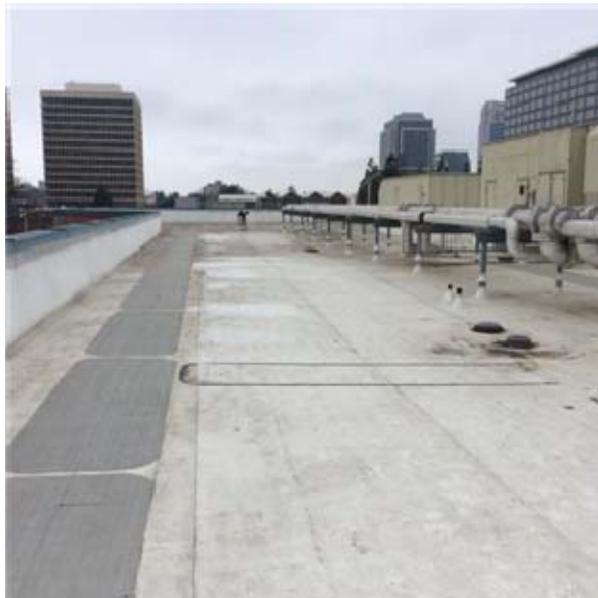
B3011 Single Ply EPDM Fully Adhered 60 Mills, Including Demo



B3011 TPO Roofing



B3011 TPO Roofing



B3011 TPO Roofing



B3011 TPO Roofing



B3011 Single Ply PVC with rock ballast & pavers



B3011 Single Ply PVC with rock ballast & pavers



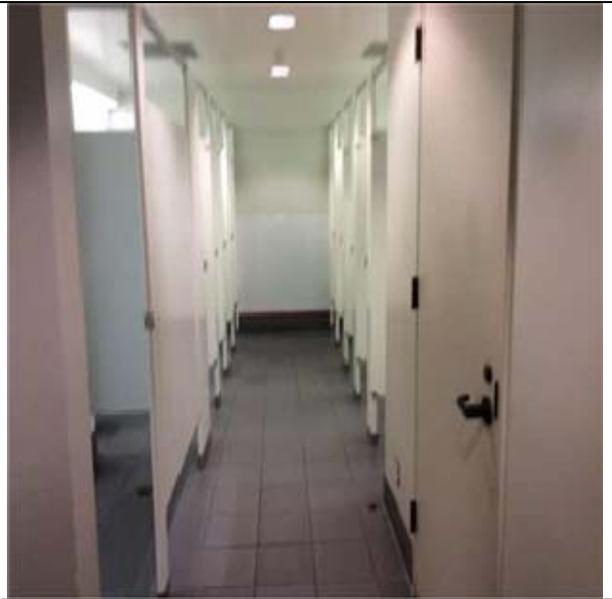
B3011 Single Ply PVC with rock ballast & pavers



B3011 Copper Panels (copper roofing, over 10 SQ, 18 oz)



