PARSONS

City of Long Beach

2013 Update of Select Facilities
Facilities Condition Assessment Report





September 17, 2013

Contents

Executive Summary

Many city, county and state agencies are coping with aging facilities, outdated building system technologies and ever-evolving business mission requirements. While new construction funding is significant in the public and private sectors, even greater expenditures are needed to fund the accumulated backlog of essential repairs and renovations to existing facilities and infrastructure. This funding is critical to provide the quality of services that the City of Long Beach's (CLB) customers deserve and for agencies to adapt existing facilities to changing customer demographics, programmatic and facility use needs.

Assessment Scope of Work

The City of long Beach, CA (CLB) authorized Parsons in August 2013 to conduct a limited facility condition assessment of four facilities' site infrastructure and buildings of about 658,642 square feet. The assessment fieldwork was completed in September 2013 and the summary results are documented in this report.

CLB administrators requested that the capital renewal requirements for the facility be forecasted for 35 years to compare those costs with facility replacement options. Information obtained through the assessment is intended to provide professional and comprehensive technical information needed to assist CLB staff in making informed decisions regarding the planning, continued use and reinvestment funding needs of the existing facilities.

Facility Condition Assessment (FCA) Summary

The following table summarizes Current Period and Forecast Period CLB facility needs:

CLB Facilities	Budget Estimate
Current Period[1] Needs (2013)	
Current Condition Deferred Maintenance[2] Needs	$119,448,578
Current Replacement Value[3] (CRV):	$213,950,793
Current Facility Condition Index[4] (FCI)%:	55.83%
Forecast Period[5] Needs	
Forecast Period (2014–2023) Capital Renewal Needs	$29,850,686
Current Period + Forecast Period Needs (2013-2023)	$149,299,264
Annual Average Needs (2013-2048)	$2,985,069
Total Projected 35 Year Needs (2013-2048)	$223,925,979

Each facility was assessed for physical condition, repair, maintenance or capital renewal needs, and remaining expected life. The data was captured in Parsons' Condition Management Estimation Technology (eCOMET™) software that provides for data capture, analysis, future capital renewal expenditure projections, and reporting.

[1] The Current Period includes the assessment period year—for this report—2013.

[2] Deferred maintenance is condition work (excluding suitability and technology readiness needs) deferred on a planned or unplanned basis to a future budget cycle or postponed until funds are available.

[3] Current Replacement Value (CRV), also known as Replacement Value represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to an optimal state-of-the-art condition under current codes and construction standards and techniques.

[4] FCI is an industry-standard measurement of a facility's condition that is the ratio of the cost to correct a facility's deficiencies to the Current Replacement Value (CRV) of the facilities. CRV represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to its optimal condition under current codes and construction methods. FCI is typically expressed as a percent.

[5] The Forecast Period includes 35 years following the Current Period—in this report 2014–2048.

Through these efforts, each facility received an FCA report detailing the deferred maintenance and capital renewal needs and a baseline inventory of selected building systems (see individual building reports).

The assessment did not include suitability issues—those issues that reflect the existing space suitability to support the intended mission or to meet the City's standards for the neither space type — nor sufficiency issues on whether there was insufficient space provided by the existing facilities required by the facilities' missions.

The table below provides the Current Period summary data by facility:

Facility Name	Gross Area(ft)	Current Replacement Value	FCI (%)	Current Needs	10-Year Renewals	10 Year Total Needs	Average Annual Needs	Projected 35 Year Needs
CLB 2013 Update	658,642	$213,950,793	55.83%	$119,448,578	$29,850,686	$149,299,264	$2,985,069	$223,925,979
Broadway Parking Structure	215,600	$15,192,920	35.28%	$5,360,566	$2,574,563	$7,935,129	$257,456	$14,371,537
City Hall	283,268	$125,850,491	52.04%	$65,492,265	$13,250,339	$78,742,604	$1,325,034	$111,868,452
City Hall Concourse Parking	24,774	$2,884,640	39.39%	$1,136,395	$0	$1,136,395	$0	$1,136,395
Civic Centre Main Library	135,000	$57,371,263	73.14%	$41,959,745	$14,025,785	$55,985,530	$1,402,579	$91,049,993
Civic Centre Site	0	$12,651,479	43.47%	$5,499,607	$0	$5,499,607	$0	$5,499,607

As a result of conducting the facility condition assessment the Current Needs can be further detailed by their priority, or urgency of need for repair. Priority 1 and 2 deficiencies have created, or will soon create, conditions that are safety hazards, are in extreme or accelerated deterioration, or are in failing and interrupted operations. Examples of these deficiencies include seismic stiffening improvements, severely damaged or failing roof systems, branch wiring systems, cooling/heating distribution systems, structural supports, building exteriors, and fire alarm systems. Deficiencies in these priority categories should be addressed immediately (Priority 1) or within the next one to two years (Priority 2) as funding is available.

The majority of remaining current needed repairs that are not yet critical (Priority 3 and Priority 4) require attention in the next three to four years (Priority 3) and five to ten years (Priority 4) to avoid eventual deterioration, operational downtime, or eventual damage if not addressed. Priority 5 issues are so-called "grandfathered" code issues and are triggered by renovation of facilities.

These needs have been prioritized and are summarized below:

Current Needs (2013)	Priority for Repair
$24,092,491	**Priority 1** – Currently Critical (Immediate) Conditions require immediate action to correct a cited safety hazard, stop accelerated deterioration, or return a facility to operation.
$16,695,313	**Priority 2** – Potentially Critical (Years 1-2) Conditions, if not corrected expeditiously, will become critical within a year resulting in intermittent operations, rapid deterioration, potential life safety hazards, etc.
$3,646,975	**Priority 3** – Necessary/Not Yet Critical (Years 3-5) Conditions require appropriate attention to avoid predictable deterioration, potential downtime, or associated damage or higher costs if deferred further.
$75,013,798	**Priority 4** – Recommended (Years 5-10) Conditions include items that represent sensible improvement to existing conditions but are not required for the basic function of the facility, overall usability improvements, or long-term maintenance cost reduction.
$0	**Priority 5** – Does Not Meet Current Codes but is "Grandfathered." No action is required at this time; however, renovation work performed in the future may trigger correction.

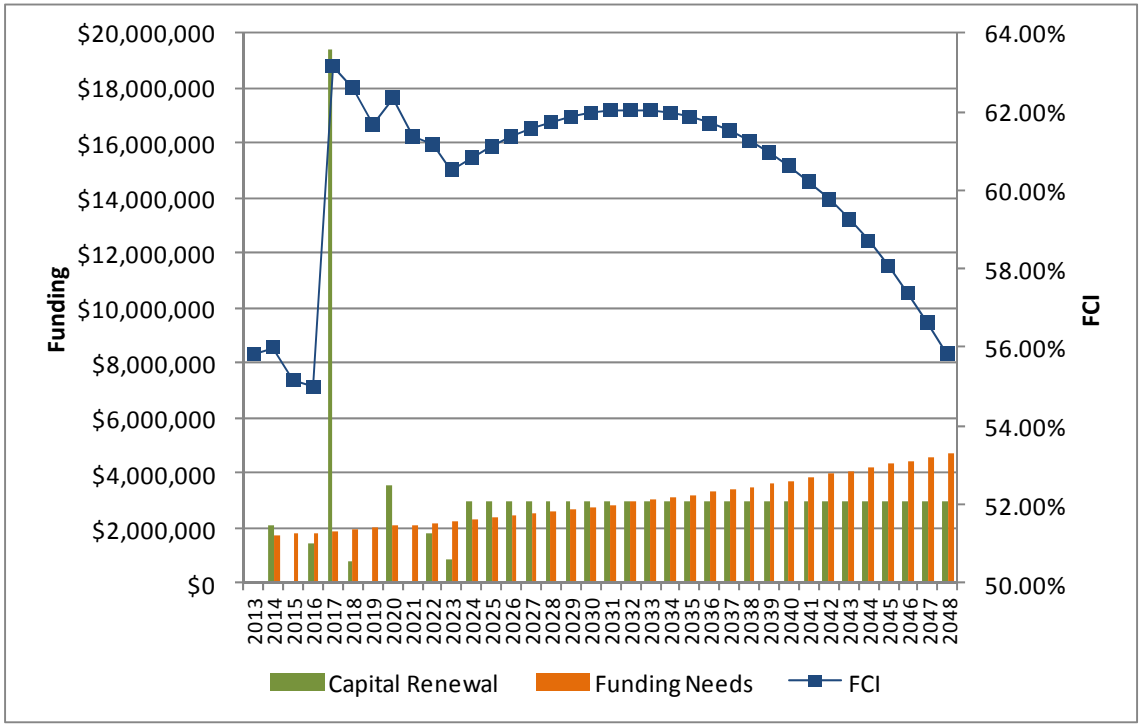
2014-2048 Capital Funding Scenarios

With requirements prioritized and the assessment data in place, Parsons identified both short- and long-term budget requirements by developing the impact of different funding levels on the condition of the designated CLB real estate portfolio.

Referring to the Facility Assessment summary, the total Current Period (2013) and 10-Year Forecast Period (2014-2023) funding needs are about $149.3 million. However, extrapolating the data 35 years into the forecast period results in needs of about $223,925,979. In the analyses shown below, the facility condition data developed during the CLB assessment were used to produce three 35-year funding Scenarios:

- Scenario 1: Maintain the current facility condition index of FCI = 55.83 percent, a level considered to be poor condition, to address forecasted on-going capital renewal needs in level funding escalated 3 percent per year of about $1.7 million per year with total funding needs in the amount of $104,477,251.
- Scenario 2: Funding to improve the CLB facilities' condition to FCI = 25 percent, a level considered to be fair condition, to address both on-going capital renewal needs plus partially pay down existing deferred maintenance needs in level funding escalated 3 percent per year of about $2.8 million per year with total funding needs in the amount of $170,438,281.
- Scenario 3: Target improving the condition under an increased funding program to achieve a 100 percent FCI improvement across the total portfolio, from 55.83 percent to 0 percent FCI in level funding escalated 3 percent per year of about $3.7 million per year with total funding needs in the amount of $223,925,979.

Scenario 1—Funding needed to maintain the current facility condition over the 35-year plan at the current facility condition index (FCI) of 55.83 percent, a level considered by many references to be poor condition. The blue curve indicates the annual FCI over the 35-year cycle based on the funding provided each year. The green columns represent system renewal costs for each year, while the orange columns represent the level payments of about $1.7 million escalated each year by 3 percent needed to offset the recurring system renewals.

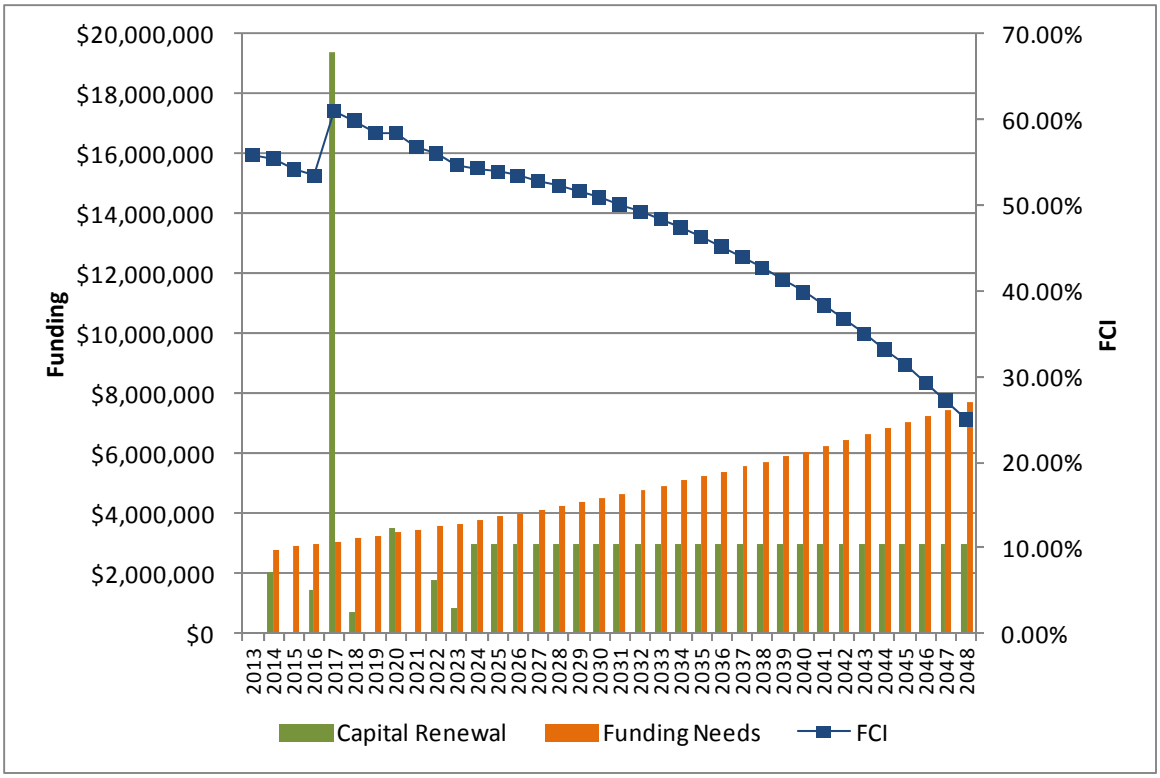


Scenario 1—Maintain the Current Condition FCI

Year	Capital Renewal	Funding Needs	FCI
2013			55.83%
2014	$2,084,341	$ 1,727,980	56.00%
2015	$0	$ 1,779,819	55.16%
2016	$1,452,121	$ 1,833,214	54.99%
2017	$19,377,707	$ 1,888,210	63.16%
2018	$754,319	$ 1,944,856	62.60%
2019	$0	$ 2,003,202	61.67%
2020	$3,528,026	$ 2,063,298	62.35%
2021	$0	$ 2,125,197	61.36%
2022	$1,779,709	$ 2,188,953	61.17%
2023	$874,463	$ 2,254,622	60.52%
2024	$2,985,069	$ 2,322,260	60.83%
2025	$2,985,069	$ 2,391,928	61.11%
2026	$2,985,069	$ 2,463,686	61.35%
2027	$2,985,069	$ 2,537,596	61.56%
2028	$2,985,069	$ 2,613,724	61.74%
2029	$2,985,069	$ 2,692,136	61.87%
2030	$2,985,069	$ 2,772,900	61.97%

Year	Capital Renewal	Funding Needs	FCI
2031	$2,985,069	$ 2,856,087	62.03%
2032	$2,985,069	$ 2,941,770	62.05%
2033	$2,985,069	$ 3,030,023	62.03%
2034	$2,985,069	$ 3,120,924	61.97%
2035	$2,985,069	$ 3,214,551	61.86%
2036	$2,985,069	$ 3,310,988	61.71%
2037	$2,985,069	$ 3,410,317	61.51%
2038	$2,985,069	$ 3,512,627	61.26%
2039	$2,985,069	$ 3,618,006	60.97%
2040	$2,985,069	$ 3,726,546	60.62%
2041	$2,985,069	$ 3,838,342	60.22%
2042	$2,985,069	$ 3,953,493	59.77%
2043	$2,985,069	$ 4,072,097	59.26%
2044	$2,985,069	$ 4,194,260	58.70%
2045	$2,985,069	$ 4,320,088	58.07%
2046	$2,985,069	$ 4,449,691	57.39%
2047	$2,985,069	$ 4,583,182	56.64%
2048	$2,985,069	$ 4,720,677	55.83%
Total	$104,477,401	$104,477,251	

Scenario 2 —Target improving the condition under an increased funding program to achieve about 55 percent FCI improvement across the total portfolio, from 55.83 percent to 25 percent FCI, a level considered by many references to be fair condition. The blue curve traces the improving FCI down to 25 percent over 35 years. The green columns represent system renewal costs for each year, while the orange columns represent the level payments of about $2.8 million escalated each year by 3 percent needed to offset the recurring system renewals plus partially pay down existing deferred maintenance.

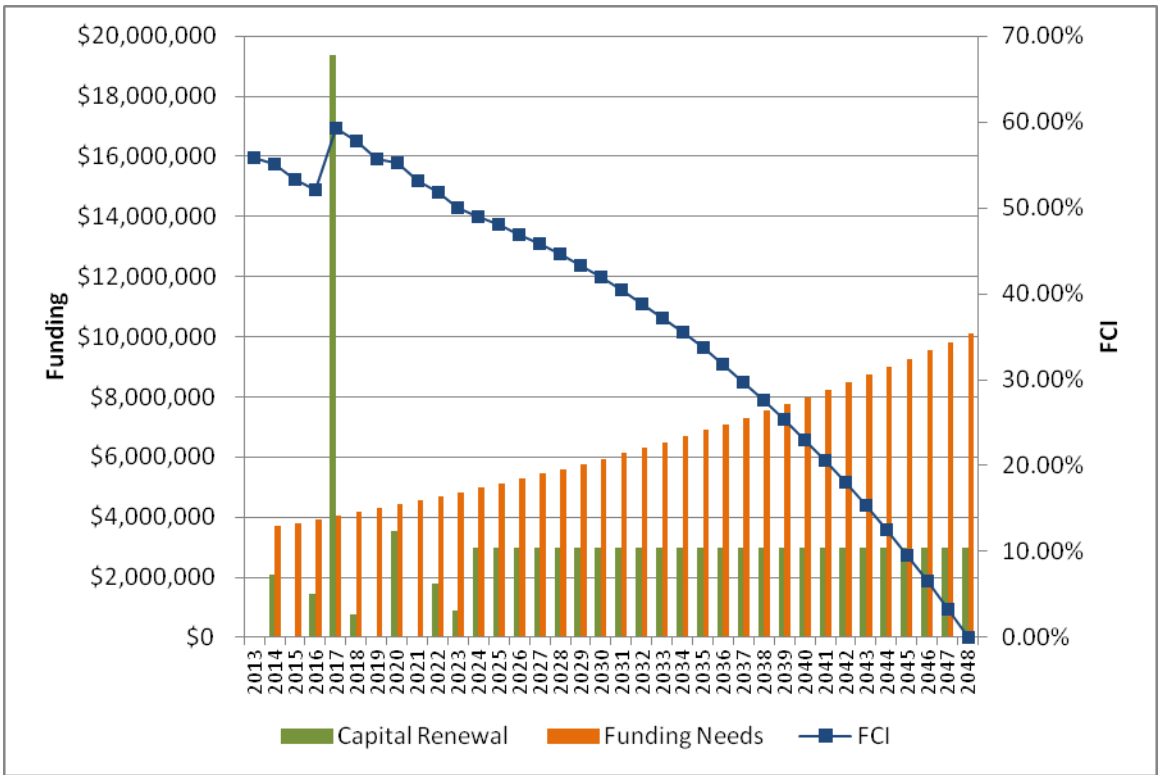


Scenario 2—Reduce the FCI to 25.0 percent

Year	Capital Renewal	Funding Needs	FCI
2013			55.83%
2014	$2,084,341	$ 2,818,928	55.49%
2015	$0	$ 2,903,496	54.13%
2016	$1,452,121	$ 2,990,601	53.41%
2017	$19,377,707	$ 3,080,319	61.03%
2018	$754,319	$ 3,172,729	59.90%
2019	$0	$ 3,267,911	58.37%
2020	$3,528,026	$ 3,365,948	58.45%
2021	$0	$ 3,466,926	56.83%
2022	$1,779,709	$ 3,570,934	55.99%
2023	$874,463	$ 3,678,062	54.68%
2024	$2,985,069	$ 3,788,404	54.30%
2025	$2,985,069	$ 3,902,056	53.87%
2026	$2,985,069	$ 4,019,118	53.39%

Year	Capital Renewal	Funding Needs	FCI
2027	$2,985,069	$ 4,139,691	52.85%
2028	$2,985,069	$ 4,263,882	52.25%
2029	$2,985,069	$ 4,391,799	51.60%
2030	$2,985,069	$ 4,523,553	50.88%
2031	$2,985,069	$ 4,659,259	50.09%
2032	$2,985,069	$ 4,799,037	49.25%
2033	$2,985,069	$ 4,943,008	48.33%
2034	$2,985,069	$ 5,091,298	47.35%
2035	$2,985,069	$ 5,244,037	46.29%
2036	$2,985,069	$ 5,401,358	45.16%
2037	$2,985,069	$ 5,563,399	43.96%
2038	$2,985,069	$ 5,730,301	42.67%
2039	$2,985,069	$ 5,902,210	41.31%
2040	$2,985,069	$ 6,079,276	39.86%
2041	$2,985,069	$ 6,261,655	38.33%
2042	$2,985,069	$ 6,449,504	36.71%
2043	$2,985,069	$ 6,642,989	35.00%
2044	$2,985,069	$ 6,842,279	33.20%
2045	$2,985,069	$ 7,047,548	31.30%
2046	$2,985,069	$ 7,258,974	29.30%
2047	$2,985,069	$ 7,476,743	27.20%
2048	$2,985,069	$ 7,701,045	25.00%
Total	$104,477,401	$170,438,281	

Scenario 3 —Target improving the condition under an increased funding program to achieve a total 100 percent FCI improvement across the total portfolio, from 55.83 percent to 0.00 percent FCI, a level considered to be excellent (new) condition. The blue curve traces the improving FCI down to 0 percent over 35 years. The green columns represent system renewal costs for each year, while the orange columns represent the level payments of about $3.7 million escalated each year by 3 percent needed to offset the recurring system renewals plus partially pay down existing deferred maintenance.