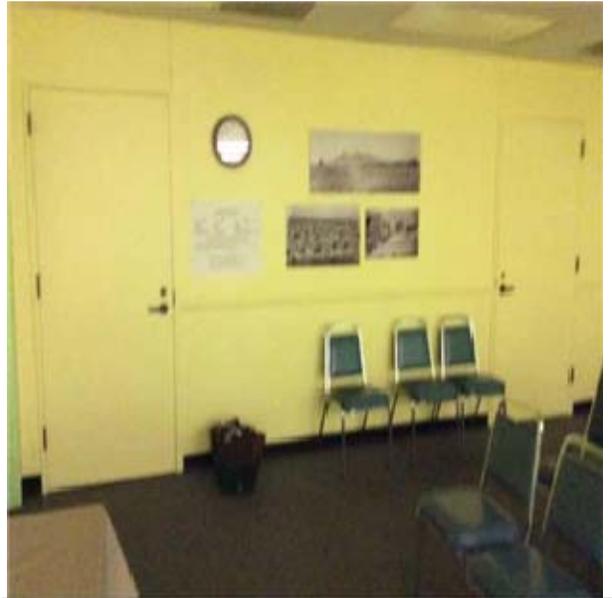
B3021 Glass Skylight



C1011 Fabricated Toilet Partitions



C1011 Fabricated Toilet Partitions



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



C1021 Flush Steel Painted Door



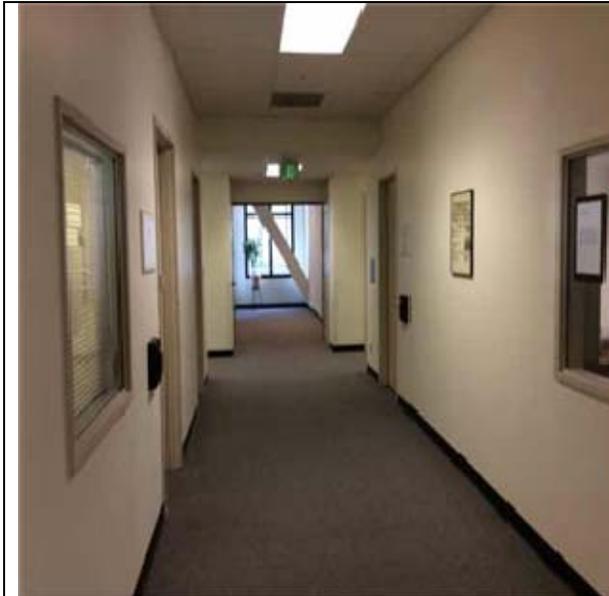
C1021 Sliding Steel Doors



C1021 Sliding Steel Doors



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



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



Coiling Counter Door, Stainless Steel, 8' to 10' Wide X 4' High



C3012 Paint Interior Walls, Drywall



C3024 Granite Flooring



C3024 12 x 12 Ceramic Tile



C3024 2x2 Ceramic Tile



C3024 Sheet Vinyl



C3024 6 x 6 Ceramic Tile



C3032 Acoustical Ceiling Tile



C3032 Acoustical Ceiling Tile



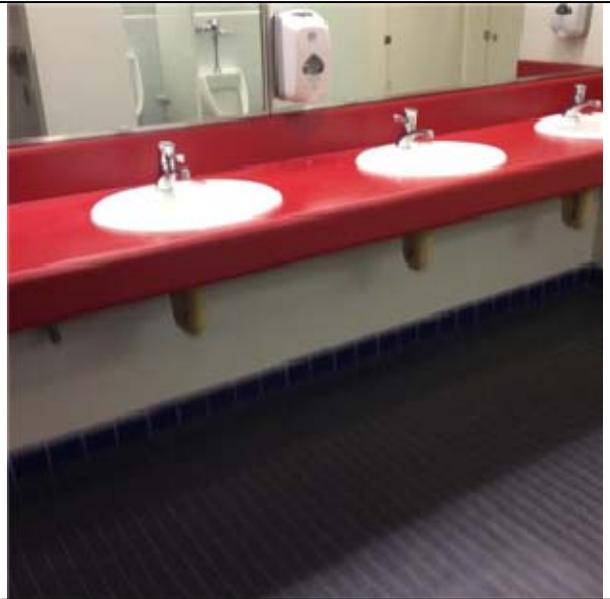
D2011 Commercial Water Closet - 1.6 GPF



D2011 Commercial Water Closet - Standard



D2012 Urinal - Standard



D2013 Counter Top Sink and Faucet - Standard



D2013 Counter Top Sink and Faucet



D3020 Water Boiler, Electric 100Kw



D3022.1 Condensate Return System 5 HP



D3022 HVAC Condenser Water - 25 HP



D3022 HVAC Chilled Water Circulation Pumps 40 HP



D3022 HVAC Heating Water Circulation Pumps - 25 HP



D3031.1 Chiller, Water Cooled, 160 Ton



D3031.1 Chiller, Water Cooled, 160 Ton, Turbo Core



D3031.2 Cooling Tower, Galvanized Steel, 170 Ton



D3032 Roof Mounted Condenser 20-Ton



D3032 Roof Mounted Condenser 10-Ton



D3032 Condenser 6-Ton



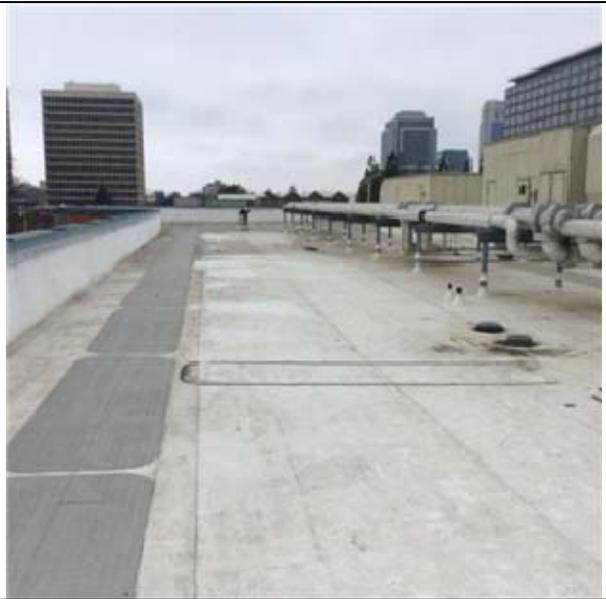
D3032 Cafe Condenser 15-Ton



D3041 Interior AHU 28,220 CFM



D3041 Rooftop AHU 9K-40K CFM w/ VFD



D3041 Rooftop AHU 2900 - 20,000 CFM



D3041 Interior Fan Coil Units



D3041 Interior AHU 12,200 CFM w/ VFD



D3041 VAV Boxes



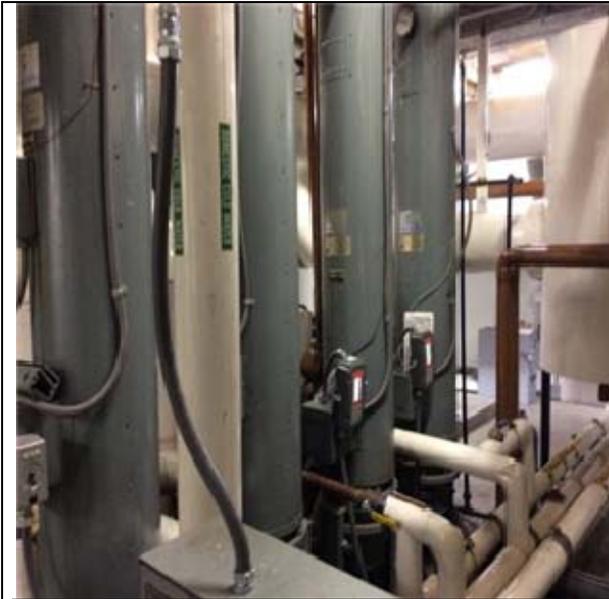
D3042 Exhaust Fan < 15,000 CFM



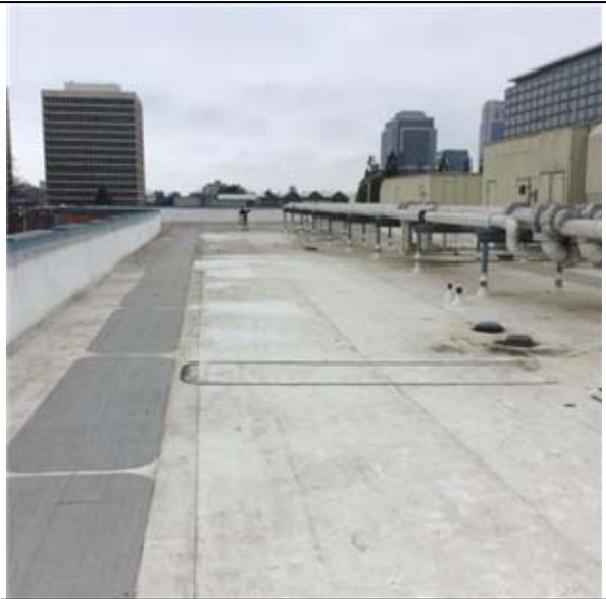
D3042 Exhaust Fan 26,000 CFM



D3042 Exhaust Fan 40,000 CFM



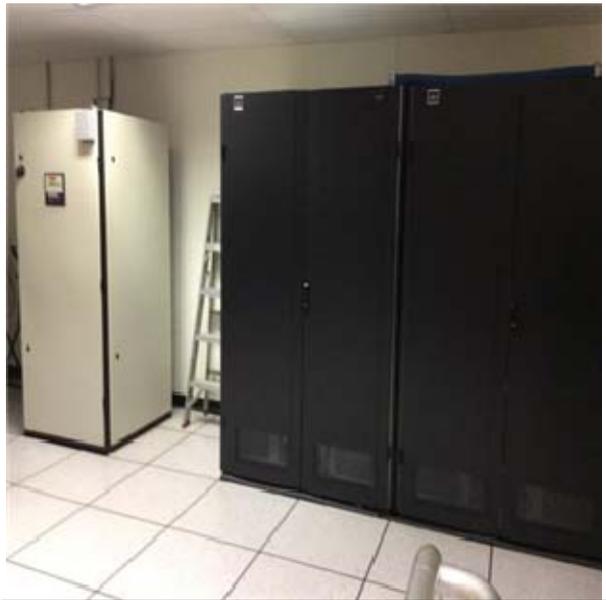
D3043 Steam-to-Water Heat Exchanger



D3043 Steam to Water Heat Exchanger



D3047 Glycol Chill Water - 25HP



D3052 Computer/Sever Room AC



D3068 DDC Controls



D3068 Pneumatic HVAC Controls



D4011 Sprinkler Heads



D4011 Wet-Pipe Sprinkler System



D5012 Breaker Panel 225 Amps, 30 Circuits



D5012 Secondary Dry Transformer 35 kVA



D5012 Secondary Dry Transformer 75 kVA



D5010 Switchgear, Mainframe, >1000 Amps



D5010 Switchgear, Mainframe, 1200 Amps



D5012 Secondary Dry Transformer 45 kVA



D5010 Switchgear, Mainframe, >1600 Amps



D5010 Switchgear, Mainframe, >1600 Amps



D5022 Exterior lighting



D5037 Fire Alarm System



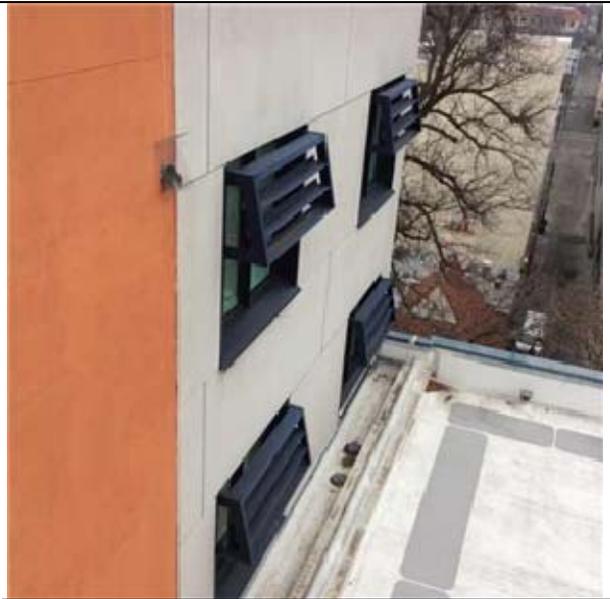
D5037 Fire Alarm Panel



D5092 Emergency Generator 1750 kW



D5092 Emergency Transfer Switch



E1090 Window Washing Equipment



B2031 Install Auto Door Openers



E2012 Counter Top and Sink



G2031 Crushed Granite



G9010 Service Tunnels

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

SECRETARY OF STATE / ARCHIVES BUILDING FACT SHEET

1500 11th Street
Sacramento
Sacramento County

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

BUILDING INFORMATION

- Age: 19 years (completed in 1995)
- Size:* 6-story,
531,049 GSF 335,925 NUSF 335,646 Assigned SF
2.44 Acre Parcel
151 underground parking spaces
Capacity - 669 occupants



- Financial: BRA Rate - \$1.64/month per SF, FY 2013-14 (DGS Price Book)
BRA Rate - \$1.69/month per SF, FY 2014-15 (Proposed DGS Price Book) SPI Structure #: 2379
Central Plant rate an additional \$0.60/month per SF Real Property #: 641
BPM #: 036
- LEED Status: Registered for LEED-EB Certification as part of DGS blanket registration in 2008
- Tenants: Occupied by a single agency, the offices of the California Secretary of State and State Archives, with child care facility and cafeteria

COMPLETED STUDIES AND SIGNIFICANT FINDINGS

A. 2010 American Disability Act Accessibility Compliance Survey

The survey indicates various areas of interior inaccessibility potentially requiring major alterations including drinking fountains; handrails at stairwells; exiting signage; and door closers and related operating pressures. The survey does, however, indicate a compliant accessible route of travel that is continuous along an unobstructed path connecting all accessible elements and public spaces within the building.

B. 2012 Access Compliance Conceptual Budget/Evaluation

In follow up to the 2010 American Disability Act Accessibility Compliance Survey this report provides the Conceptual Cost and Path of Travel Plans. ADA upgrades have been proposed for this building as part of DGS's ten year ADA Compliance Upgrades and Deferred Special Repairs Program.

ADDITIONAL BUILDING ISSUES

The building exterior needs to be caulked, sealed, and painted, and elevators need modernization.

CURRENT UTILIZATION PROJECTS

No utilization projects.

RECENTLY COMPLETED PROJECTS

Cost

TBD

ACTIVE PROJECTS

Cost

TBD

PLANNED SPECIAL REPAIRS BY FISCAL YEAR

Estimated Cost

TBD

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

* Source: Statewide Property Inventory

APPENDIX G: COST TABLES

10 YEAR EXPENDITURE FORECAST



Secretary of State / Archives Building
1500 11th Street
Sacramento

Useful Life	Estimated Useful Life	Plan Type	OP: Operations	CC: Code Compliance
	Remaining Useful Life		EN: Environmental	FN: Functionality
			IN: Integrity	

Legend
Deferred
Scheduled

Element #	Component Description	Asset	Location	Action	EUL (Yrs)	RUL (Yrs)	Qty.	Unit of Meas.	Unit Cost	Plan Type	Priority	2015 Year 0	2016 Year 1	2017 Year 2	2018 Year 3	2019 Year 4	2020 Year 5	2021 Year 6	2022 Year 7	2023 Year 8	2024 Year 9	Total - Deferred	Total - Scheduled									
A. SUBSTRUCTURE																																
Substructure Subtotal												\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B. SHELL																																
B20 EXTERIOR ENCLOSURE																																
B2011	B2011 Exterior Wall Construction	B2011 Granite Veneer	Exteriors	B2011 Replace exterior caulk/sealant	18	0	1,000.00	LF	\$6.31	IN - Beyond Rated Life	Priority 1	\$6,310	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,310	\$0									
B2011	Stone Veneer - First Floor	B2011 Precast veneer panels	First through sixth floors	B2011 Replace exterior caulk/sealant at all joints	18	0	6,500.00	LF	\$6.31	IN - Beyond Rated Life	Priority 1	\$41,015	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$41,015	\$0									
B2011	Stucco and Lath	B2011 Stucco and Lath	Street and court yard exterior elevations	B2011 Patch and paint stucco exteriors	10	5	25,000.00	SF	\$1.42	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$35,500	\$0	\$0	\$0	\$0	\$0	\$35,500									
B2011	Stucco and Lath	B2011 Stucco and Lath	Wall facing fifth floor roof	Replace B2011 Stucco and Lath	30	0	2,000.00	SF	\$18.33	IN - Beyond Rated Life	Priority 1	\$36,654	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$36,654	\$0									
B2031	Steel 3'-0" X 7'-0"	B2031 Aluminum Glazed Doors 3'-0" X 7'-0"	Exteriors	B2031 Replace doors	25	5	16.00	EA	\$6,203.72	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$99,260	\$0	\$0	\$0	\$0	\$0	\$99,260									
B2031	3'-0" X 7'-0" Solid Core, w/Safety Glass, Ptd. Door	B2031 Glazed Entrance Doors	Doors to courtyard and patios	B2031 Replace weatherstripping	10	0	21.00	EA	\$250.00	OP - Energy	Priority 1	\$5,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,250	\$0									
B2032	3'-0" X 7'-0" Steel, Painted, Door	B2032 3'-0" X 7'-0" Steel, Painted, Door	Exteriors	Replace B2032 3'-0" X 7'-0" Steel, Painted, Door	45	9	15.00	EA	\$2,723.04	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40,846	\$0									
B2039	Overhead Door Coiling, 14' Tall By 22' Wide, Automatic,	B2039 Overhead Coiling Door 20'+ wide	Loading Dock	B2039 Replace coiling doors	20	9	2.00	EA	\$20,236.80	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40,474	\$0									
B30 ROOFING																																
B3011	Single Ply Epdm with Insulation, Fully Adhered 60 Mills, Including Demo	B3011 Single Ply EPDM Fully Adhered 60 Mills, Including Demo	Patios/decks	B3011 Replace waterproofing at decks & patios	20	0	70.00	SQ	\$1,660.73	IN - Beyond Rated Life	Priority 1	\$116,251	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$116,251	\$0									
B3011	B3011 Roof Finishes	B3011 Single Ply PVC with rock ballast & pavers	Archives, 6th floor roof	B3011 Complete roof tear off and replacement of all flashings	20	0	145.00	SQ	\$2,790.00	IN - Beyond Rated Life	Priority 1	\$404,550	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$404,550	\$0									
B3011	B3011 Roof Finishes	B3011 TPO Roofing	6th floor, Secretary of State building	B3011 Complete tear off and replacement and all flashings	10	5	250.00	SF	\$1,806.36	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$451,589	\$0	\$0	\$0	\$0	\$0	\$451,589									
Shell Subtotal												\$610,031	\$0	\$0	\$0	\$0	\$0	\$586,349	\$0	\$0	\$0	\$0	\$81,319	\$610,031	\$667,668							
C. INTERIORS																																
C10 INTERIOR CONSTRUCTION																																
C1011	Toilet Partitions Porcelain Enamel Overhead Braced	C1011 Fabricated Toilet Partitions	Restrooms Secretary of State	C1031 Replace toilet partitions	20	5	48.00	EA	\$2,328.72	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$111,779	\$0	\$0	\$0	\$0	\$0	\$111,779									
C1011	Toilet Partitions Porcelain Enamel Overhead Braced	C1011 Fabricated Toilet Partitions	Restrooms, Archives & Museum	C1031 Replace toilet partitions	20	5	48.00	EA	\$2,328.72	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$111,779	\$0	\$0	\$0	\$0	\$0	\$111,779									
C1021	Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware	C1021 Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware	Secretary of State	C1021 Replace doors	24	4	160.00	EA	\$2,403.12	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$384,499	\$0	\$0	\$0	\$0	\$0	\$0	\$384,499									
C1021	Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware	C1021 Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware	Museum	C1021 Replace doors	24	4	18.00	EA	\$2,403.12	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$43,256	\$0	\$0	\$0	\$0	\$0	\$0	\$43,256									
C1021	C1021 Interior Doors	C1021 Sliding Steel Doors	Entry to Archives	C1021 Provide electric re-opening controls	35	0	5.00	EA	\$2,370.88	IN - Reliability	Priority 2	\$11,854	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,854	\$0									
C30 INTERIOR FINISHES																																
C3012	Paint Interior Walls, Drywall	C3012 Paint Interior Walls, Drywall	Museum	C3012 Paint walls	3	1	10,000.00	SF	\$2.13	IN - Appearance	Priority 3	\$0	\$21,328	\$0	\$0	\$0	\$21,328	\$0	\$0	\$0	\$0	\$0	\$21,328	\$0								
C3012	Paint Interior Walls, Drywall	C3012 Paint Interior Walls, Drywall	Archives	C3012 Paint walls	10	8	20,000.00	SF	\$2.13	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42,656	\$0	\$0	\$42,656									
C3012	Paint Interior Walls, Drywall	C3012 Paint Interior Walls, Drywall	Secretary of State portion	C3012 Paint walls	10	6	30,000.00	SF	\$2.13	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$63,984	\$0	\$0	\$0	\$0	\$63,984									
C3024	Vinyl Tile	C3024 Sheet Vinyl	Museum	C3024 Replace vinyl tile	18	5	155.00	SY	\$125.78	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$19,496	\$0	\$0	\$0	\$0	\$0	\$19,496									
C3024	C3024 Flooring	C3024 6 x 6 Ceramic Tile	Entry, hallway, and stairs	C3024 Replace broken tile	50	0	10.00	CSF	\$2,312.80	IN - Appearance	Priority 2	\$23,128	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,128	\$0									
C3024	Vinyl Tile	C3024 Vinyl Tile	Archives	Replace C3024 Vinyl Tile	18	5	2,000.00	SY	\$163.10	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$326,199	\$0	\$0	\$0	\$0	\$0	\$326,199									
C3025	Carpet Tiles - Standard	C3025 Carpet Tiles - Standard	Secretary of State portion	C3025 Replace carpet tile	10	0	25,500.00	SY	\$96.61	IN - Appearance	Priority 2	\$2,463,443	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,463,443									
C3025	Carpet Tiles - Standard	C3025 Carpet Tiles - Standard	Archives	C3025 Replace carpet	10	3	5,000.00	SY	\$96.61	IN - Appearance	Priority 3	\$0	\$0	\$483,028	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$483,028									
C3025	Carpet Tiles - Standard	C3025 Carpet Tiles - Standard	Museum	C3025 Replace carpet tile	10	0	5,000.00	SY	\$96.61	IN - Appearance	Priority 2	\$483,028	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$483,028									
C3032	Acoustical Tile With Exposed Grid System	C3032 Acoustical Ceiling Tile	Secretary of State	C3032 Replace ceiling tile	20	5	23.00	CSF	\$1,201.56	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$27,636	\$0	\$0	\$0	\$0	\$0	\$27,636									
C3032	Acoustical Tile With Exposed Grid System	C3032 Acoustical Ceiling Tile	Archives	Replace C3032 Acoustical Ceiling Tile	20	5	450.00	CSF	\$1,201.56	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$540,702	\$0	\$0	\$0	\$0	\$0	\$540,702									
Interiors Subtotal												\$2,981,453	\$21,328	\$0	\$483,028	\$449,083	\$1,137,590	\$63,984	\$21,328	\$42,656	\$0	\$2,981,453	\$2,218,997									
D. SERVICES																																
D10 CONVEYING SYSTEMS																																
D1011	Elevator Hydraulic System, 2,500 Lb Capacity	D1011 Kitchen Car 14	Kitchen Car 14	Replace D1011 Kitchen Car 14	20	6	1.00	EA	\$172,900.00	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$0	\$172,900	\$0	\$0	\$0	\$0	\$172,900									
D1011	Traction Geared Elevator - High Rise	D1011 Passenger Cars 8-13	Elevators 8-13 See notes	D1011 Install new hoist ropes on Cars 9, 11 and 13. This should be included in the service contract.	20	0	3.00	EA	\$15,000.00	OP - Maintenance	Priority 2	\$45,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45,000	\$0									
					Elevators 8-13 See notes	D1011 Modernize Passenger Cars 11, 12 and 13	20	1	3.00	EA	\$409,500.00	FN - Modernization	Priority 2	\$0	\$1,228,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,228,500						
						D1011 Modernize Passenger Cars 8 and 9	20	1	2.00	EA	\$391,300.00	FN - Modernization	Priority 2	\$0	\$782,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$782,600						
						D1011 Modernize Secretary of State Car 10	20	1	1.00	EA	\$354,900.00	FN - Modernization	Priority 2	\$0	\$354,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$354,900						
						D1011 Perform five year full load test on traction cars 8, 9, 11 to 13	15	0	5.00	EA	\$3,000.00	CC - Building Code	Priority 1	\$15,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,000					
D1011	Traction Geared Elevator - High Rise	D1011 Passenger Cars 8-13	Elevators 8-13 See notes	Replace D1011 Passenger Cars 8-13	35	4	6.00	EACH	\$3,321,500.00	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$19,929,000	\$0	\$0	\$0	\$0	\$0	\$0	\$19,929,000										
D1011	Elevator Hydraulic System, 2,500 Lb Capacity	D1011 Hydraulic Car 3	Hydraulic Car 3	Replace D1011 Hydraulic Car 3	20	6	1.00	EA	\$172,900.00	FN - Modernization	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$172,900	\$0	\$0	\$0	\$0	\$172,900									
D1011	Elevator Hydraulic System, 3,500 Lb Capacity	D1011 Museum Cars 1,2	Museum	D1011 Perform five year full load test.	15	0	4.00	EA	\$3,000.00	CC - Building Code	Priority 1	\$12,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,000	\$0									
					D1011 Museum Cars 1,2	25	6	2.00	EA	\$391,300.00	FN - Modernization	Priority 4	\$0	\$0	\$0	\$0	\$0	\$782,600	\$0	\$0	\$0	\$0	\$0	\$782,600								
D1012	D1012 Freight Elevators	D1012 Freight Cars 4-7	Freight Cars 4-7 see notes	D1012 Modernize Freight Elevator 4	20	7	1.00	EA	\$455,000.00	FN - Modernization	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$455,000	\$0	\$0	\$0	\$0	\$455,000								
					Freight Cars 4-7 see notes	D1012 Modernize Freight Elevator 7	20	1	1.00	EA	\$354,900.00	FN - Modernization	Priority 2	\$0	\$354,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$354,900						
						D1012 Modernize Freight Elevators 5 and 6	20	6	1.00	EA	\$418,600.00	FN - Modernization	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$418,600	\$0	\$0	\$0	\$0	\$0	\$418,600						
						D1012 Perform five year full load test.	15	0	4.00	EA	\$3,000.00	CC - Building Code	Priority 1	\$12,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,000	\$0					
D20 PLUMBING																																
D2011	Flush Valve & Water Closet	D2011 Commercial Water Closet - Standard	Throughout Facility	D2011 Install automatic flush valves on toilets	20	0	70.00	EA	\$1,303.99	OP - Energy	Priority 2	\$91,279	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$91,279	\$0								
D2012	Urinal	D2012 Urinal - Standard	Throughout Facility	D2012 Install automatic flush valves on urinals	20	0	20.00	EA	\$2,440.66	OP - Energy	Priority 2	\$48,813	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$48,813	\$0								
D2013	Counter Top Sink and Faucet	D2013 Counter Top Sink and Faucet - Standard	Restrooms	D2013 Install automatic faucets with motion sensors	20	0	90.00	EA	\$1,667.80	OP - Energy	Priority 2	\$150,102	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,102	\$0								