Scenario 3—Reduce the FCI to 0%

Year	Capital Renewal	Funding Needs	FCI
2013			55.83%
2014	$2,084,341	$ 3,703,577	55.07%
2015	$0	$ 3,814,684	53.29%
2016	$1,452,121	$ 3,929,125	52.13%
2017	$19,377,707	$ 4,046,999	59.30%
2018	$754,319	$ 4,168,409	57.70%
2019	$0	$ 4,293,461	55.70%
2020	$3,528,026	$ 4,422,265	55.28%
2021	$0	$ 4,554,933	53.15%
2022	$1,779,709	$ 4,691,581	51.79%
2023	$874,463	$ 4,832,328	49.94%
2024	$2,985,069	$ 4,977,298	49.01%
2025	$2,985,069	$ 5,126,617	48.01%
2026	$2,985,069	$ 5,280,415	46.93%

Year	Capital Renewal	Funding Needs	FCI
2027	$2,985,069	$ 5,438,828	45.79%
2028	$2,985,069	$ 5,601,993	44.56%
2029	$2,985,069	$ 5,770,052	43.26%
2030	$2,985,069	$ 5,943,154	41.88%
2031	$2,985,069	$ 6,121,449	40.41%
2032	$2,985,069	$ 6,305,092	38.86%
2033	$2,985,069	$ 6,494,245	37.22%
2034	$2,985,069	$ 6,689,072	35.49%
2035	$2,985,069	$ 6,889,744	33.66%
2036	$2,985,069	$ 7,096,437	31.74%
2037	$2,985,069	$ 7,309,330	29.72%
2038	$2,985,069	$ 7,528,610	27.60%
2039	$2,985,069	$ 7,754,468	25.37%
2040	$2,985,069	$ 7,987,102	23.03%
2041	$2,985,069	$ 8,226,715	20.58%
2042	$2,985,069	$ 8,473,516	18.02%
2043	$2,985,069	$ 8,727,722	15.33%
2044	$2,985,069	$ 8,989,554	12.52%
2045	$2,985,069	$ 9,259,240	9.59%
2046	$2,985,069	$ 9,537,017	6.53%
2047	$2,985,069	$ 9,823,128	3.33%
2048	$2,985,069	$ 10,117,822	0.00%
Total	$104,477,401	$223,925,979	

Background and Objectives

Purpose of the CLB Assessment

In August 2013, CLB commissioned Parsons to conduct a limited condition assessment of four designated CLB buildings. The four facilities and their campus site comprised the "CLB 2013 Update":

CLB 2013 Update	658,642
Broadway Parking Structure	215,600
City Hall	283,268
City Hall Concourse Parking	24,774
Civic Centre Main Library	135,000
Civic Centre Site	0

CLB initiated the facility condition assessment by Parsons to:

- Use assessment software provided through the assessment services to develop current facility condition data that can be used by CLB facility staff to support timely funding decisions to reduce deferred maintenance backlog that will lead to lower relative overall facility recapitalization program costs.
- Identify facility deficiency correction cost budgets that can be prioritized and categorized to maximize repair and replacement efficiencies.
- Establish Facility Condition Index (FCI) and other industry standard benchmarks as prioritization tools to quantify each building's current condition and future funding requirements.
- Develop facility system renewal cost forecasts for site infrastructure and building systems through facility's component life-cycle analysis and prediction for a forecast period of 35 years.

Assessment Objectives

The objectives of this assessment were to determine and report on the general status of each assessed building's current and deferred maintenance conditions based on its components' useful life and to provide recommended funding budgets for CLB's capital renewal expenditures over the next 35 years. The assessment software eCOMET and the assessment process were initiated to evaluate the technology's application to CLB's facility management. The assessment achieved the following objectives:

- Collated relevant existing building data, including prior assessments, reports or other facility information at CLB facilities and their supporting site infrastructure.
- Updated the facility inventory and assessment of facility conditions.
- Developed a comprehensive facilities condition assessment database and Condition Management Estimation Technology (eCOMET) software that included a facility condition index ranking method.
- Demonstrated and oriented CLB facilities management personnel to access facilities assessment database using the internet web-based software eCOMET.

The 2013 CLB limited database has been structured so that any CLB business unit can use eCOMET to inventory their facility assets, determine their deferred maintenance funding needs and plan their facility renewal requirements over the internet. In the near term, eCOMET will primarily operate as an objective prioritization and reporting tool to help CLB guide capital renewal and deferred maintenance funding requests for its facilities. The database will be available to building managers and CLB administrators through a secure internet portal, 24/7. CLB's eCOMET database users will record existing facility deficiencies and forecast future renewal funding requirements, support the development of facility master plans and provide valuable input to facility preventive maintenance programs. It is

important to note that the existing CLB database was not updated, and any overall reports derived from the current database will not provide current data for the non-updated facilities in the database.

Assessment Benefits

The eComet software and the CLB facility condition assessment process provides significant benefits to CLB facility adminstrators:

- Increased credibility—CLB building operators and administrators must obtain their funds from at least one, sometimes several levels of corporate governance. The eCOMET assessment software and process is based on experienced construction professionals using state of the art cost data from RSMeans combined with the best practices of owner associations such as BOMA, IFMA and NACORE. The data accurately reports conditions and facility renewal capital reinvestment requirements. The assessment software technology documents improvements through the reduction of deferred maintenance and the application of proactive capital renewal.
- Procurement savings—eCOMET renewal data provides owners with statistically derived future funding requirements to proactively plan projects. By grouping deficient conditions into a single contract, owners receive economies of scale from the construction markets and reduced internal soft costs.
- Leveled procurement—Procurement leveling is the strategic timing of purchases. eCOMET's project definition capability identifies horizontal procurement opportunities (grouping contracts by trade) or bundling deficiencies vertically (grouping contracts by building). Forward procurement of near term building systems that will expire is another possibility to level out work load and funding needs.
- Green procurement—Procurement opportunities, those that can potentially reduce a facility's "carbon footprint," can be easily identified by category and priority filters within the database for further financial analysis and consideration for implementation.
- Ranked funding needs—eCOMET reports the relative condition of buildings using a ratio of needed repairs (NR) over replacement value (RV) for the facility condition index (FCI). This ratio index sorts facilities into a potential list of "worst first." The Extended FCI evaluates facility condition index at any point in the future to reflect the future value of renewal and repair funding. These and other eCOMET ranking tools provide an objective determination of future funding needed across an business unit's entire real estate holdings.
- Automated budget and schedule tools—eCOMET's cost data is derived directly from the most current RSMeans cost database, updated each year through subscription to the national cost database. eCOMET users assign priorities to each deficiency to determine its urgency. These features enhance the determination on when repair and renovation work should be scheduled to be done in a multi-year renovation program. Or, priorities are set to determine which projects will be done within limited funding and which projects will be deferred.

Assessment Approach

CLB Database Development and Analysis

The CLB assessment team completed the following tasks to develop the eCOMET database for the assignment:

Task 1 – Project Mobilization

- Coordinated the assessment process with the CLB staff.
- Reviewed goals and objectives and developed questionnaire to define proper classification of eCOMET data elements.
- Defined standards and set expectations for the assignment
- Discussed existing data relevant to the project
- Set milestone schedule for completion

Task 2 – Review of Existing Documentation

- Reviewed the existing facility drawings and records prior to data collection that will also be referenced for call-up within the database.

Task 3 – Physical Survey

- Physically surveyed the facilities and infrastructure assets defined within the scope of the project. The CLB assessment team conducted a visual inspection of distinct building systems and components.
- Developed budgets to help identify corrective scope of work budgets for identified facility deficiencies using RSMeans cost database that included Owner soft costs and recommended additional costs.
- Provided digital photographs of each building to record its general condition and the visual condition of any found deficiency. Photographs were included in the final report and linked to the database records.

Task 4 –Data Management System

- Initiated assimilation assessment data with existing CLB facility documents, reports and drawings.

Task 5 – Facility Condition Index

- Developed a Facility Condition Index (FCI) and for each building in the assessment to quantify the deficiencies in each building.

Task 6 – Capital Renewal Budgets

- Developed forecasts for the renewal of building systems through life-cycle analysis.

Task 7 – Deferred Maintenance Deficiency Management

- Set up priority and category filter combinations for deficiency sorting and management.

Task 8 –FCA Reports

- Provided final written reports of assigned CLB facility condition assessment that quantified capital renewal and deferred maintenance issues.

eCOMET Definitions and Set-up Variables

The following terms and definitions are used throughout this report and are included below for clarification. Key database setup options and variables that affect the outcome of prioritization, ranking and costing are identified for review and consideration for further adjustment.

Assessment Levels

There are three primary levels of assessment using eCOMET with each level having multiple add-on options. The CLB 2013 Update Assessment was a comprehensive Level 1 general assessment.

- Modeling Assessment: Life cycle analysis of a building using a replacement cost model and its building system schedule of values to determine a predicted facility condition index and probable system level deficiencies.
- Level 1 Assessment: Assessment of a building's systems life cycles combined with an on-site physical assessment to verify existing building systems condition and their major system component deficiencies.
- Level 2 Assessment: Level 1 assessment of building system life cycles combined with specific on-site room by room physical assessment to determine deferred building systems component deficiencies.

eCOMET Facility Cost Variables

eCOMET cost variables used in the Pilot assessment include the following:

Cost Variables	2013 Assessment
RSMeans cost data eCOMET building current replacement value cost models and deficiency costs use current RSMeans cost data classifications and current city cost indexes. RSMeans cost data in the database can be updated annually by subscription – 1st year subscription is included in this assignment.	2013 data used
Escalation Factor eCOMET cost escalation factor are set to reflect predicted annual per year cost escalation that is included in all forecast cost reports and capital renewal predications.	+3% / year used
Priority Weighting Factors Deficiency Priority weighting factors are used to enhance the relative importance of individual deficiencies in the FCI calculations and report rankings	Level weighting used
Additional or Soft Costs Owner's additional costs over and above contractor's "hard costs" are included to calculate repair budget total costs to owner (See Additional Cost Table)	+47.5% add-on multiplier of estimated sub-construction labor and material cost used
Adequacy / Suitability Standards Adequacy or Suitability standards can be created and measured at existing conditions to determine the cost of compliance	Not used
Sufficiency Standards Area Sufficiency standards can be created and measured at existing conditions to determine the cost of compliance	Not used
Facility Condition Index (FCI) FCI can be calculated and used to rank relative building renewal and correction needs. Extended FCI (EFCI) can be used to calculate the FCI at any given point in the future, using present value of funds.	FCI used

Facility Condition Index (FCI)

The facility condition index (FCI) is a measure widely used in the building industry to represent the physical condition of a facility compared to its replacement value.

The term FCI was originally used by the US Navy to aid in prioritizing repair funds. It has been adopted and refined by numerous national facility maintenance, trade and facility administrator associations and is generally used as a means of comparing relative facility conditions. The FCI measures the estimated cost of the current year repair and replacement deficiencies, including recommended modernization improvements and grandfathered code issues, divided by the projected replacement cost of the facility replaced to contemporary construction standards and design best practices. The result of this division is an index, generally expressed as a percentage, which is the FCI. The higher the FCI, the poorer the relative condition of the facility. The inverse of the FCI is the Condition Index (CI) that represents a 1-100 score where the higher the score, the better the facility's condition.

$$FCI = \frac{\text{Unweighted Repair Costs}}{\text{Replacement Value}}$$

Although current industry "standards" consider a building with an FCI of 0 to 5% good; 6 to 10% fair and 10% and above poor, in practice few, if any, inventories of public buildings ever achieve an overall rating of 10% or below. These FCI guidelines are general guidelines that are under almost constant debate within the building ownership communities. Parsons has routinely found existing average building conditions throughout the United States to fall within the range of 25%-35% FCI, and we propose the following guides used in this report

Rating	Industry Standards	Report Standards
Good	0.0—4.9%	0.0—14.9%
Fair	5.0—9.9%	15.0—29.9%
Poor	10.0—100%	30.0—100%

Deficiency priority definitions and priority weighting factors

Each eCOMET deficiency was assigned a preliminary priority number of 1 through 5, to reflect that deficiency's priority status as determined by the assessment team. (NOTE: These preliminary deficiency priority settings are internal to the database and do not reflect the final priority setting assigned to proposed project repairs as determined by CLB in their funding requests).

The following list provides a brief summary of each data priority and its relative cost weighting in the database:

Deficiency Priority #	Description (Weight Factor Used)
1	Critical—Immediate Need: (Weight Factor: 1.00) Used only for critical issues that pose immediate threats to the life, health or safety of persons within the facility. Examples include: - Obvious or suspected asbestos; potential release into the air - Unprotected exit corridors Serious code violations such as blocked egress, improper fire detection/warning, electrical hazards, structural failures, emergency lighting, etc.
2	Trending Critical – 1 Year: (Weight Factor: 1.00) Assigned to systems or deficiencies that are mission critical and beyond useful life or most systems that are 150% beyond expected life. Examples include: - Fire alarm/detection systems whose age is between 100% and 150% of the life cycle. - Any system that is in serious disrepair or where failure is imminent - Severely damaged walls, floors and ceilings Most systems that are greater than 150% of the BOMA life expectancy.

Deficiency Priority #	Description (Weight Factor Used)
3	Necessary – Years 2-5: (Weight Factor: 1.00) Assigned to systems or deficiencies that should be repaired to mitigate additional damage. Examples include: Roofs that are leaking - Exterior walls, doors, window systems that chronically leak. Inadequate ventilation systems that could result in moisture damage or mold creation.
4	Recommended – Years 5-10 (Weight Factor: 1.00) Assigned to systems or deficiencies that are beyond expected BOMA life cycles, however, exhibit no signs of immediate repair requirements. Examples include: Electrical service equipment that is 110% of the expected BOMA life yet is functioning well. Most interior finishes not severely damaged, torn, etc.
5	Grandfathered – Project triggered: (Weight Factor: 1.00) Assigned to systems or deficiencies that are code issues that are "grand fathered" or standards specific to the local agency or jurisdiction. Examples include: - Fire sprinkler systems - ADA improvements, life safety code updates, etc. - Finishes, flooring type, architectural standards, etc.

Deficiency Categories

The assessment adopted the following deficiency categories and supplemented them with others to reflect current assessment industry nomenclature:

Category	Description
Compliance	Includes items associated with federal and state compliance laws, such as the Americans with Disabilities Act (ADA), chlorofluorocarbon (CFC) elimination and disposal, asbestos abatement, indoor air quality (IAQ) initiatives, and other life-safety mandated initiatives.
Deferred Maintenance	Includes major preventive maintenance, building system repairs and upgrades, and deferred maintenance activities that have been postponed due to funding priorities.
Safety	Includes items that have been identified as potentially unsafe conditions.
Energy	Includes items that have been identified as potential low cost or no-cost energy savings opportunities.
Appearance	Includes items that have been identified as non-contributing to the client's branding or presentation to its employees or to its customers.
Building Integrity	Includes items that have been identified as contributing to building component erosion or continuing deterioration of conditions.
Deferred Renewal	Includes items that have been identified as needing replacement due to its near term obsoleCLBnce or expiration of estimated useful life.

Cost models

eCOMET incorporates RSMeans derived current replacement value (CRV) cost models to assign life cycle costs to the various systems within a building. Cost models are detailed to Uniformat II – Level 3 building systems and assigned costs-per-square-foot replacement values. Models are designed to represent a client specific facility that meets local standards and cost trends.

Current replacement value (CRV)

Replacement value represents the hypothetical cost of rebuilding or replacing an existing facility under today's codes and construction standards, using its current configuration. For example, an existing building that currently does not have a fire sprinkler, but requires one under today's codes, would include costs for this system as part of its replacement value. It is determined by multiplying the gross area of the facility by a square foot cost developed in that facility's schedule of values cost model. Replacement cost includes construction costs and owner's additional or "soft" costs for fees, permits and other expenses to reflect a total project cost.

Order of magnitude repair budgets

These are the budgeted costs to make partial or full replacement of expired systems, costs for out of cycle repair adjustments and costs for condition, suitability and sufficiency deficiencies. Because project costs typically include budget elements in addition to condition repair costs of a current facility, i.e., modernization upgrade items, area sufficiency items, etc., the total order of magnitude repair costs can exceed the current replacement cost.

Order of magnitude repair costs are budget numbers, not actual project costs. The facility condition assessment data should not be considered specific scope of work descriptions for individual buildings; rather it is a repair-program budgeting tool that offers reference data for the repair planning process.

Within a construction project program, substantial cost differences may be recognized from the estimated cost figures provided in the eCOMET database, depending on the method of repair procurement, the construction market at the time and the actual scope of work anticipated. Detailed engineering studies may also be required to fully determine costs associated with individual component failures that were beyond the scope of the assessment.

The scope of the assessment findings and the figures contained in the eCOMET database do not include additional renovation costs and mark-ups that may be recommended as part of the project analysis or within the business units' proposed comprehensive repair program, of which the eCOMET facility assessment is one input component. The assessment also does not include information regarding the affordability of any potential repairs or replacements, nor does it prioritize the business units' objectives that will become a major component of any facility repair plan.

Additional Costs—Soft Costs

Additional costs or "soft" costs are costs that are necessary to accomplish the corrective work but are not directly attributable to the deficient system's direct trade construction cost, often referred to as "hard cost". Soft costs vary by owner but can include architect and contractor fees, contingencies and other owner incurred costs necessary to fully develop and build a facility.

Soft costs currently included in the eCOMET database result in a 45.47% markup and include the following allowances:

Parameter Name	Value %
A & E	12.00%
Bond & Insurance	2.00%
Construction Conting	15.00%
Construction Mgt	6.50%
Contractor O & P	10.00%
FF&E	7.00%
General Conditions	15.00%
Hazardous Material	3.00%
Material Testing	2.00%
Permits & Fees	2.00%
Relocation Cost	1.00%

Life cycles

Parsons assigned expected life cycles to all the building systems based on Building Operators and Managers of America (BOMA) recommended cycles, manufacturer's suggested life, and with RSMeans recommended component and material life based on their historical records. BOMA standards are a nationally recognized source of life cycle data (based on its member's historical data) for various components and/or systems associated with facilities. RSMeans is a national company specializing in construction estimating and costs.

Renewal factors

Renewal factors represent the difference in cost of renovating or replacing an existing system, rather than new construction of a building system. For example, installing a new built-up roof on an existing building would include the difficulty of removing and disposing of the old roof, a cost not associated with new construction. Typical renewal premiums assigned to account for demolition and other difficulty costs were about 110% of the system or component raw cost.

System generated deficiencies

eCOMET automatically generates system deficiencies based on system life cycles using the systems' installation dates as the base year. By adjusting the Next Renewal date ahead or behind the predicted or stated life cycle date, a system cost will come due earlier or later than the originally installed life cycle date. This utility accounts for good maintenance conditions and a longer life, or early expiration of a system life due to any number of adverse factors such as poor installation, acts of god, material defects, poor design applications and other factors that may shorten the life of a material or system.

Building systems

eCOMET uses Uniformat II to organize building data. Uniformat II was originally developed by the federal General Services Administration to delineate building costs by systems rather than by materials. Uniformat II was formalized by an NIST standard, NISTIR 6389 in 1999. It has been further quantified and updated by ASTM standard 2005, E1557-05. The Construction Specifications Institute, CSI, has taken over the standard as part of their MasterFormat / MasterSpec system.