Element #	Component Description	Asset	Location	Action	EUL (Yrs)	RUL (Yrs)	Qty.	Unit of Meas.	Unit Cost	Plan Type	Priority ¹	2015 Year 0	2016 Year 1	2017 Year 2	2018 Year 3	2019 Year 4	2020 Year 5	2021 Year 6	2022 Year 7	2023 Year 8	2024 Year 9	Total - Deferred	Total - Scheduled	
D30 HVAC																								
D3022.1	Circulation Pump, 7 to 10 HP	D3022.1 Condensate Return System 5 HP	Mechanical Room North	Replace D3022.1 Condensate Return System 5 HP	20	5	2.00	EA	\$18,877.33	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$37,755	\$0	\$0	\$0	\$0	\$0	\$37,755	
D3022.1	Circulation Pump 30 HP	D3022 HVAC Heating Water Circulation Pumps - 25 HP	Mechanical Room North	Replace D3022 HVAC Heating Water Circulation Pumps - 25 HP	20	8	2.00	EA	\$24,794.16	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$49,588	\$0	\$0	\$49,588	
D3022.1	Circulation Pump 30 HP	D3022 HVAC Condenser Water - 25 HP	Mechanical Room South	Replace D3022 HVAC Condenser Water - 25 HP	20	8	2.00	EA	\$24,794.16	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$49,588	\$0	\$0	\$49,588	
D3031.1	Chiller, Water Cooled, Centrifugal, 160 Ton	D3031.1 Chiller, Water Cooled, 160 Ton	Mechanical Room South	Replace D3031.1 Chiller, Water Cooled, 160 Ton	25	0	1.00	EA	\$422,344.00	IN - Reliability	Priority 1	\$422,344	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$422,344	\$0	
D3031.2	Cooling Tower, Galvanized Steel, 254 Ton	D3031.2 Cooling Tower, Galvanized Steel, 170 Ton	Rooftop 4th Floor	D3031.2 Renovate Cooling Tower, Galvanized Steel, 170 Ton	25	2	2.00	EA	\$187,016.80	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$374,034	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$374,034
D3032	Pad-Mounted Condenser 20-Ton	D3032 Roof Mounted Condenser 20-Ton	Rooftop Fifth Floor	Replace D3032 Roof Mounted Condenser 20-Ton	15	0	2.00	EA	\$44,857.40	IN - Beyond Rated Life	Priority 1	\$89,715	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$89,715	\$0
D3032	Roof-Mounted Condenser 15-Ton	D3032 Cafe Condenser 15-Ton	Cafe Coolers and Freezers	Replace D3032 Cafe Condenser 15-Ton	15	5	2.00	EA	\$45,608.69	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$91,217	\$0	\$0	\$0	\$0	\$0	\$91,217	
D3032	Roof-Mounted Condenser 7.5-Ton	D3032 Condenser 6-Ton	Rooftop fifth Floor	Replace D3032 Condenser 6-Ton	15	0	2.00	EA	\$17,348.00	IN - Beyond Rated Life	Priority 1	\$34,696	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$34,696	\$0
D3032	Pad-Mounted Condenser 10-Ton	D3032 Roof Mounted Condenser 10-Ton	Rooftop Fifth Floor	Replace D3032 Roof Mounted Condenser 10-Ton	15	0	2.00	EA	\$20,945.09	IN - Beyond Rated Life	Priority 1	\$41,890	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$41,890	\$0
D3041.1	Air Handler 20,000-22,000 CFM	D3041 Rooftop AHU 2900 - 20,000 CFM	Rooftop Fifth Floor	Replace D3041 Rooftop AHU 2900 - 20,000 CFM	20	5	4.00	EA	\$25,330.00	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$101,320	\$0	\$0	\$0	\$0	\$0	\$101,320	
D3041.1	Fan Coil Unit 5 Ton	D3041 Interior Fan Coil Units	Throughout Facility	D3041 Replace fan motors	15	5	18.00	EA	\$2,000.00	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$36,000	\$0	\$0	\$0	\$0	\$0	\$36,000	
D3041.1	Central Station Ahu 63000 CFM	D3041 Rooftop AHU 9K-40K CFM w/ VFD	Rooftop Fifth Floor	Replace D3041 Rooftop AHU 9K-40K CFM w/ VFD	20	5	12.00	EA	\$263,584.32	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$3,163,012	\$0	\$0	\$0	\$0	\$0	\$3,163,012	
D3041.1	Air Handler 8,000 to 12,000 CFM	D3041 Interior AHU 12,200 CFM w/ VFD	Basement	D3041 Replace fan motors	15	5	3.00	EA	\$2,000.00	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$6,000	\$0	\$0	\$0	\$0	\$0	\$6,000	
D3041.1	Air Handler 30,000 CFM	D3041 Interior AHU 28,220 CFM	AH Stacks Basement	D3041 Replace fan motors	15	5	5.00	EA	\$2,000.00	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$10,000	\$0	\$0	\$0	\$0	\$0	\$10,000	
D3043	Multi-pass shell and tube (Cast iron heads, 40 to 180 deg., steam 10 psi, 96 GPM)	D3043 Steam to Water Heat Exchanger	Mechanical Room North	Replace D3043 Steam to Water Heat Exchanger	30	0	2.00	EA	\$26,297.80	IN - Beyond Rated Life	Priority 1	\$52,596	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$52,596	\$0
D3043	Multi-pass shell and tube (Cast iron heads, 40 to 180 deg., steam 10 psi, 96 GPM)	D3043 Steam-to-Water Heat Exchanger	Mechanical Room North	Replace D3043 Steam-to-Water Heat Exchanger	30	3	4.00	EA	\$26,297.80	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$0	\$105,191	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$105,191	
D3047	D3047 Glycol Distribution Systems	D3047 Glycol Chill Water - 25HP	Mechanical Room South	Replace D3047 Glycol Chill Water - 25HP	25	5	2.00	EA	\$21,080.00	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$42,160	\$0	\$0	\$0	\$0	\$0	\$42,160	
D3068	Direct Digital Controls (DDC) Extensive	D3068 Pneumatic HVAC Controls	Mechanical Room North	Replace D3068 Pneumatic HVAC Controls	20	0	2.00	EA	\$42,480.00	FN - Modernization	Priority 1	\$84,960	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$84,960	\$0
D40 FIRE PROTECTION SYSTEMS																								
D4011	Sprinkler Head	D4011 Wet-Pipe Sprinkler System	Throughout Facility	D4011 Install facility-wide sprinkler system	25	0	511,000.00	SF	\$8.26	CC - Life Safety	Priority 1	\$4,220,860	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,220,860	\$0
D50 ELECTRICAL SYSTEMS																								
D5022	D5022 Lighting Equipment	D5022 Exterior lighting	Exterior Courtyard	Replace D5022 Exterior lighting	20	0	10.00	EA	\$2,232.00	IN - Beyond Rated Life	Priority 1	\$22,320	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,320	\$0
D5092	Diesel Generator Over 205 Up to 250 kW	D5092 Emergency Generator 1750 kW	Emergency Generator Room	D5092 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
Services Subtotal												\$5,347,075	\$2,720,900	\$374,034	\$105,191	\$19,929,000	\$3,487,464	\$1,547,000	\$455,000	\$99,177	\$0	\$5,347,075	\$28,717,765	
E. EQUIPMENT & FURNISHING																								
E10 EQUIPMENT																								
E1097	E1097 Window Washing Equipment	E1090 Window Washing Equipment	Roofs	Replace E1090 Window Washing Equipment	20	0	1.00		\$575,000.00	IN - Beyond Rated Life	Priority 2	\$575,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$575,000	\$0
E1099	E1099 Other Equipment	B2031 Install Auto Door Openers	At entries	B2031 Install Auto Door Openers	15	0	8.00		\$2.53	CC - Accessibility	Priority 1	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20	\$0
E20 FURNISHINGS																								
E2012	Bath Counter Top and Sink	E2012 Counter Top and Sink	Location 34	E2010 Replace sink cabinets	20	0	15.00	EA	\$4,925.28	CC - Accessibility	Priority 1	\$73,879	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$73,879	\$0
Equipment & Furnishing Subtotal												\$648,899	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$648,899	\$0	
F. SPECIAL CONSTRUCTION AND DEMOLITION																								
Special Construction And Demolition Subtotal												\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
G. BUILDING SITEWORK																								
G20 SITE IMPROVEMENTS																								
G2031	Crushed Granite Walkways, 3' Wide	G2031 Crushed Granite	Courtyard	G2031 Replace crushed granite	15	5	5,000.00	SF	\$14.41	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$72,044	\$0	\$0	\$0	\$0	\$0	\$72,044	
G2031	Crushed Granite Walkways, 3' Wide	G2031 Crushed Granite	Courtyard	G2031 Replace uneven surfacing material with something less hazardous	15	0	60.00	SF	\$100.00	CC - Life Safety	Priority 1	\$6,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,000	\$0
Building Sitework Subtotal												\$6,000	\$0	\$0	\$0	\$0	\$0	\$72,044	\$0	\$0	\$0	\$6,000	\$72,044	
Z. GENERAL																								
General Subtotal												\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Expenditure Totals per Year												\$9,593,458	\$2,742,228	\$374,034	\$588,219	\$20,378,083	\$5,283,447	\$1,610,984	\$476,328	\$141,833	\$81,319	\$9,593,458	\$31,676,475	
Total Cost (Inflated @ 5% per Yr.)												\$9,593,458	\$2,879,339	\$412,372	\$680,937	\$24,769,688	\$6,743,164	\$2,158,873	\$670,241	\$209,551	\$126,153	Total *	\$41,269,933	