Reference organizations

Several organizations are referenced throughout the document and include:

Acronym	Organization
BOMA	BUILDING OWNERS AND MANAGERS ASSOCIATION: national organization of public and private facilities focused on building management tools and maintenance techniques. Comet reference: building and component system effective economic life expectancies
RSMeans	RSMEANS: Primary national company specializing in construction cost data. Comet reference: cost models and deficiency pricing
CSI	CONSTRUCTION SPECIFICATIONS INSTITUTE: Primary national organization specializing in construction materials data and data location in construction documents. Comet reference: Uniformat II materials classification

Summary of Findings

Finding 1: Current and 35 Year Funding Needs

Facility Name	Gross Area	Current Replacement Value	FCI %	Current Needs	10-Year Renewals	10 Year Total Needs	Average Annual Needs	Forecast 35 Year Needs
CLB 2013 Update	658,642	$213,950,793	55.83%	$119,448,578	$29,850,686	$149,299,264	$2,985,069	$223,925,979
Broadway Parking Structure	215,600	$15,192,920	35.28%	$5,360,566	$2,574,563	$7,935,129	$257,456	$14,371,537
City Hall	283,268	$125,850,491	52.04%	$65,492,265	$13,250,339	$78,742,604	$1,325,034	$111,868,452
City Hall Concourse Parking	24,774	$2,884,640	39.39%	$1,136,395	$0	$1,136,395	$0	$1,136,395
Civic Centre Main Library	135,000	$57,371,263	73.14%	$41,959,745	$14,025,785	$55,985,530	$1,402,579	$91,049,993
Civic Centre Site	0	$12,651,479	43.47%	$5,499,607	$0	$5,499,607	$0	$5,499,607

Finding 2: Repair Cost by Priority

Facility Name	P1 Critical Immediate Need	P2 Trending Critical 12 months	P3 Necessary 2-5 Yrs	P4 Recommended 5-10 Yrs	P5 Grandfathered
CLB 2013 Update	$24,092,491	$16,695,313	$3,646,975	$75,013,798	$0
Broadway Parking Structure	$0	$4,624,016	$128,774	$607,776	$0
City Hall	$23,315,278	$3,835,739	$453,897	$37,887,351	$0
City Hall Concourse Parking	$0	$0	$0	$1,136,395	$0
Civic Centre Main Library	$777,213	$8,235,558	$3,064,304	$29,882,669	$0
Civic Centre Site	$0	$0	$0	$5,499,607	$0

Glossary

Assessment Glossary

Abandoned

A facility owned by a district that is not occupied and not maintained.

Building

An enclosed and roofed structure that can be traversed without exiting to the exterior.

Building addition

An area, space or component of a building added to a building after the original building's year built date.

Calculated next renewal

The year a system or element would be expected to expire based solely on the date it was installed and the expected useful lifetime for that kind of system.

Capital renewal

Capital renewal is condition work (excluding suitability and energy audit work) that includes the replacement of building systems or elements (as they become obsolete or beyond their useful life) not normally included in an annual operating budget.

Condition

Condition refers to the state of physical fitness or readiness of a facility, system, or system element for its intended use.

Current Period

The Current Period is the present year plus user selected forward years.

Current Replacement Value (CRV)

Current Replacement Value (CRV) represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to its optimal condition (excluding auxiliary facilities) under current codes and construction standards.

Deferred maintenance

Deferred maintenance is condition work (excluding suitability and energy audit needs) deferred on a planned or unplanned basis to a future budget cycle or postponed until funds are available.

Deficiency

A deficiency is a repair item that is damaged, missing, inadequate or insufficient for an intended purpose.

Element

Elements are the major components that comprise building systems.

Extended Facility Condition Index (EFCI)

Extended Facility Condition Index (EFCI) is calculated as the condition needs for the current year, plus facility system renewal three years in advance (the Current Period), divided by Current Replacement Value.

Facility

A facility refers to site(s), building(s), or building addition(s), or combinations thereof that provide a particular service or support of an educational purpose.

Facility Condition Index (FCI)

FCI is an industry-standard measurement of a facility's condition that is the ratio of the cost to correct a facility's deficiencies to the Current Replacement Value of the facilities. The higher the FCI, the poorer the condition of a facility. After an FCI is established for all buildings within a portfolio, a building's condition can be ranked relative to other buildings. The FCI may also represent the condition of a portfolio based on the cumulative FCIs of the portfolio's facilities.

Forecast Period

The Forecast Period includes plan years following the Current Period.

Gross square feet (GSF)

The size of the enclosed floor space of a building in square feet, measured to the outside face of the enclosing wall.

Install year

The year a building or system was built or the most recent major renovation date (where a minimum of 50% of the system's Current Replacement Value (CRV) was replaced).

Life cycle

The period of time that a building or site system or element can be expected to adequately serve its intended function.

Next renewal

The assessor adjusted expected useful life of a system or element based on on-site inspection.

Order of magnitude

Rough approximation, made with a degree of knowledge and confidence that the estimated figure falls within a reasonable range of cost values.

Remaining Service Life (RSL)

RSL is the number of years service remaining for a "renewable" system or equipment item. It is automatically calculated based on the difference between the current year and the "Calculated Next Renewal" date or the "Next Renewal" date whichever one is the later date.

Remaining Service Life Index (RSLI)

RSLI is defined as a percentage ratio of the remaining service life of a renewable system to its system life, expressed as a percent.

Site

A facility's grounds and its utilities, roadways, landscaping, fencing and other typical land improvements needed to support the facility.

Suitability

Suitability indicates how well a facility supports the programs that it houses.

System

System refers to building and related site work elements as described by *ASTM Uniformat II, Classification for Building Elements (E1557-97)*, a format for classifying major facility elements common to most buildings. Elements usually perform a given function, regardless of the design specification, construction method, or materials used. See also, Uniformat II.

Uniformat II

Uniformat II is *ASTM Uniformat II, Classification for Building Elements (E1557-97)*, a format for classifying major facility components common to most buildings.

Vacant

A facility that is not occupied but is maintained by a district.

Year built

The year that a building or addition was originally built based on substantial completion or occupancy.

Facility Reports

Broadway Parking Structure

Executive Summary

Gross Area (SF):	215,600
Year Built:	1984
Last Reno:	
Replacement Value:	$15,192,920
Repair Cost:	$5,360,566
Total FCI:	35.28%
Total RSLI:	28%
Condition Score:	3.24

Facility Description:
Broadway Parking Structure is located at intersection of Broadway and Chestnut in Long Beach ,California. The 4 story , 215,600 square foot building caters to the parking needs of City Hall and Main Library , was originally constructed in 1984. There has been no additions or renovations since then.

Structural/Exterior Closure: The building typically rests on slab-on-grade, concrete footings and foundation walls that are not showing signs of settlement or damage. The main structure is typically concrete frame. The building envelope is comprised of concrete parapet walls up to 4 feet height. On the First Floor the 4 feet height walls have metal fence extending up to beam level and is just a parapet wall on upper floors. The roof is typically flat cast in place concrete that houses parking over, and is original and in good condition. A few areas on the roof have standing water problems. Stagnant water is not good for slab on grade in the long run and re-grading for proper surface drainage of roof is recommended. Exterior doors are absent. Entry and exit in the parking lot is controlled using fautomatic parking lot barricades.

Interiors: Partition wall primarily include CMU. Most ceilings are exposed deck that are in good condition, except cracks at few points due to water leaks from roof. Flooring is primarily cement concrete that is generally in good condition. Few areas around the staircases have developed cracks on the floor. Re-grouting to fill the cracks is recommended. Floor cleaning and re-striping the parking lots on a regular bases is recommended. Interior graphics and signage are adequate. Upper floors have Steel cables running in steel posts to guard the slab edge. Steel cables are in good condition but repainting the posts will restrain the rust and improve the life of post.

There are two staircases that are in opposite sides of the parking lot. The stairs are made in steel frame with concrete treads. The Steel frame is rusted and corroded. This will eventually lead to structural instability. Installation of new staircases is recommended.

Mechanical/Plumbing: There are no mechanical systems for this building. Plumbing systems for the building include the fixtures, domestic water, sanitary and rain water drainage piping. The fixtures are original and are in good condition. The domestic water piping is copper and sanitary and roof drain piping is cast iron and the piping is original and is in good condition. The onsite assessment revealed that significant rain water ponds on the southwest area of the top level parking deck. Some deterioration of the concrete surface is evident and a section of the structural cable tendon is exposed. It is recommended that remediation of the ponding and resulting damage be addressed in the near term to prevent further damage to the parking deck.

Electrical: The electrical system is fed from pad mounted transformers that a deliver 120/208 volt, 3-phase power to a main distribution panel and sub-panels. The electrical distribution system is original equipment and is in good condition and should meet life cycle expectations. Lighting is typically surfaced mounted and is mostly fluorescent. Illumination is generally adequate throughout the building. Emergency lights are present and exit signs are present at exit doors and near stairways and are typically illuminated. The security system consists of intrusion, motion, and surveillance equipment and was upgraded in 1999 and is in good condition. Overall the electrical systems for the building appear to be in good condition and should meet system life cycle expectations.

Fire Protection/Life Safety Systems: For fire protection the building has a stand pipe system. The stand pipe system appears to be original to the building and no deficiencies were observed with the piping and connections. The system appears to be in good condition and should meet life cycle projections.

Conveying: The building has one hydraulic passenger elevator that services four levels. The elevator and controls have been upgraded and are in good condition and should operate with regular maintenance for quite some time.

Current Investment Requirement and Condition by Uniformat Classification

Uniformat Classification	RSLI%	FCI%	Current Repair Amount
A10 Foundations	NR	0.00	$0
B10 Superstructure	NR	9.95	$1,038,859
B20 Exterior Enclosure	67.41	321.02	$3,413,265
C10 Interior Construction	61.33	0.00	$0
C20 Stairs	42.00	191.85	$192,550
C30 Interior Finishes	0.00	2,162.50	$678,256
D10 Conveying	3.33	0.00	$0
D20 Plumbing	3.33	0.00	$0
D40 Fire Protection	3.33	0.00	$0
D50 Electrical	3.22	3.25	$37,637
E10 Equipment	9.38	0.00	$0
Total:	**27.51**	**35.28**	**$5,360,566**

System Listing for Broadway Parking Structure

Uniformat	System Description	Unit Price	Qty	UoM	Life	Install Year	Calc Next Renewal	Next Renewal[1]	RSL [2]	RSLI %	REMR	FCI%	Current Repair Amt	Current Replacement Amt
A1010	Standard Foundations	$1.85	215,600	S.F.	100	1984	NR			NR		0.00	$0	$398,328
A1030	Slab on Grade	$1.95	215,600	S.F.	100	1984	NR			NR		0.00	$0	$420,283
B1000	Concrete Columns	$3.10	215,600	S.F.	100	1984	NR			NR		0.65	$433,028	$668,062
B1010	Floor Construction	$8.16	215,600	S.F.	100	1984	NR			NR		0.01	$20,657	$1,759,543
B1010220	CIP Concrete Beam and Slab	$37.17	215,600	S.F.	100	1984	NR			NR		0.07	$585,173	$8,013,607
B2010	Exterior Walls	$4.67	215,600	S.F.	100	1984	2084		71	71.00		0.00	$0	$1,006,798
B2010	Exterior Walls - Seismic Stiffening	$0.00	0				NR			NR		-	$3,413,265	$0
B2030	Exterior Doors	$0.26	215,600	S.F.	30	1984	2014		1	3.33		0.00	$0	$56,456
C1010	Partitions	$1.67	215,600	S.F.	75	1984	2059		46	61.33		0.00	$0	$360,691
C2010	Stair Construction	$0.47	215,600	S.F.	50	1984	2034		21	42.00		2	$192,550	$100,366
C3010	Wall Finishes	$0.07	215,600	S.F.	5	1984	1989		0	0.00		17	$266,782	$15,682
C3020	Floor Finishes	$0.04	215,600	S.F.	20	1984	2004		0	0.00		1	$9,409	$9,409
C3030	Ceiling Finishes	$0.03	215,600	S.F.	5	1984	1989		0	0.00		64	$402,064	$6,273
D1010	Elevators and Lifts	$1.24	215,600	S.F.	30	1984	2014		1	3.33		0.00	$0	$266,597
D2010	Plumbing Fixtures	$0.31	215,600	S.F.	30	1984	2014		1	3.33		0.00	$0	$65,865
D2020	Domestic Water Distribution	$0.12	215,600	S.F.	30	1984	2014		1	3.33		0.00	$0	$25,092
D2040	Rain Water Drainage	$2.07	215,600	S.F.	30	1984	2014		1	3.33		0.00	$0	$445,375
D4020	Standpipes	$0.09	215,600	S.F.	30	1984	2014		1	3.33		0.00	$0	$18,819
D5010	Electrical Service/Distribution	$0.26	215,600	S.F.	30	1984	2014		1	3.33		0.00	$0	$56,456
D5020	Lighting and Branch Wiring	$4.93	215,600	S.F.	30	1984	2014		1	3.33		0.00	$0	$1,063,253
D5030	Communications and Security	$0.17	215,600	S.F.	20	1984	2004		0	0.00		1	$37,637	$37,637
E1030	Vehicular Equipment	$1.85	215,600	S.F.	15	1984	1999	2016	3	9.38		0.00	$0	$398,328

[1] For blank cells default to dates shown in Calculated Next Renewal Column

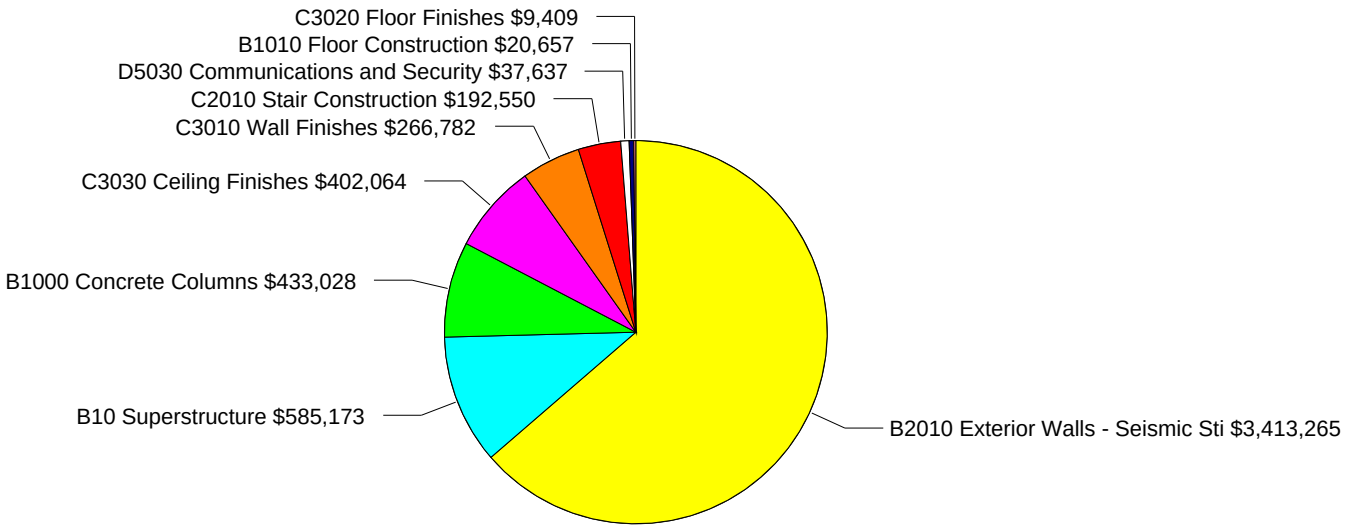
[2] Cells are left blank for Non Renewable Systems, no RSL will be calculated. Systems are expected to expire at the end of their life cycle.

Renewal Schedule

Uniformat	System Description	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total		$5,165,141	$2,084,340		$435,264		$25,452					$29,506	$7,739,703
A1010	Standard Foundations												
A1030	Slab on Grade												
B1000	Concrete Columns	$433,028											$433,028
B1010	Floor Construction	$20,657											$20,657
B1010220	CIP Concrete Beam and Slab	$585,173											$585,173
B2010	Exterior Walls												
B2010	Exterior Walls - Seismic Stiffening	$3,413,265											$3,413,265
B2030	Exterior Doors		$61,057										$61,057
C1010	Partitions												
C2010	Stair Construction	$66,825											$66,825
C3010	Wall Finishes	$225,238					$18,180					$21,076	$264,494
C3020	Floor Finishes	$9,409											$9,409
C3030	Ceiling Finishes	$373,909					$7,272					$8,430	$389,611
D1010	Elevators and Lifts		$302,055										$302,055
D2010	Plumbing Fixtures		$61,057										$61,057
D2020	Domestic Water Distribution		$25,844										$25,844
D2040	Rain Water Drainage		$458,736										$458,736
D4020	Standpipes		$19,383										$19,383
D5010	Electrical Service/Distribution		$61,057										$61,057
D5020	Lighting and Branch Wiring		$1,095,151										$1,095,151
D5030	Communications and Security	$37,637											$37,637
E1030	Vehicular Equipment				$435,264								$435,264

Deficiency Summary by System

Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart lists all current deficiencies associated with this facility.



Budget Estimate Total: $5,360,566

Condition Detail

System: B1000 - Concrete Columns

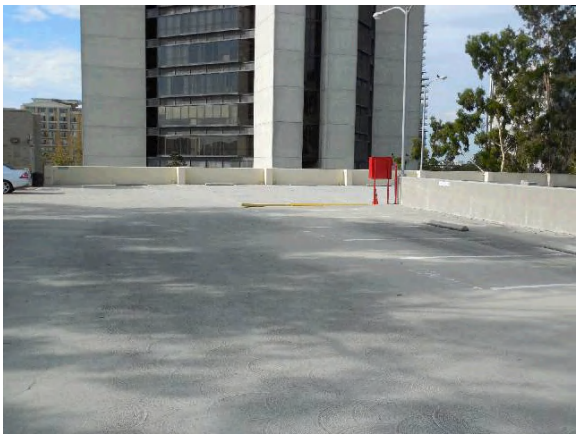
Analysis: The system is in good condition. The system was installed in 1984. It has a 100-year service life. However, in the assessment, it was found to be currently deficient and is non-renewable.

Location:	**Building Systems**
Material:	**Cast In Place Concrete**
Distress:	**Failing**
Category:	**Building Integrity**
Priority:	**2 - Potentionally Critical**
Correction:	**Seismic upgrade - concrete**
Qty:	**160,900-S.F.**
Estimate:	**$433,028.16**
Assessor Name:	**Tom Moe**
Date Created:	**09/11/2013**

Notes: **Seismic upgrade to concrete columns - there is some sign of degradation. Conduct study and design seismic upgrade.**

System: B1010 - Floor Construction

Analysis: The system is in good condition. The system was installed in 1984. It has a 100-year service life. However, in the assessment, it was found to be currently deficient and is non-renewable.



Location:	**Building Systems**
Material:	**Concrete Floor, Finished**
Distress:	**Failing**
Category:	**Building Integrity**
Priority:	**3 - Necessary / Not Critical**
Correction:	**Slope and provide drainage at top parking deck**
Qty:	**4,000-S.F.**
Estimate:	**$20,657.45**
Assessor Name:	**Tom Moe**
Date Created:	**09/12/2013**

Notes: **An area of the top deck of the parking structure ponds water - grind concrete, epoxy fill and add drainage**

System: B1010220 - CIP Concrete Beam and Slab

Analysis: The system is in good condition. The system was installed in 1984. It has a 100-year service life. However, in the assessment, it was found to be currently deficient and is non-renewable.

Location:	**Building Systems**
Material:	**Cast in Place Slabs, One Way**
Distress:	**Inadequate**
Category:	**Building Integrity**
Priority:	**2 - Potentionally Critical**
Correction:	**Seismic upgrade to beams & suspended parking deck**
Qty:	**160,900-S.F.**
Estimate:	**$585,173.19**
Assessor Name:	**Tom Moe**
Date Created:	**09/11/2013**

Notes: Prepare seismic upgrade study and upgrade parking structure to seismic standards

System: B2010 - Exterior Walls - Seismic Stiffening

Analysis: The system The system was installed at an unknown date.

Photo is not available.

Location:	**Building Systems**
Material:	**Concrete Wall**
Distress:	**Inadequate**
Category:	**Life Safety**
Priority:	**2 - Potentionally Critical**
Correction:	**Repair Concrete Wall**
Qty:	**1-C.F.**
Estimate:	**$3,413,264.85**
Assessor Name:	**John Oualline**
Date Created:	**09/14/2013**

System: C2010 - Stair Construction

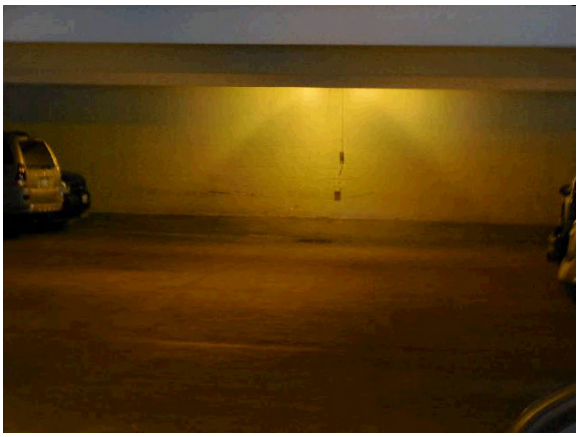
Analysis: The system is in good condition. The system was installed in 1984. It has a 50-year service life. However, in the assessment, it was found to be currently deficient.