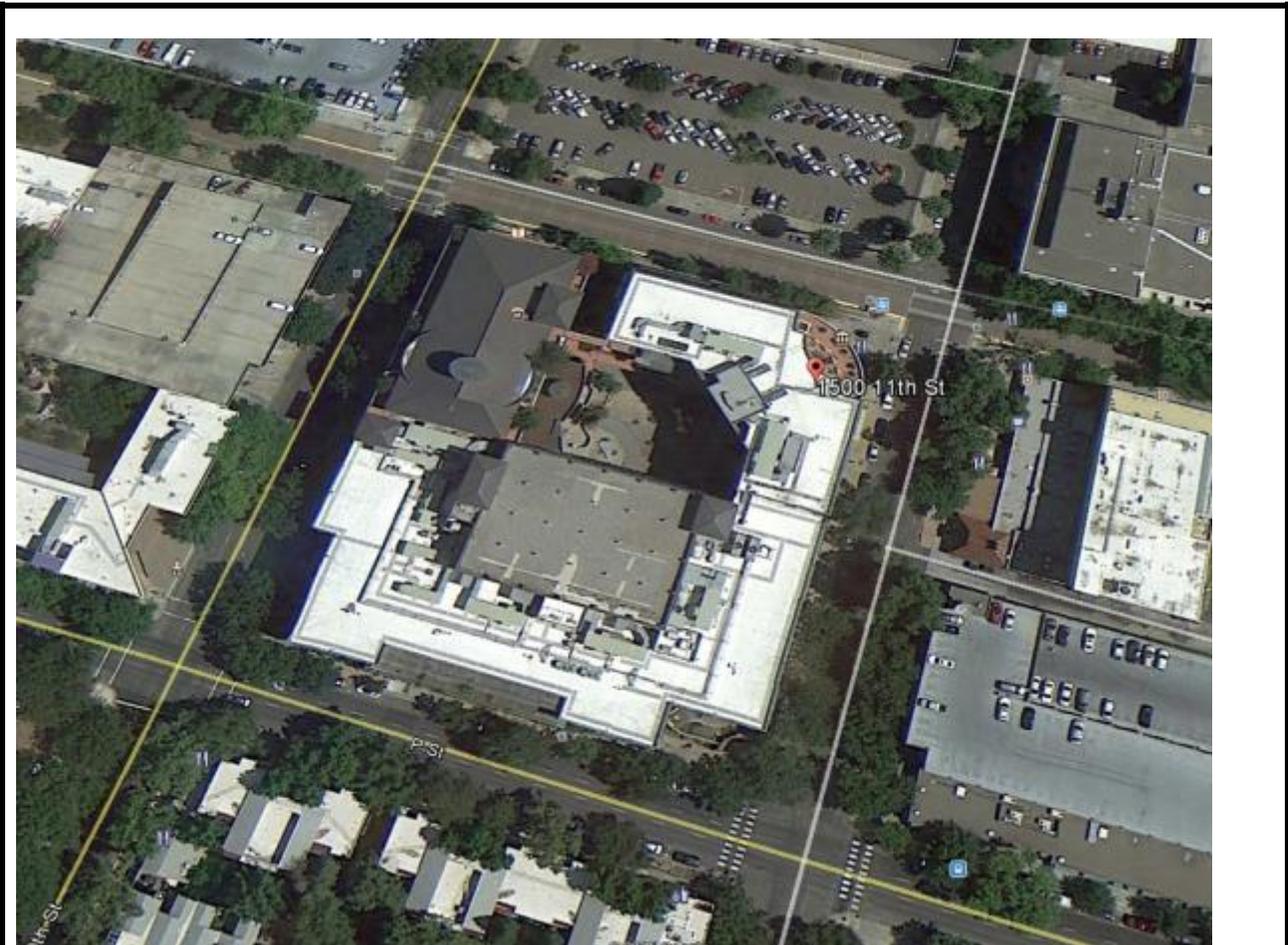
* - Present Value Currency

Footnotes

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

Current Repl.Value \$207,376,663

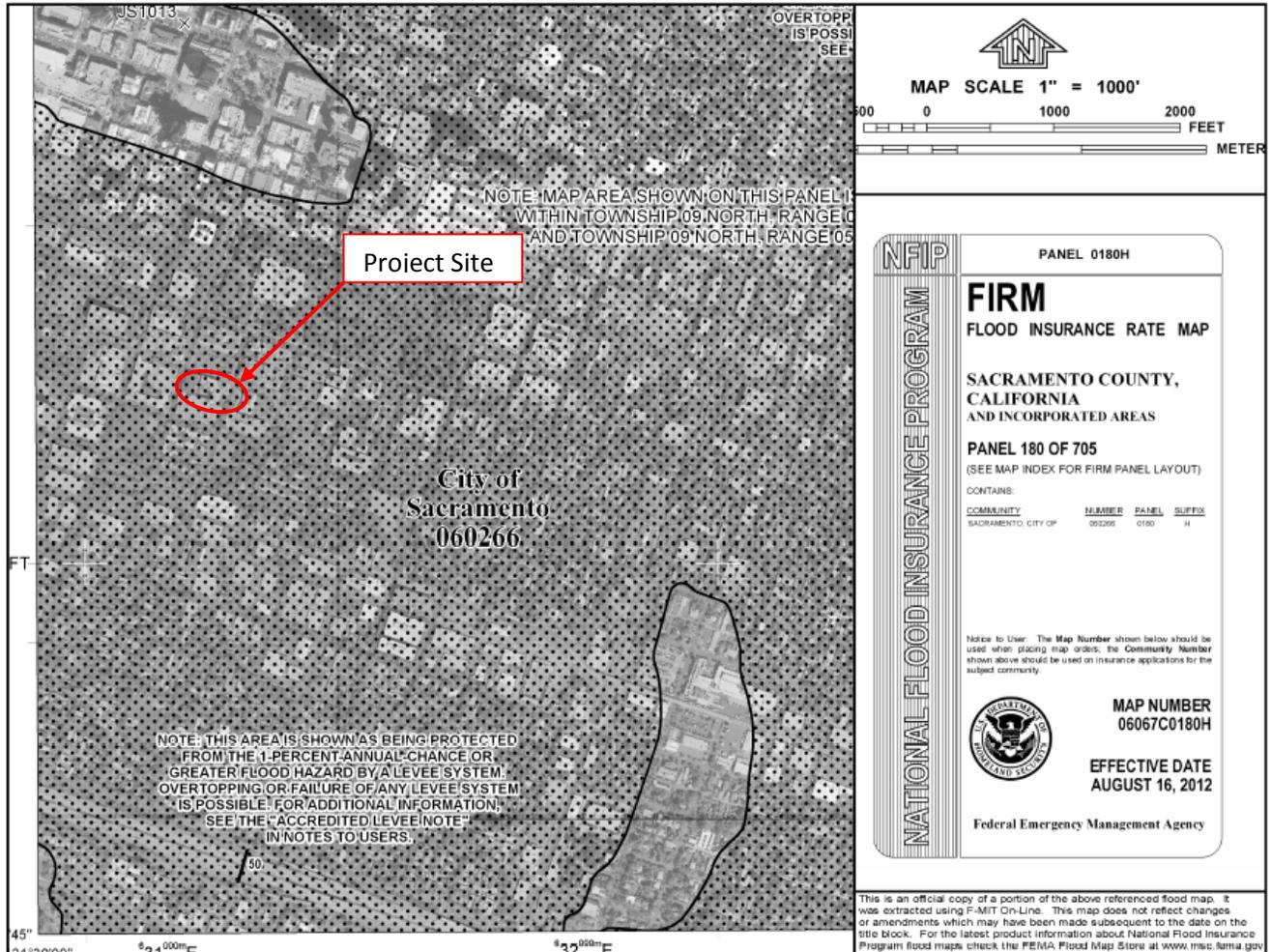
APPENDIX H: SUPPORTING DOCUMENTATION



Site Plan

	<p>Source:</p> <p>The north arrow indicator is an approximation of 0° North.</p>	<p>Project Number:</p> <p>111326.14R-030.305</p> <p>Project Name:</p> <p>Secretary of State / Archives Building</p>
		<p>On-Site Date:</p> <p>January 20, 21 & 22, 2015</p>

Flood Map



	SOURCE: FEMA	Project Number: 111326.14R-030.305
		Project Name: Secretary of State / Archives Building
Not drawn to scale. The north arrow indicator is an approximation of 0° North.		On-Site Date: January 20, 2014

Estimate of Structures Cost Using Marshall Cost Systems			
Secretary of State / Archives Building (036)			
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	\$312.40	531,049	\$165,901,330
	\$0.00	0	\$0
	\$0.00	0	\$0
	\$0.00	0	\$0
	\$0.00	0	\$0
	Total	531,049	\$165,901,330
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	\$165,901,330	25.00%	\$207,376,663
	\$0	25.00%	\$0
	\$0	25.00%	\$0
	\$0	25.00%	\$0
	\$0	25.00%	\$0
Cost Per SF	\$390.50	Total Estimate	\$207,376,663

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)	c0
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: Secretary of State / Archives Building

Date: January 20, 21 and 22, 2015

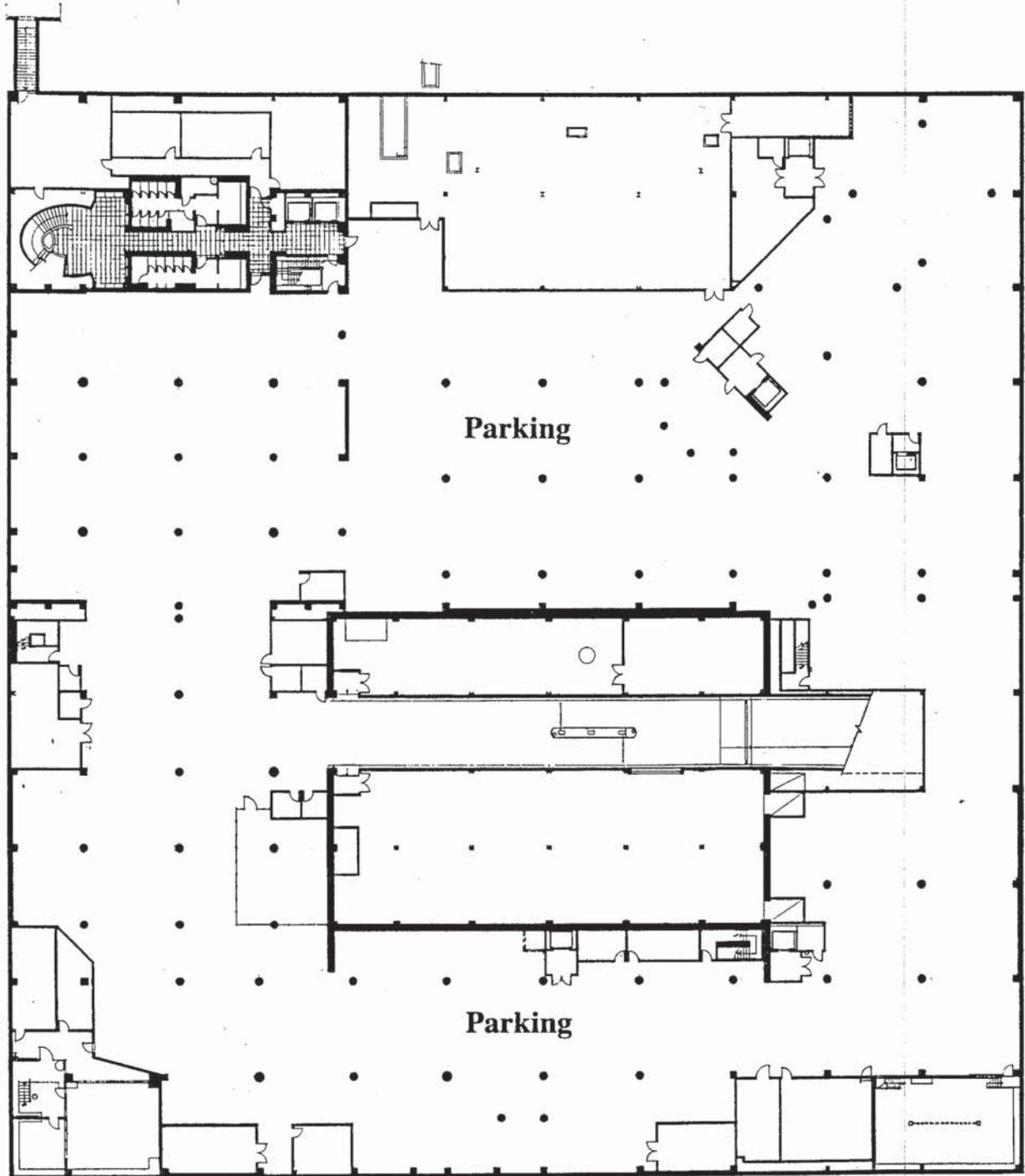
Project Number: 111326.14R-030.305

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.?				Unknown
5.	Has building ownership or management received any ADA related complaints that have not been resolved?				Complaints have been received, it is unknown if any are unresolved
6.	Is any litigation pending related to ADA issues?				Unknown
	Parking	Yes	No	N/A	Comments
1.	Are there sufficient accessible parking spaces with respect to the total number of reported spaces?		✓		With 166 total parking spaces, four are marked as accessible..The required minimum is six, one of which should be a van space.
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?	✓			
	Parking	Yes	No	N/A	Comments
5.	Do curbs on the accessible route have depressed, ramped curb cuts at drives, paths, and drop-offs?	✓			
6.	Does signage exist directing you to accessible parking and an accessible building entrance?	✓			

EMG Abbreviated Accessibility Checklist					
	Ramps	Yes	No	N/A	Comments
1.	If there is a ramp from parking to an accessible building entrance, does it meet slope requirements? (1:12)	✓			The ramp is from the street to the entrance at the corner of 11 th and P Streets
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?		✓		It appears as if there is not a level landing
	Entrances/Exits	Yes	No	N/A	Comments
1.	Is the main accessible entrance doorway at least 32 inches wide?	✓			
2.	If the main entrance is inaccessible, are there alternate accessible entrances?			✓	Main entrance is accessible
3.	Can the alternate accessible entrance be used independently?			✓	Main entrance is accessible
4.	Is the door hardware easy to operate (lever/push type hardware, no twisting required, and not higher than 48 inches above the floor)?	✓			
5.	Are main entry doors other than revolving door available?	✓			
6.	If there are two main doors in series, is the minimum space between the doors 48 inches plus the width of any door swinging into the space?			✓	No main doors in series
	Paths of Travel	Yes	No	N/A	Comments
1.	Is the main path of travel free of obstruction and wide enough for a wheelchair (at least 36 inches wide)?	✓			
2.	Does a visual scan of the main path reveal any obstacles (phones, fountains, etc.) that protrude more than 4 inches into walkways or corridors?		✓		
3.	Are floor surfaces firm, stable, and slip resistant (carpets wheelchair friendly)?	✓			
4.	Is at least one wheelchair-accessible public telephone available?		✓		No public phones
	Paths of Travel	Yes	No	N/A	Comments
5.	Are wheelchair-accessible facilities (toilet rooms, exits, etc.) identified with signage?	✓			
6.	Is there a path of travel that does not require the use of stairs?	✓			
7.	If audible fire alarms are present, are visual alarms (strobe light alarms) also installed in all common areas?	✓			

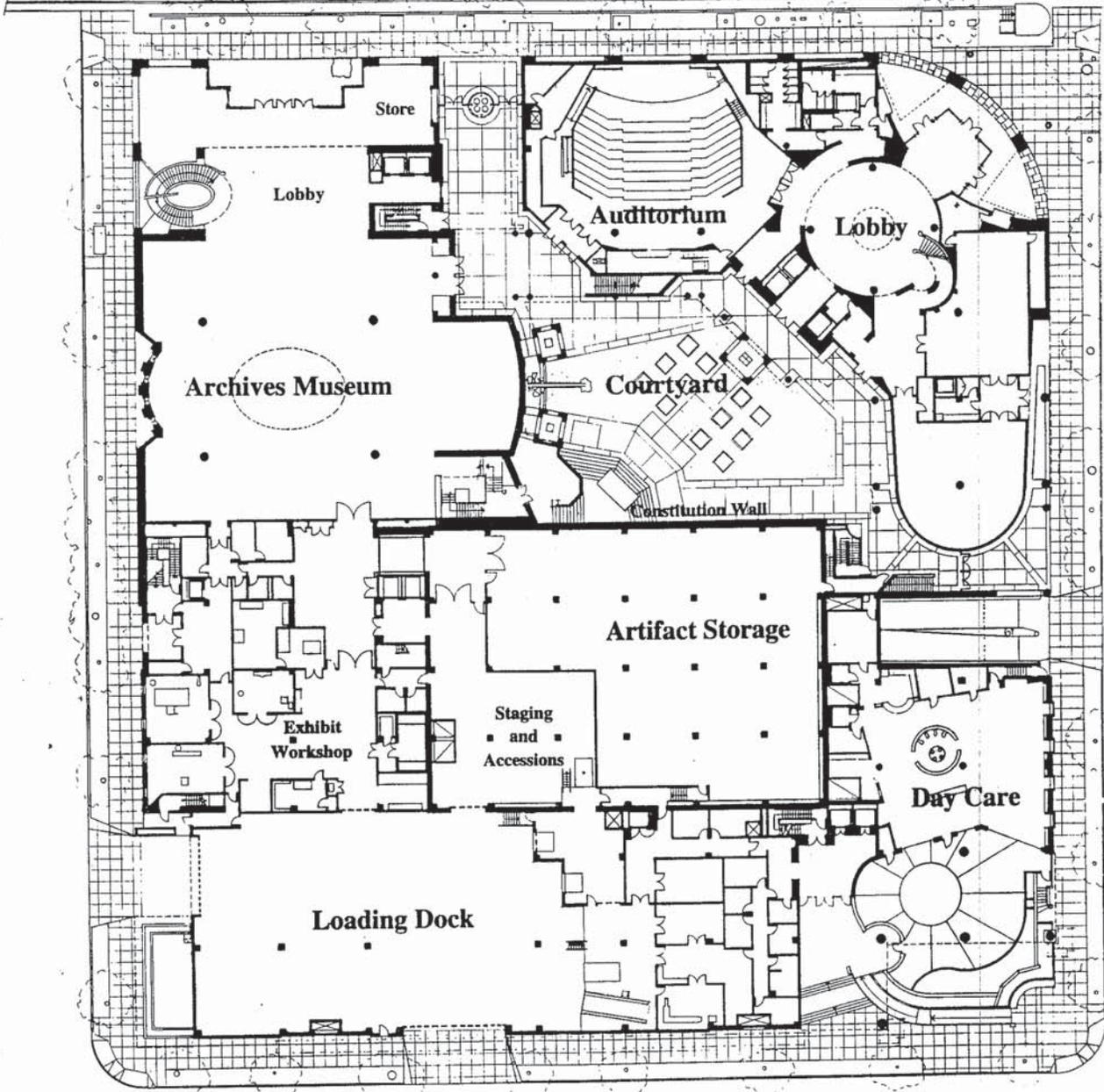
EMG Abbreviated Accessibility Checklist					
	Elevators	Yes	No	N/A	Comments
1.	Do the call buttons have visual signals to indicate when a call is registered and answered?				
2.	Are there visual and audible signals inside cars indicating floor change?				
3.	Are there standard raised and Braille marking 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?		✓		
	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?	✓			

EMG Abbreviated Accessibility Checklist					
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?	✓			