Location:	**Building Systems**
Material:	**Stairs**
Distress:	**Failing**
Category:	**Building Integrity**
Priority:	**2 - Potentionally Critical**
Correction:	**Replace metal stair frame with concrete treads**
Qty:	**6-Flight**
Estimate:	**$66,825.40**
Assessor Name:	**Tom Moe**
Date Created:	**09/11/2013**

Notes: **Steel framed stairway system is rusting and showing signs of potential failure. The stairs should be replaced in the next few years.**

System: C3010 - Wall Finishes

Analysis: The system is in poor condition. The system was installed in 1984. It has a 5-year service life which expired in 1989.



Location:	**Building Systems**
Material:	**Paint & Covering**
Distress:	**Failing**
Category:	**Deferred Maintenance**
Priority:	**3 - Necessary / Not Critical**
Correction:	**Repaint Interior Walls/Ceilings**
Qty:	**40,000-S.F.**
Estimate:	**$108,117.02**
Assessor Name:	**Tom Moe**
Date Created:	**09/12/2013**

Notes: **Re-paint interior walls, beams and columns as needed**

System: C3010 - Wall Finishes

Analysis: The system is in poor condition. The system was installed in 1984. It has a 5-year service life which expired in 1989.

Photo is not available.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$15,682.20**
Assessor Name:	**John Oualline**
Date Created:	**09/16/2013**

System: C3010 - Wall Finishes

Analysis: The system is in poor condition. The system was installed in 1984. It has a 5-year service life which expired in 1989.

Location:	**Building Systems**
Material:	**Exterior Walls - Paint**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Paint exterior concrete walls at parking structure**
Qty:	**50,000-S.F.**
Estimate:	**$98,195.62**
Assessor Name:	**Tom Moe**
Date Created:	**09/12/2013**

Notes: Paint exterior concrete walls and precast concrete walls

System: C3010 - Wall Finishes

Analysis: The system is in poor condition. The system was installed in 1984. It has a 5-year service life which expired in 1989.

Location:	**Building Systems**
Material:	**Paint & Covering**
Distress:	**Beyond Useful Life**
Category:	**Deferred Maintenance**
Priority:	**4 - Recommended**
Correction:	**Repaint Interior Walls/Ceilings**
Qty:	**1,200-S.F.**
Estimate:	**$3,243.51**
Assessor Name:	**Tom Moe**
Date Created:	**09/12/2013**

Notes: Paint interior walls of office area

System: C3020 - Floor Finishes

Analysis: The system is in poor condition. The system was installed in 1984. It has a 20-year service life which expired in 2004.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$9,409.32**
Assessor Name:	**Tom Moe**
Date Created:	**09/11/2013**

Notes: Renew floor finishes in office area when required

System: C3030 - Ceiling Finishes

Analysis: The system is in poor condition. The system was installed in 1984. It has a 5-year service life which expired in 1989.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$6,272.88**
Assessor Name:	**Tom Moe**
Date Created:	**09/11/2013**

Notes: Renew ceiling finishes in offices when required

System: C3030 - Ceiling Finishes

Analysis: The system is in poor condition. The system was installed in 1984. It has a 5-year service life which expired in 1989.

Location:	**Building Systems**
Material:	**Paint & Covering**
Distress:	**Inadequate**
Category:	**Building Integrity**
Priority:	**4 - Recommended**
Correction:	**Paint parking garage ceilings to increase lighting**
Qty:	**164,100-S.F.**
Estimate:	**$367,635.69**
Assessor Name:	**Tom Moe**
Date Created:	**09/11/2013**

Notes: Painting the parking garage ceiling would greatly enhance the lighting making the garage much more pleasant to the patrons

System: D5030 - Communications and Security

Analysis: The system is in poor condition. The system was installed in 1984. It has a 20-year service life which expired in 2004.

Photo is not available.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$37,637.29**
Assessor Name:	**John Oualline**
Date Created:	**09/16/2013**

City Hall

Executive Summary

Gross Area (SF):	283,268
Year Built:	1976
Last Reno:	1997
Replacement Value:	$125,850,491
Repair Cost:	$65,492,265
Total FCI:	52.04%
Total RSLI:	21%
Condition Score:	2.40

Facility Description:
City Hall is located at 333 W. Ocean Boulevard in City of Long Beach, California. The 14 story (excluding basement and a penthouse), 283,268 Gross Square Foot (GSF) building which houses Council Chambers and City Hall offices was originally constructed in 1976. There have been no major additions to the building. The HVAC system was updated in 1997. Several of the upper 13 floors have more recent tenant improvements.

Site: Open Parking is available on-site. Landscaping is non-existent. Surface Drainage is generally adequate. Glazed concrete pavers immediately adjacent to the facility are in good condition.

Structural/Exterior Closure: The building typically rests on concrete slab-on-grade, footings and foundation walls that are not showing signs of settlement or damage. The main structure is typically concrete encased columns, beams and cast in place concrete walls in the basement. The building envelope is comprised of precast concrete panels. The roof is typically flat, cast in place concrete, is original and in good condition. The slab surface had developed cracks that have been regrouted and fixed. Roof drains are cast iron. Piping for roof drains is beyond useful life and needs replacement. Roof openings are covered with metal sheet. The metal sheet on roof covers is rusted and replacement in a period of 2-3 years is recommended. Exterior doors and windows are typically in steel and part of curtain wall assembly. Windows are typically fixed. First floor exterior windows have floor sills that cause water seepage during rains in particular. The floor outside the windows needs to be graded properly to drain water away from the window sills. Currently the problem has been fixed by applying sealants on window and floor joint.

Seismic Upgrade: FEMA - 310 Tier 2 Studies and a conceptual cost estimate was prepared in October 2005. The estimate is attached to this FCA, escalated to today's (2013) dollars and the cost included as a deficiency.

Interiors: Partition wall types include painted drywall, glass partitions in aluminum frame and wood paneling in conference rooms and selected areas. Office workstations are generally fitted with demountable partitions. The interior wall finishes is paint and is generally in good condition. Council Chamber has heavy curtains on walls for acoustical treatment. Wall paint in cafeteria in the basement is bad and needs replacement. Most ceilings are either 2x2 suspended acoustical panels or painted plastered ceilings that are generally in good condition. At some places ceiling tiles are damaged and need replacement. Ceilings in council chamber are sheetrock acoustical ceiling. Ceilings in cafeteria are beyond useful life and need immediate replacement.

Flooring in common areas is VCT and in restrooms is typically 12" X 12" ceramic tile. Flooring in occupied spaces is generally carpet tile. Penthouse and other mechanical rooms have concrete floor. Floor in cafeteria is generally VCT and carpet. Cafeteria floor is beyond useful life and needs replacement. Some areas in Cafeteria have vinyl asbestos tiles (VAT). Interior doors are generally solid core painted/ polished wood doors that are nine feet high. Aluminum glass doors are generally fitted with adjacent glass partitions. Mechanical rooms have industrial double leaf, steel doors. Interior graphics and/or signage are adequate. There are two staircases in the building that connect all the floors. Staircases are constructed in metal frame concrete treads. Both staircases are original and are in good condition.

Mechanical/Plumbing: Heating is provided by natural gas fired boilers in the process of being replaced in the fall of 2013. The boilers are in new condition and should meet or exceed life cycle projections. Cooling is supplied by two 400 Ton centrifugal chillers. The chillers circulated chilled water to the air handling units and they were updated in 1997. The chillers and cooling towers are well maintained and they are in good condition. It is expected that the chillers and cooling towers will meet life cycle expectations. The air distribution system is a network of steel duct work using air handlers. Fresh air is supplied by the air handling units. The air handlers and air distribution system for the building appear to be original equipment and are well maintained and in overall good condition. With current and continued levels of maintenance the air distribution system should last beyond the next five years. Roof mounted exhaust fans are installed to serve the bathrooms and ventilation is adequate. The exhaust ventilation equipment is well maintained and is in overall good condition. Plumbing fixtures were upgraded in 1997 and are generally in good condition and should meet life cycle expectations. Domestic water piping is copper and sanitary and roof drain piping is cast iron and is original. With the exception of the roof drain piping the overall condition of the water and sanitary piping is good. Domestic hot water is supplied by two gas-fired boilers and they are in good condition. Temperature controls are a combination of pneumatic and electric

devices and are controlled through a central energy management system. With the exception of the rain water drainage piping, the mechanical and plumbing systems for this building are in overall good condition.

Electrical: The electrical system is fed from pad mounted transformers that a deliver 4160 volt, 3-phase, 4-wire, service to the main electrical switch gear. This voltage is further stepped down to either 277/480 volt or 120/208 volt 3-phase where needed. The electrical distribution system is original equipment and is in good condition. Lighting is typically grid mounted or recessed and is fluorescent. Illumination is generally adequate throughout the building with much of the lighting having been replaced in the last ten years. Emergency lights are present and exit signs are present at exit doors and near stairways and are typically illuminated. The building has a 250 kW emergency generator that serves as back up power for egress lighting and other dedicated data and communication systems. The security system consists of intrusion, motion and surveillance equipment and was upgraded in 2001.

Fire Protection/Life Safety Systems: The fire alarm system consists of audible and strobe annunciators that are located in common spaces, rest rooms and interior corridors. The system is activated by pull stations and smoke detectors and is centrally monitored. The system was upgraded in 1997 and it is operational and should meet life cycle expectations. The building has a wet pipe fire sprinkler system that includes a fire pump and controls. The sprinkler system is in good condition and should meet life cycle projections.

Conveying: The building has a total of six passenger and one freight elevators. The elevators and their controls were overhauled in 2003 and they are in good condition and should meet life cycle expectations.