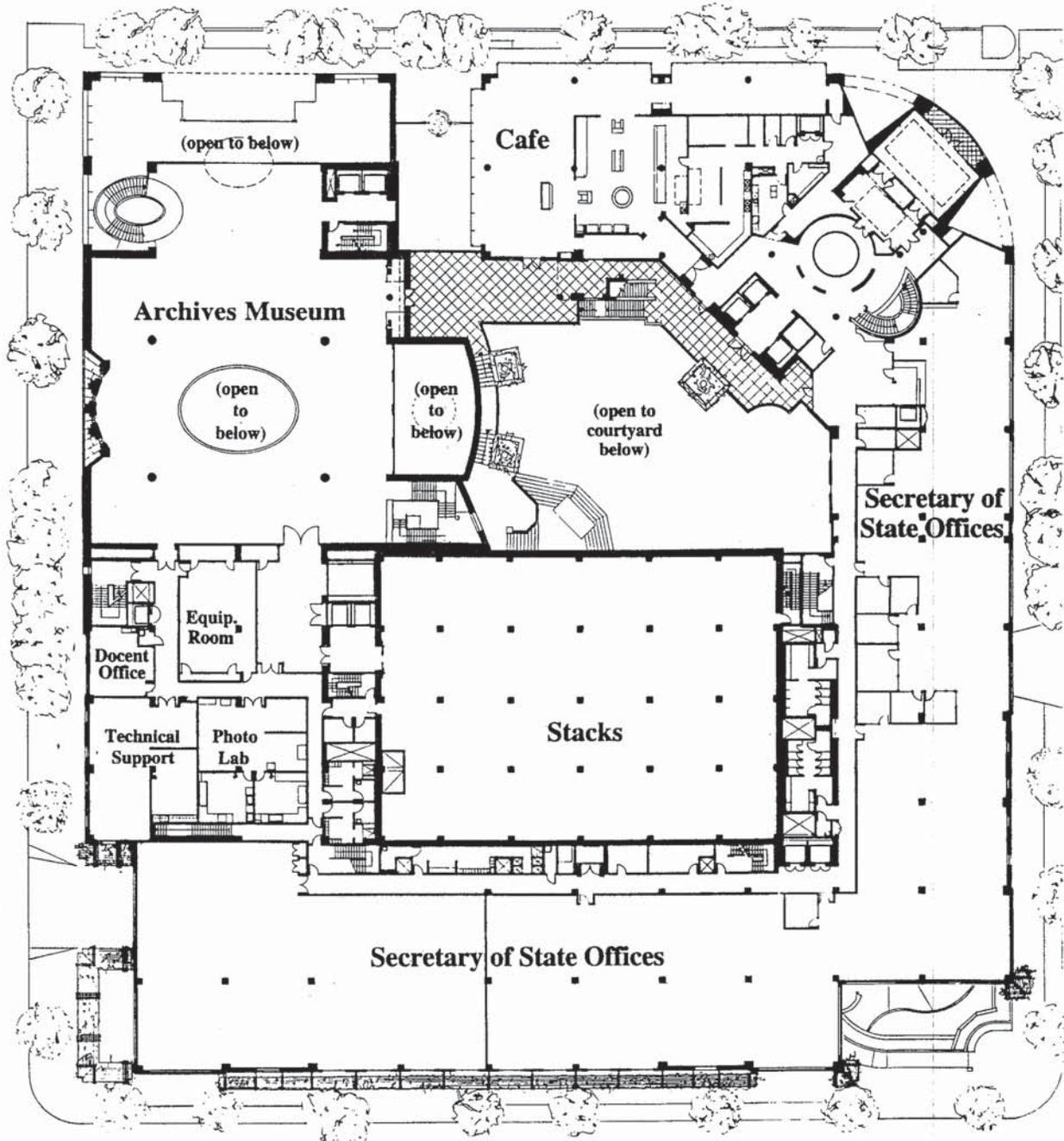


BASEMENT

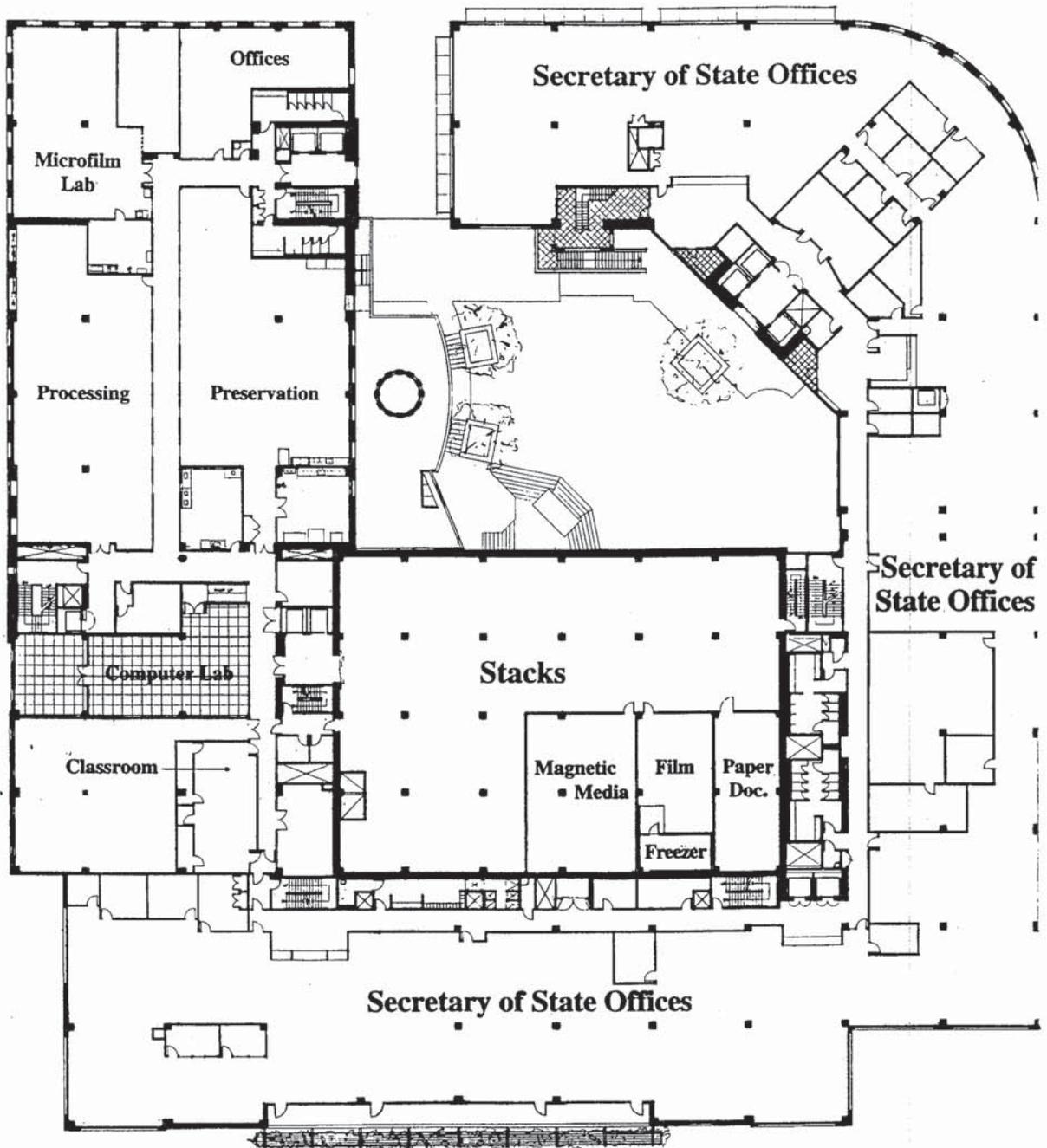
"Archives Plaza" Light Rail Station



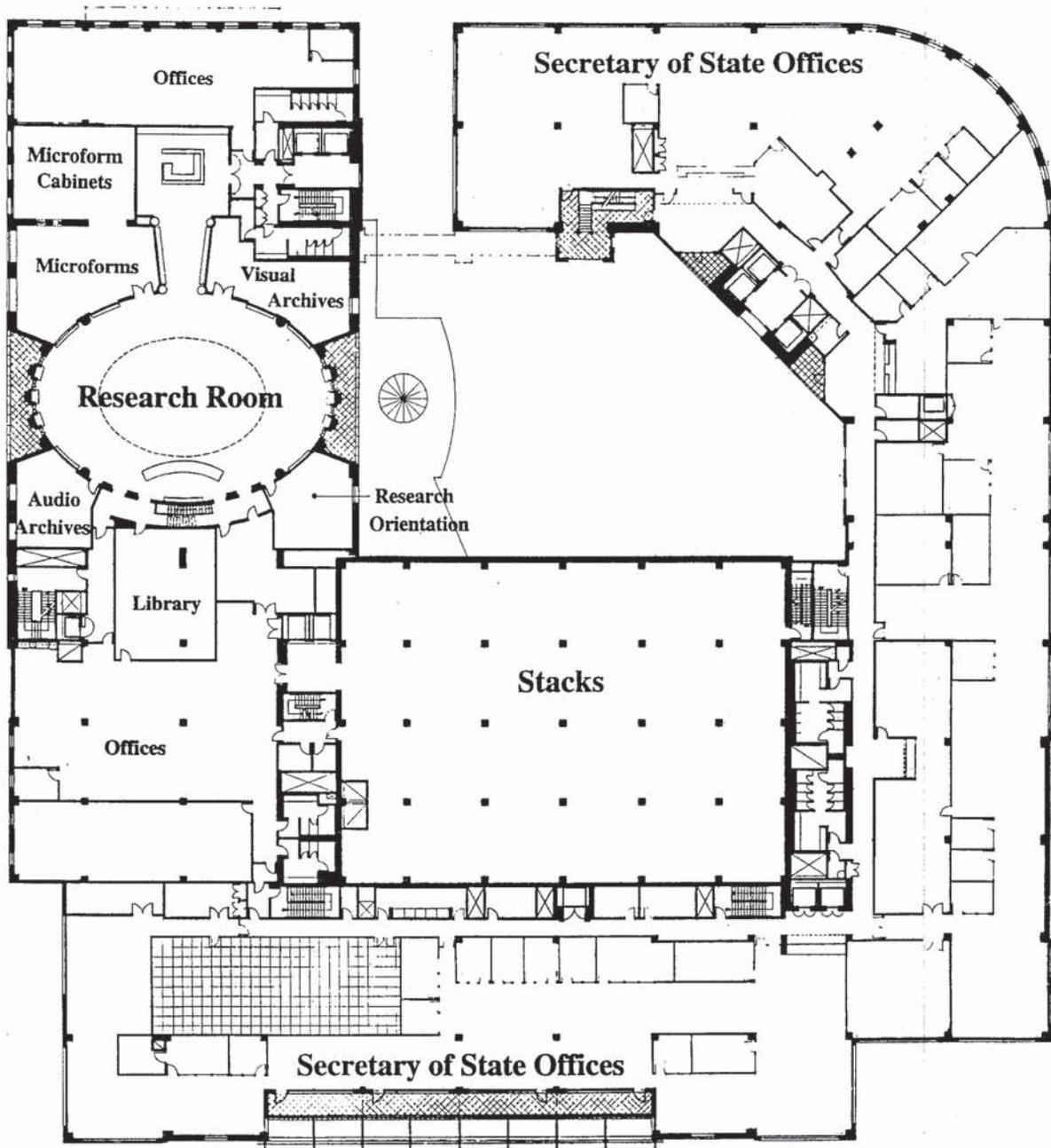
FIRST FLOOR



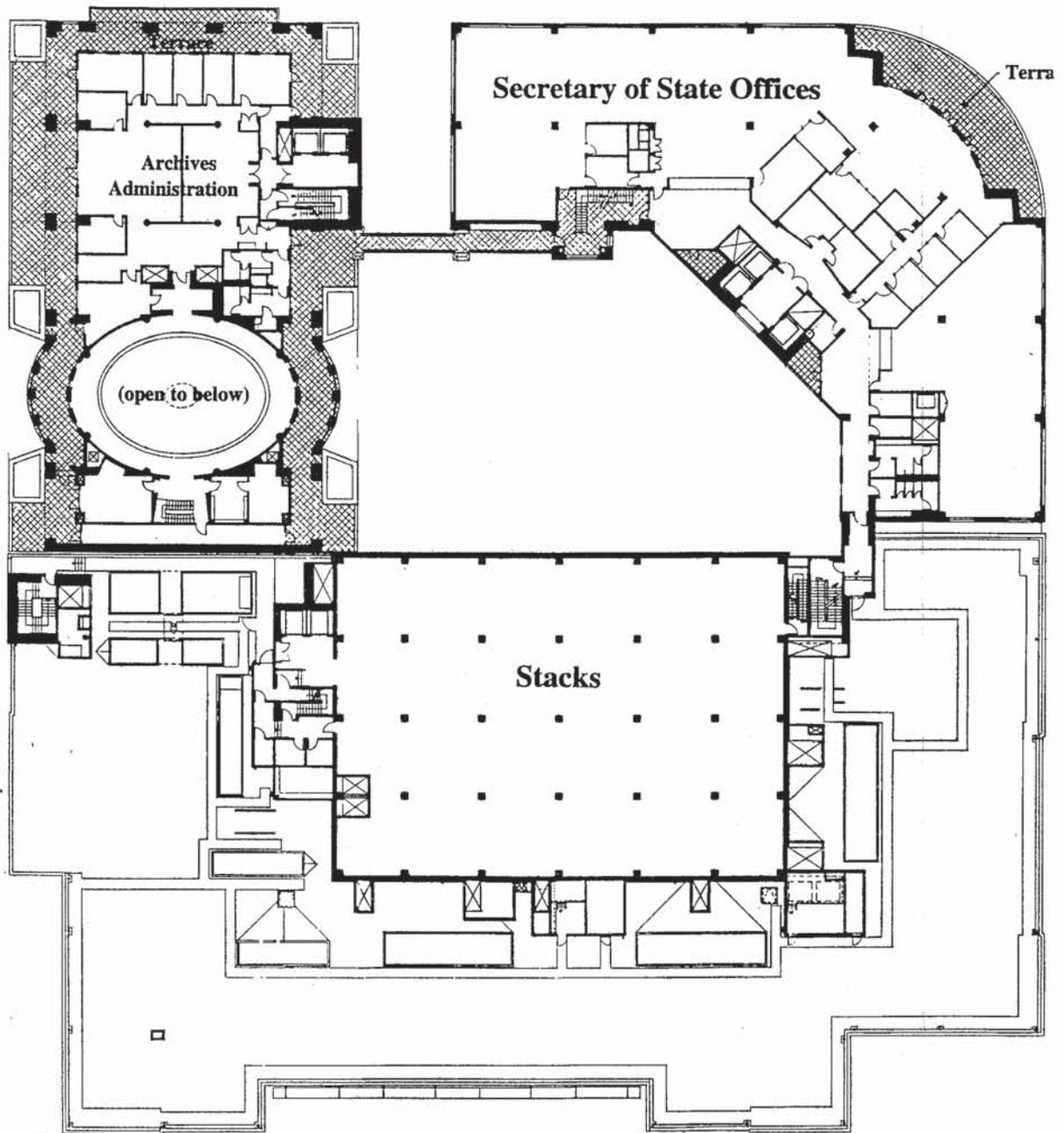
SECOND FLOOR



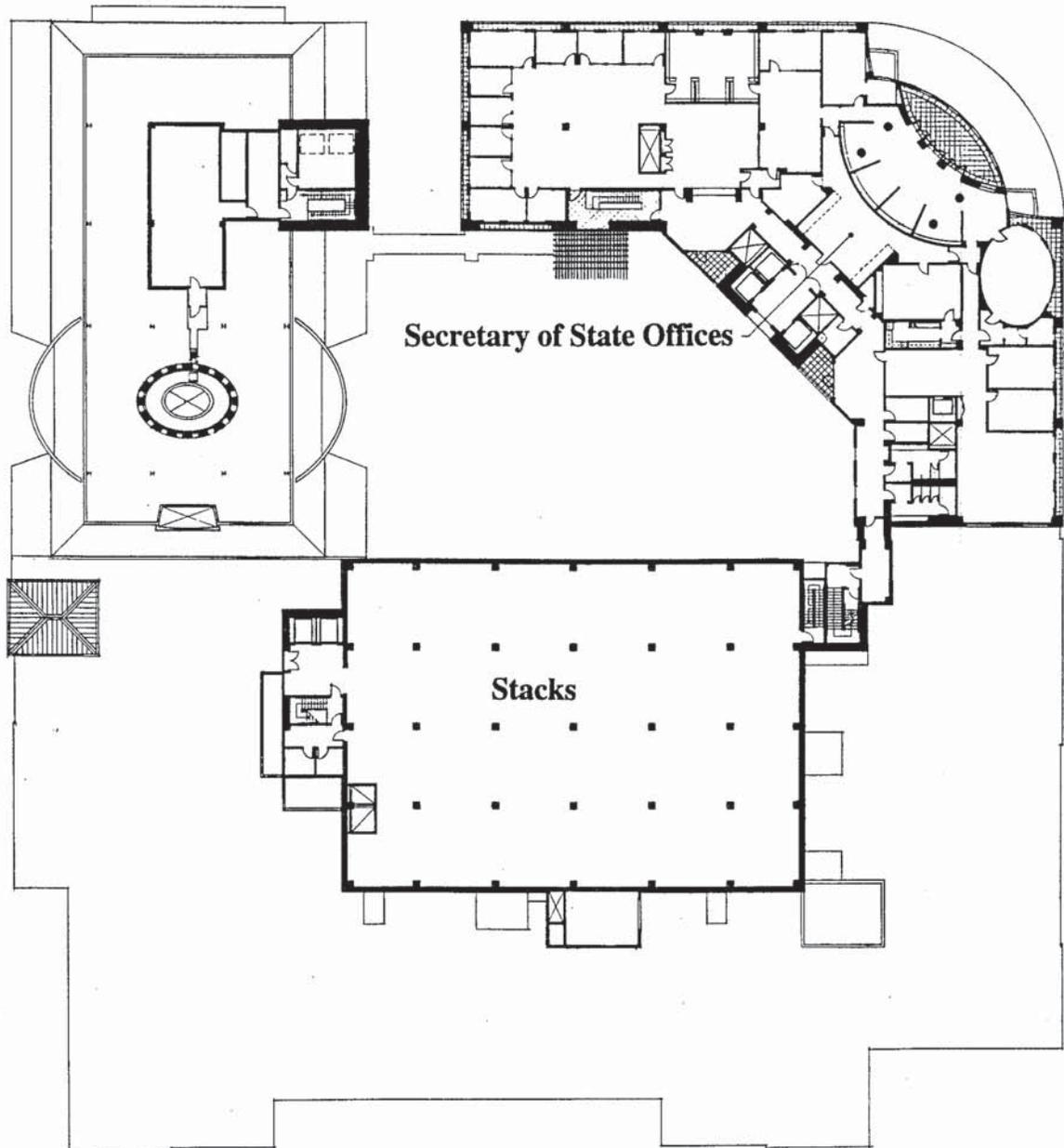
THIRD FLOOR



FOURTH FLOOR



FIFTH FLOOR



SIXTH 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: Ken Firchau

Building name: Secretary of State / Archives Building (036)

What is your association with this property? Building Manager

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

Phone number: (916) 653-2843

Please provide information about inspections relating to the following items

Inspections	Date Last Inspected	List Name & Contact for Maintenance Contractor, if any.
1. Elevators	02/10/15	T&K Elevators and DGS Inspector
2. HVAC, Mechanical, Electric, Plumbing	01/01/15	California Power and Test. / DGS Engineers and Maintenance
3. Life-Safety/Fire	12/16/14	Quality Sound / Siemens
4. Roofs	08/10/14	Tremco

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

2014 Fire and Life safety control upgrade. 2012 Reverse osmosis humidification system for museum. 2013 Energy management system and VAV upgrade.

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

Rollup Fire door retrofit.

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

20 years old over Archives and north end of Secretary of State side. Five years old over Secretary of State south side.

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

Roof, Exterior caulking and sealing, sidewalks, exterior painting, interior carpet replacement, window washing.

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				Strobe light synchronization required by SFM. File number 01-34-0217
10. Are there any "down" or unusable units?	x				Chiller #2 compressor #1 out of service. Domestic water heat exchanger #1.
11. Are there any problems with erosion, storm-water drainage or areas of paving that do not drain?	x				

Question	Y	N	N/A	Unk	Comments
12. Is the property served by a private water well?		x			Daycare handicap ramp
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				Word wall is Deteriorated due to water intrusion.
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				HVAC mixing valves leak
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				In Progress
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				No Grease trap for Cafe
45. Are there any unresolved construction defects at the property?	x				Davits misplaced

APPENDIX J: ELEVATOR REPORT



State Archives
1500 – 11th Street
Sacramento, CA

Due Diligence
Elevator Report

February 24, 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 12, 2015 Bob Nicholson and Russell Holt of Architectural Elevator Consulting, LLC (AEC) surveyed all the vertical transportation systems at the State Archives Building 1500 11th Street, Sacramento, CA. There are eleven (11) geared traction and three (3) hydraulic elevators. The elevators provide vertical transportation to various sections of the buildings. The purpose of the survey was to review the major components, to identify upgrades needed over the next ten years and check for compliance with various codes. In addition to reviewing the major components of the elevators we checked the performance parameters of the equipment and tested safety devices such as door restrictors, electric edges and emergency phones.

All the traction elevators were manufactured and installed by U.S. Elevator Company during the original building construction in 1994. The traction elevators have U.S. MP 1220 controllers while two of the hydraulic elevators have U.S. MP 1230 controllers. One large freight elevator has an MCE controller.

During our survey we noted that the elevators were well maintained by ThyssenKrupp Elevator in most areas but in need of improvement in others. Housekeeping in the machine rooms was good and most the car tops and pits were clean. However, 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 appear to have had a five year full load test since they were installed over 20 years ago. These are not required on Group II elevators in California, but highly recommended.

B. Elevator Layout

Elevators 1-2 are in the museum and work together as a duplex system. Car 3 is a single hydraulic elevator and serves floors 1-4. Cars 4, 5, 6 and 7 are freight elevators and provide service off the loading dock for the Museum and State Archives. Cars 8-9 are for the State Archives building and Cars 10-13 are for the Secretary of State. Car 10 is a special 2 stop elevator that provides secure service from the parking level to the 6th floor. Car 14 is a back of house kitchen elevator. The number, speed and size of the elevators appear to be adequate to provide satisfactory service for each portion of the buildings.

Elevator Summary				
Elevator Bank	Elevator Speed	Floors Served	Capacity	Door Type
Museum Cars 1-2	350 FPM	1-6	3,500 lbs.	Center
Hydraulic Car 3	150 FPM	1-4	2,100 lbs.	Side
Museum Freight Car 4	100 FPM	1-2	16,000 lbs.	Vertical
Traction Freight Cars 5-6	200 FPM	1-6	5,000 lbs.	Vertical
Traction Freight Car 7	150 FPM	B, 1-4	4,000 lbs.	Vertical
Passenger Cars 8-9	350 FPM	Car 8: B, 1-4 Car 9: 1-4	3,500 lbs.	Center
Secretary of State Car 10	200 FPM	1,6	2,100 lbs.	Side
Passenger Cars 11-13	350 FPM	Car 11- B, 1-6 Cars 12-13: 1-6	3,500 lbs.	Center
Kitchen Service Car 14	150 FPM	B, 1-2	2,500 lbs	Center

C. Condition/Components

Most the major components of the elevators were found to be in good condition. However, the controllers were known to be nearly obsolete when installed. U.S. controllers, especially the MP 1220 and 1230 models that are installed here are of concern. In addition, the elevators utilize inefficient motor generator sets to convert the incoming power from AC to DC. The car and hall signal fixtures meet ADA and California Title 24 and were in good condition. The machines, car equipment and door operators are in good condition. The controllers are of real concern. The mother boards are not replaceable and need to be rebuilt by sending out to a repair shop. In *Section II* of this report we provide an in-depth review of each of the major components of the elevators with photographs.

D. Maintenance/Performance

The elevators are currently being maintained by ThyssenKrupp Elevator. The level of maintenance was noted to be good. However, the full speed of the elevators was well below design on many of the elevators. They may have been intentionally slowed down to avoid or mask problems with the controllers. Three sets of hoist ropes (Cars 9, 11 and 13) failed to meet minimum size standards and should be replaced immediately. A few door restrictors did not work and these should be repaired. Most the car tops and pits were clean but a few are getting dirty and should be cleaned. 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 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. All the elevators meet ADA and T24.
2. **Retro Active Codes for Existing Elevators:** We reviewed the elevators for compliance to A17.3 Code, the national safety code for existing elevators. This code requires all elevators, no matter age or installation date, to meet a minimum level of safety. A17.3 is not adopted in California, thus not required by the State, but highly recommended. A complete check list for this retro-active code is included in *Appendix B* of this report. The elevators were installed with most A17.3 coded items. A few door restrictors did not work and should be repaired. The following is a list of items that do not comply with A17.3:
 - a. **Fire Service:** The elevators do not have a “hold” feature on Phase II and thus do not comply with A17.3. We recommend this be added when the elevators are modernized.

3. **Seismic:** The elevators were installed in 1994 under California Group II seismic code. They do not have seismic fishplates, but the counterweight rails had extra rail backing and support which achieved seismic requirements at the time they were installed. The counterweights have ring and string derailment protection. No work is needed for seismic compliance at this time.

F. Recommendation:

We recommend all the elevators have a five year full load test performed as soon as possible. The traction elevators were installed under Group II and are thus exempt from five year full load tests, but we recommend they be tested to ensure they work properly. The hydraulic elevator five year tests are current. The U.S. 1220 and 1230 controllers are of significant concern as service support for these is very limited. We recommend all the elevators be modernized. It would be best to modernize them all at one time, however, in case the budget cannot support a full modernization in one year, we have listed them spread out over the next 1 to 10 years.

Section II : Component Review

A. MACHINE ROOM:

Controllers:

The controllers were manufactured and installed by U.S. Elevator. The traction cars use MP 1220 controllers and the hydraulic elevators use MP 1230 controllers. Parts support and reliability of these controllers is of concern.



Machines:

All the geared traction elevators have high-quality Hollister Whitney machines. A few of the machines had minor oil leaks and some had enough that warrant changing the seals. These machines are generally in good condition and can be retained during the modernization.



Motor Generator Sets:

All the traction elevators have motor generator sets. Some were in pretty good condition and quiet while others were loud and had arching. We recommend these be removed when the elevators are modernized.



B. HOISTWAY:

Hoistway Construction:

The hoistway (elevator shaft) is the main area where the elevators go up and down. The hoistways were mostly built of dry way and in good condition. No work is anticipated in the hoistways.

Hoist ropes:

A few of the hoist ropes were noted to have rouge and undersized. These should be replaced as soon as possible.

Car Guide Rails:

The car rails are in good condition but do not have seismic fish plates. Upgrading the guide rails to current seismic standards is voluntary.



Pits:

All the pits were found to be dry and most were relatively clean. Several of the pits were walk in type and several had pit ladders that were all in compliance with code.

C. CAR TOP:

Door Operator:

The door operators are GAL which are known to be reliable, however, they are starting to show their age. We recommend new closed loop door operators when the elevators are modernized.



Car Roller/Slide Guides:

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



D. SIGNAL FIXTURES:

Car Operating Panels:

All the Car Operating Panels (COP's) are in good condition and meet all ADA and T24. Some of the car button panels were starting to look dated, but overall they were found to be in good condition.



Hall Lanterns:

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



Hall Call Pushbuttons:

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

E. CAB INTERIOR:

Wall Finish:

The existing cab interiors for the passenger cars are in good condition but dated. When the elevators are modernized consideration should be given to upgrade the cabs.



Ceilings:

The passenger elevators have down light ceilings with incandescent light fixtures. Most of the lighting in the passenger cabs was noted to be dim. We recommend new lights that are brighter and have energy savings LED's.



F. HYDRAULIC ELEVATORS:

Hydraulic Elevators:

All the hydraulic elevators have in-ground jacks. The pistons and jack heads appeared to be in good condition.



Controller:

The controller for freight car 4 was manufactured by MCE and is the only non U.S. controller at the building.



Power Unit:

Each hydraulic elevator has a power unit that consists of a valve, pump, motor and tank. The power units were submersible type and found to be in good condition.



Vertical Transportation

State Archives - 1500 11th Street

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 new hoist ropes on Cars 9, 11 and 13. All are undersized with rouge. This should be included in the service contract.	1	1	EA	\$15,000.00		\$45,000				\$45,000
2	Perform five year full load tests on all 11 traction cars. Elevators are not required to have tests and it appears they have not since 1994 when installed.	1	11	EA	\$3,000.00	\$33,000					\$33,000
3	Modernize Passenger Cars 11, 12 and 13	3	3	EA	\$225,000.00			\$675,000			\$675,000
4	Modernize Secretary of State Car 10	3	1	EA	\$195,000.00			\$195,000			\$195,000
5	Modernize Passenger Cars 8 and 9	3	2	EA	\$215,000.00			\$430,000			\$430,000
6	Modernize Museum Passenger Cars 1 and 2	3	2	EA	\$215,000.00				\$430,000		\$430,000
7	Modernize Freight Elevator 7	3	1	EA	\$195,000.00			\$195,000			\$195,000
8	Modernize Freight Elevators 5 and 6	3	2	EA	\$230,000.00				\$460,000		\$460,000
9	Modernize Freight Elevator 4	3	1	EA	\$250,000.00					\$250,000	\$250,000
10	Modernize hydraulic elevators 3 and 14	3	2	EA	\$95,000.00				\$95,000		\$95,000
11											
12											
Subtotal						\$33,000	\$45,000	\$1,495,000	\$985,000	\$250,000	\$2,808,000
		1	\$33,000	Code and Safety							
		2	\$45,000	Deferred Maintenance & Repair							
		3		Capital Expenditure							
		4	\$2,730,000	Modernization / Improvements							
		5	\$2,808,000	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 1-3,8-14
	GENERAL	
4.10.1	Elevator must comply with ASME A17.1-1990. Freight elevators are not acceptable unless only elevator provided, and is permitted to carry passengers, both public and employees.	Yes
	AUTOMATIC OPERATION	
4.10.2	Elevators must be Automatic.	Yes
4.10.2	Self-leveling to within 1/2 in.	Yes
	HALL CALL BUTTONS	
4.10.3	Buttons centered at 42 in. above the floor.	Yes
4.10.3	Buttons to illuminate when call is entered and extinguish when answered.	Yes
4.10.3	Buttons to be at least 3/4 in. in the smallest dimension.	Yes
4.10.3	Up button located above down button.	Yes
4.10.3	Buttons raised or flushed. (T24 must be raised)	Yes
4.10.3	Objects mounted beneath hall buttons not to project into the lobby more than 4 in.	Yes
	HALL or CAR LANTERNS	
4.10.4	Visible and audible signals at each hoistway entrance to indicate which car is responding to the call.	Yes – Hall
4.10.4	Audible signals to sound once for up and twice for “down” or may verbal announcement stating “up” “down.”	Yes
4.10.4	Hall directional lantern centered 72 in. above floor.	Yes
4.10.4	Directional lantern visible elements minimum of 2-½ in. in the smallest dimension.	Yes
4.10.4	Directional lanterns must be visible from the vicinity of the hall call button.	Yes
4.10.4	In car lanterns, meeting the requirements above are acceptable in lieu of hall directional lanterns.	N/A
	HOISTWAY ENTRANCES	
4.10.5	Raised and Braille floor designations are required on both door jambs. Permanently applied plates are acceptable. (T24 must be to the left)	Yes
4.10.5	Centerline of floor designation characters 60 in. above floor.	Yes
4.30.4	Characters must be 2 in. high, raised 1/32 in. upper sans serif (block letters) or simple serif type.	Yes
4.30.4	Grade II Braille to accompany raised characters.	Yes
	DOOR PROTECTIVE & REOPENING DEVICES	
4.10.6	Doors must open and close automatically.	Yes
4.10.6	Non-contact door reopening device at 5 in. and 29 in. above the floor.	Yes
4.1.6(3)(c)	If safety edges are provided on existing elevators, the non-contact door reopening devices may be omitted.	Yes
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 1-3,8-14
	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)	Yes
4.10.12	Buttons must be designated by raised characters and Braille or symbols complying with ASME A17.1 Rule 210.13.	Yes
4.10.12	Characters must be a minimum of 5/8 in. high, upper case sans (block letters) or simple serif type.	Yes
4.10.12	Grade II Braille to accompany raised character of symbol.	Yes
4.10.12	Raised designations must be to the immediate left of the button to which they apply.	Yes
4.10.12	Call button illuminates when call is entered and extinguish when answered.	Yes

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		Cars 1-3,8-14
4.10.12	Floor buttons must be no higher than 48 in. when located in front return. Buttons must be no higher than 54 in. when a side approach provided.	Yes
4.10.12	Emergency controls, including emergency alarm and emergency stop (if provided) must be grouped at the bottom of the panel and have centerlines no less than 35 in. above the finished floor.	Yes
4.10.12	Controls must be on the front return wall with center-opening doors. They may be on the front return or strike jamb sidewall with side doors.	Yes
	CAR POSITION INDICATORS	
4.10.13	Visual car position indicator must be provided above control panel or over door.	Yes
4.10.13	Car position indicator numerals must be a minimum of 1/2 in. high.	Yes
4.10.13	Audible signal to sound as the car passes or stops at a floor and a corresponding floor designation must illuminate. Audible signal must be at least 20 dB with a frequency no higher than 1,500 Hz.	Yes
4.10.13	A button to activate audible signal only for desired trip may be provided.	N/A
4.10.13	An automatic verbal announcement the floor at which a car stops may be substituted for the audible signal.	N/A
	EMERGENCY COMMUNICATIONS	
4.10.14	If provided, emergency two-way communication systems between the elevator and a point outside the hoistway must comply with ASME A17.1-1990, Rule 211.1.	Yes
4.10.14	The highest operable part must be a maximum of 48 in. from the car floor.	Yes
4.10.14	Emergency communication identification must be provided and located adjacent to the device. Characters must be a minimum of 5/8 in. high raised 1/32 in., upper case serif (block letters) or simple serif type, and accompanied by Grade II Braille.	Yes
4.10.13	If a handset is provided the cord must be at least 29 in. long.	N/A
4.27.4	If located in a closed compartment, the door must be operable with one hand. It must not require tight grasping, pinching or twisting of the wrist. The force required to open the door must not exceed 5 lb/f.	N/A
4.10.13	The system must not require voice communication.	Yes

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

A17.3	Code Item	Cars: 1-14
2.1	HOISTWAYS	
2.1.1	Hoistway Construction (Enclosed & Fire rated per local code or ANSI/NFPA No. 101)	Yes
2.1.2	Windows in Hoistway Enclosures: (If provided are they guarded properly.)	Yes
2.1.3	Projections in Hoistway (Must be flush and level; Leveling zone +3” / 60 to 75 deg bevel.)	Yes
2.1.4	Pipes Conveying Gases, Vapors, or Liquids. (If provided must be properly covered & securely fastened.)	Yes
2.1.5	Counterweight Guards (Start at 12” go to 84” above pit floor; not needed with comp rope/chain)	N/A
2.2	MACHINE ROOMS AND MACHINERY SPACES	
2.2.1	Enclosures – Designated Machine Room (No-non elevator equipment- existing can stay)	Yes
2.2.2	Access to Machine Rooms and Machinery Spaces (A permanent means to the machine room- locked door)	Yes
2.2.3	Lighting (Permanent lighting in all machine rooms)	Yes
2.2.4	Ventilation (Natural or mechanical to avoid overheating)	Yes
2.2.5	Pipes Conveying Gases, Vapors, or liquids (Existing pipes allowed if guarded to prevent discharge)	Yes
2.2.6	Protection From Weather	Yes
2.3	PITS	
2.3.1	Access to Pits (Means of access to all pits. If access door provide closer & keys onsite.)	Yes
2.3.2	Drains (Drains connected directly to the sewer are not permitted.)	Yes
2.3.3	Stop Switch (A stop switch shall be provided for every pit. Locate near access, color, etc.)	Yes
2.4	CLEARANCES AND RUNBYS	
2.4.1	Horizontal Car Clearances (Not more than 5” for horizontal doors; 7.5” for vertical doors)	Yes
2.4.2	Bottom Car Clearances (Car shall not strike any equipment when resting on fully compressed buffer.)	Yes
2.4.3	Bottom Car and Counterweight 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: 1-14
2.7.4	Restricted Opening of Hoistway Doors and/or Car Doors on Passenger Elevators (Cannot open more than 4” outside unlocking zone +-18” max.)	Yes
2.7.5	Hoistway Emergency Door Contacts (Positively opened)	Yes
2.8	POWER OPERATION OF DOORS AND GATES	
2.8.1	Kinetic Energy and Force Limitations for Power-operated Horizontal Sliding Doors. (Shall not exceed 7ft/lbs. with re-opening device, without 2.5ft/lbs.; cannot exceed 30 ft/lbs)	Yes
2.8.2	Reopening Device for Power-Operated Car Doors or Gates (Can be rendered inoperative if less than 2.5ft/lb)	Yes
	Part III	
3.1	Buffers And Bumpers (Car and counterweight buffers are required)	Yes
3.2	Counterweights (The weights shall be protected so that they cannot be dislodged. The rod nuts shall be protected)	Yes
3.3	CAR FRAMES AND PLATFORMS	
3.3.1	Car Platforms(Cover entire area)	Yes
3.3.2	Platform Guards (Aprons) (Vertical face at least 21”, 60-75deg, withstand 150#)	Yes
3.3.3	Hinged Platform Sills(Must have contacts & prevent operation unless within 2”)	N/A
3.3.4	Floating (Movable) Platforms(Prohibited if car can move when door is not closed)	N/A
3.3.5	Protection of Platforms Against Fire (Must be covered with sheet metal or fire resistant material)	Yes
3.4	CAR ENCLOSURES	
3.4.1	Car Enclosures (Passenger – total enclosed; Frt maybe perforated, but not by the cwt.; Car top must withstand 300lbs on any 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: 1-14
	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: 1-14
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)	Yes
3.12	SUSPENSION MEANS AND THEIR CONNECTIONS	
3.12.1	Suspension Means (Must be wire rope made of iron or steel- Elevator ropes only)	Yes
3.12.2	Rope Data Tag	Yes
3.12.3	Factor of Safety ($f = SxN/W$ or table 3.12.3)	Yes
3.12.4	Minimum Number and Diameter of Suspension Ropes (3 for traction; 2 for drum; minimum diameter = 3/8”)	Yes
3.12.5	Suspension Rope Equalizers (When provided shall be of the individual-compression spring type)	Yes
3.12.6	Securing of Suspension Wire Ropes to Winding Drums (rope must be secured by clamps or tapered babbitted sockets.)	N/A
3.12.7	Spare Turns on Winding Drums (Not less then 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

1500 11 th Street							
	PERFORMANCE TIMES	Design	CAR 1	CAR 2	CAR 11	CAR 12	CAR 13
7.1	Door Open Time	1.6	1.7	1.9	2.1	2.1	1.9
7.2	Door Close Time	2.4	3.5	3.2	2.5	3.2	3.3
7.3	Floor to Floor Up	9.1	16.1	15.0	15.6	14.5	13.3
9.6	Floor to Floor Down	9.1	16.2	15.7	13.3	14.2	11.4
7.5	Full Speed Up	350 FPM	301	284	367	334	298
7.6	Full Speed Down	350 FPM	297	279	365	325	292
7.7	Jerk Rate Up	< 7.0	6.5	8.8	11.7	11.1	9.8
7.8	Jerk Rate Down	<7.0	14.2	15.3	10.5	13.1	11.5
7.9	Power Closing of Door (Pressure Gauge)	<30lbs	21 lbs	19 lbs	18 lbs	15 lbs	19lbs
7.10	Interrupted Ray	.5sec	1.2	1.1	1.7	1.9	2.1
7.11	Car Dwell Time	3.0	3.7	4.2	3.9	5.1	4.6
7.12	Hall Call Dwell Time	5.0	6.1	6.5	6.3	7.1	7.7
7.13	Hall/Car Lantern Time	8.0	13.5	15.3	13.8	13.5	12.5
	Nudging	20.0	>20	>20	>20	>20	>20
	Test Emergency Phone	Yes	Yes	Yes	Yes	Yes	Yes

Items in Red do not comply and should be adjusted.

Car #	GENERAL MAINTENANCE DEFICIENCIES
	Car 1
1.1	Car takes too long to level.
1.2	Car position indicator lens is burned out.
1.3	Service cabinet is not locked.
1.4	Car has significant roll back.
	Car 2
2.1	Check bearing on motor generator set. Gets real loud when winding down.
	Car 11
11.1	Leveling times is too long.
11.2	No floor passing chime.
11.3	Ropes have rouge and failed to meet minimum size standards. Replace ASAP.
11.4	All three controller cabinets for Cars 11-13 are dirty.

Appendix “C”

Performance Review and Maintenance Deficiency List

11.5	Door restrictor does not work.
11.6	E-light power supply box on top of car is all smashed in.
11.7	Pit compensation is missing rollers in the pit. Other cars have them.
11.8	Hall call stations show wear on antique bronze.
	Car 12
12.1	Car jerks to a start.
12.2	Check brushes on motor generator set.
12.3	Door restrictor does not work.
	Car 13
13.1	Hoist ropes have rouge and are undersized – had full failure. Replace ASAP.
13.2	Machine needs some minor work.
13.4	Car takes too long to level.
13.5	Certificate in Car 13 is for Car 11.

1500 11 th Street										
	PERFORMANCE TIMES	Design 8-9	CAR 8	CAR 9	Design 10	CAR 10	Design 3	CAR 3	Design 14	CAR 14
7.1	Door Open Time	1.6	2.8	2.9	2.1	2.4	2.1	1.9	1.6	1.4
7.2	Door Close Time	2.4	3.9	3.5	3.4	3.3	3.4	3.0	2.4	2.5
7.3	Floor to Floor Up	9.1	15.3	13.2	11.2	N/A	13.5	19.2	13.0	19.5
9.6	Floor to Floor Down	9.1	13.4	12.2	11.2	N/A	13.5	20.1	13.0	18.1
7.5	Full Speed Up	350 FPM	348	350	200 FPM	183	150 FPM	156	150 FPM	160
7.6	Full Speed Down	350 FPM	338	340	200 FPM	182	150 FPM	123	150 FPM	134
7.7	Jerk Rate Up	< 7.0	11.6	11.5	< 7.0	10.9	< 7.0	14.0	< 7.0	9.6
7.8	Jerk Rate Down	<7.0	12.1	9.6	<7.0	4.6	<7.0	8.8	<7.0	7.1
7.9	Power Closing of Door (Pressure Gauge)	<30lbs	20 lbs	21 lbs	<30lbs	27 lbs	<30lbs	22 lbs	<30lbs	20 lbs
7.10	Interrupted Ray	.5sec	1.4	1.5	.5sec	2.8	.5sec	1.2	.5sec	2.3
7.11	Car Dwell Time	3.0	3.2	3.9	3.0	4.5	3.0	5.1	3.0	4.0
7.12	Hall Call Dwell Time	5.0	6.2	6.7	5.0	4.6	5.0	8.0	5.0	7.5
7.13	Hall/Car Lantern Time	8.0	13.5	10.2	8.0	15.4	8.0	15.1	8.0	7.5
	Nudging	20.0	28.5	29.4	20.0	20.1	20.0	>20	20.0	>30
	Test Emergency Phone	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Appendix “C”

Performance Review and Maintenance Deficiency List

Car #	GENERAL MAINTENANCE DEFICIENCIES
	Car 8
8.1	Provide label for machine room door.
8.2	Seal oil leak on machine room.
	Car 9
9.1	Hoist ropes show crown wear. All five ropes are undersized.
9.2	Car position indicator is not working.
	Car 3
3.1	Car position indicator is frosted and hard to read.
3.2	Car jerks to a start and stop.
3.3	Door is squeaky
3.4	Pit has minor dirt.

1500 11 th Street									
	PERFORMANCE TIMES	Design 5-6	CAR 5	CAR 6	Design 7	CAR 7	Design 4	CAR 4	
7.1	Door Open Time	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
7.2	Door Close Time	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
7.3	Floor to Floor Up	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
9.6	Floor to Floor Down	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
7.5	Full Speed Up	200 FPM	186	182	150 FPM	120	100 FPM	77	
7.6	Full Speed Down	200 FPM	184	174	150 FPM	118	100 FPM	64	
7.7	Jerk Rate Up	< 7.0	10.3	7.2	< 7.0	6.2	< 7.0	14.5	
7.8	Jerk Rate Down	<7.0	8.2	7.2	<7.0	6.2	<7.0	9.6	
7.9	Power Closing of Door (Pressure Gauge)	<30lbs	N/A	N/A	<30lbs	N/A	<30lbs	N/A	
7.10	Interrupted Ray	.5sec	N/A	N/A	.5sec	N/A	.5sec	N/A	
7.11	Car Dwell Time	3.0	N/A	N/A	3.0	N/A	3.0	N/A	
7.12	Hall Call Dwell Time	5.0	N/A	N/A	5.0	N/A	5.0	N/A	
7.13	Hall/Car Lantern Time	8.0	N/A	N/A	8.0	N/A	8.0	N/A	
	Nudging	20.0	N/A	N/A	20.0	N/A	20.0	N/A	
	Test Emergency Phone	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Appendix “C”
Performance Review and Maintenance Deficiency List

Car #	GENERAL MAINTENANCE DEFICIENCIES
	Car 6
6.1	Car position indicator not working.
	Car 7
7.1	Hoist ropes only have one clip on counterweight side of dead end. Car side is marginal.
	Car 4
4.1	Small parts mess in controller room.
4.2	Equipment is being stored in the elevator cab.



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