Current Investment Requirement and Condition by Uniformat Classification

Uniformat Classification	RSLI%	FCI%	Current Repair Amount
A10 Foundations	NR	0.00	$0
A20 Basement Construction	NR	0.00	$0
B10 Superstructure	NR	94.33	$23,315,278
B20 Exterior Enclosure	38.27	41.22	$9,034,532
B30 Roofing	0.00	118.11	$11,491,378
C10 Interior Construction	19.00	279.95	$4,210,736
C20 Stairs	26.00	0.00	$0
C30 Interior Finishes	16.67	135.76	$6,400,195
D10 Conveying	66.67	0.00	$0
D20 Plumbing	0.00	93.49	$485,435
D30 HVAC	20.60	27.02	$2,506,708
D40 Fire Protection	0.00	100.00	$1,487,624
D50 Electrical	0.23	96.90	$6,560,379
E10 Equipment	0.00	0.00	$0
E20 Furnishings	0.00	0.00	$0
Total:	**21.42**	**52.04**	**$65,492,265**

System Listing for City Hall

Uniformat	System Description	Unit Price	Qty	UoM	Life	Install Year	Calc Next Renewal	Next Renewal[1]	RSL [2]	RSLI %	REMR	FCI%	Current Repair Amt	Current Replacement Amt
A1010	Standard Foundations	$78.88	283,268	S.F.	100	1976	NR			NR		0.00	$0	$22,343,201
A1030	Slab on Grade	$9.94	283,268	S.F.	100	1976	NR			NR		0.00	$0	$2,814,535
A2010	Basement Excavation	$35.26	283,268	S.F.	100	1976	NR			NR		0.00	$0	$9,988,919
A2020	Basement Walls	$23.19	283,268	S.F.	100	1976	NR			NR		0.00	$0	$6,568,621
B1000	Siesmic Upgrade	$0.00	0				NR			NR		-	$23,315,278	$0
B1010	Floor Construction	$46.17	283,268	S.F.	100	1976	NR			NR		0.00	$0	$13,079,550
B1020	Roof Construction	$41.08	283,268	S.F.	100	1976	NR			NR		0.00	$0	$11,637,256
B2010	Exterior Walls	$47.00	283,268	S.F.	100	1976	2076		63	63.00		0.00	$0	$13,314,438
B2020	Exterior Windows	$29.82	283,268	S.F.	30	1976	2006		0	0.00		1	$8,870,111	$8,447,725
B2030	Exterior Doors	$0.55	283,268	S.F.	30	1976	2006		0	0.00		1	$164,422	$156,592
B3010	Roof Coverings	$31.10	283,268	S.F.	25	1976	2001	2007	0	0.00		1	$10,572,430	$8,810,359
B3020	Roof Openings	$3.24	283,268	S.F.	25	1976	2001	2006	0	0.00		1	$918,948	$918,948
C1000	ADA Restroom Upgrades	$0.00	0				NR		0	NR		-	$3,835,739	$0
C1010	Partitions	$1.64	283,268	S.F.	75	1976	2051		38	50.67		0.00	$0	$465,655
C1020	Interior Doors	$2.34	283,268	S.F.	40	1976	2016		3	7.50		0.00	$0	$663,455
C1030	Fittings	$1.32	283,268	S.F.	20	1976	1996		0	0.00		1	$374,997	$374,997
C2010	Stair Construction	$1.93	283,268	S.F.	50	1976	2026		13	26.00		0.00	$0	$548,072
C3010	Wall Finishes	$1.35	283,268	S.F.	5	1997	2002	2010	0	0.00		5	$2,081,293	$383,238
C3020410	Carpet Tile	$4.23	283,268	S.F.	7	1976	1983	2008	0	0.00		1	$1,319,081	$1,199,165
C3020410	Concrete	$4.00	283,268	S.F.	50	1976	2026		13	26.00		0.00	$0	$1,133,231
C3020410	VCT	$2.24	283,268	S.F.	12	1997	2009		0	0.00		1	$935,515	$634,610
C3030	Ceiling Finishes	$4.82	283,268	S.F.	25	1997	2022		9	36.00		2	$2,064,305	$1,363,998
D1010	Elevators and Lifts	$6.34	283,268	S.F.	30	2003	2033		20	66.67		0.00	$0	$1,796,687
D2010	Plumbing Fixtures	$1.19	283,268	S.F.	30	1976	2006		0	0.00		0.90	$304,118	$337,909
D2020	Domestic Water Distribution	$0.33	283,268	S.F.	30	1976	2006	2011	0	0.00		1	$94,779	$94,779
D2040	Rain Water Drainage	$0.31	283,268	S.F.	30	1976	2006		0	0.00		1	$86,538	$86,538
D3010	Energy Supply	$8.04	283,268	S.F.	30	1997	2027	2011	14	0.00		1	$2,506,708	$2,278,825
D3010550	Heating - Gas Fired Hot Water	$2.25	283,268	S.F.	30	2013	2043		30	100.00		0.00	$0	$638,730
D3030	Cooling Generating Systems	$22.45	283,268	S.F.	20	1997	2017		4	20.00		0.00	$0	$6,358,458
D4010	Sprinklers	$4.99	283,268	S.F.	30	1976	2006		0	0.00		1	$1,413,449	$1,413,449
D4020	Standpipes	$0.26	283,268	S.F.	30	1976	2006		0	0.00		1	$74,175	$74,175
D5010	Electrical Service/Distribution	$0.74	283,268	S.F.	30	1976	2006	2016	3	7.50		0.00	$0	$210,163
D5020	Lighting and Branch Wiring	$18.46	283,268	S.F.	30	1976	2006		0	0.00		1	$5,229,348	$5,229,348
D5030	Communications and Security	$4.25	283,268	S.F.	15	1976	1991		0	0.00		1	$1,203,286	$1,203,286
D5090	Other Electrical Systems	$0.45	283,268	S.F.	20	1976	1996		0	0.00		1	$127,746	$127,746
E1020	Institutional Equipment	$1.60	283,268	S.F.	20	1976	1996		0	0.00		0.00	$0	$453,293
E1090350	Kitchen Equipment	$0.29	283,268	S.F.	20	1976	1996		0	0.00		0.00	$0	$82,417
E20	Furnishings	$2.18	283,268	S.F.	30	1976	2006		0	0.00		0.00	$0	$618,126

[1] For blank cells default to dates shown in Calculated Next Renewal Column

[2] Cells are left blank for Non Renewable Systems, no RSL will be calculated. Systems are expected to expire at the end of their life cycle.

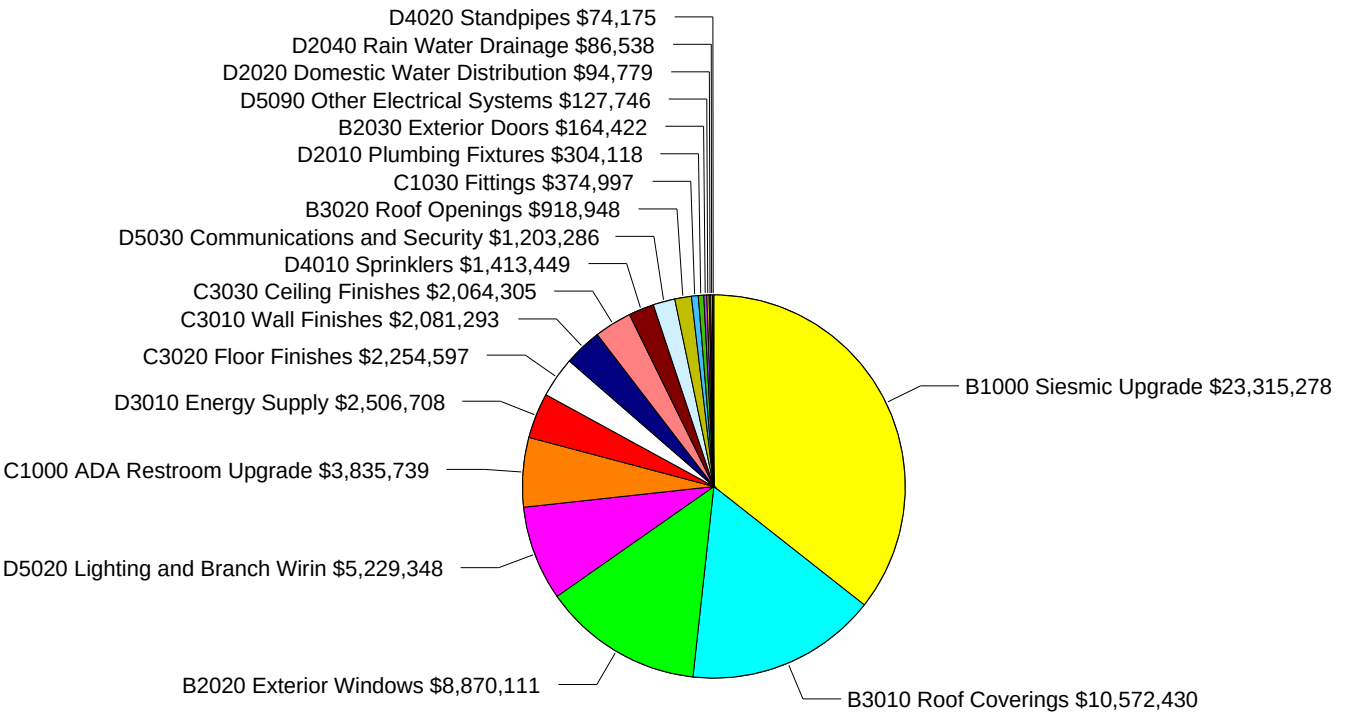
Renewal Schedule

Uniformat	System Description	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total		$61,946,359			$1,016,857	$7,872,151	$444,278		$1,622,304		$1,779,709	$515,040	$75,196,698
A1010	Standard Foundations												
A1030	Slab on Grade												
A2010	Basement Excavation												
A2020	Basement Walls												
B1000	Siesmic Upgrade	$23,315,278											$23,315,278
B1010	Floor Construction												
B1020	Roof Construction												
B2010	Exterior Walls												
B2020	Exterior Windows	$8,870,111											$8,870,111
B2030	Exterior Doors	$164,422											$164,422
B3010	Roof Coverings	$10,572,430											$10,572,430
B3020	Roof Openings	$918,948											$918,948
C1000	ADA Restroom Upgrades	$3,835,739											$3,835,739
C1010	Partitions												
C1020	Interior Doors				$775,724								$775,724
C1030	Fittings	$374,997											$374,997
C2010	Stair Construction												
C3010	Wall Finishes	$383,238					$444,278					$515,040	$1,342,556
C3020410	Carpet Tile	$1,319,081							$1,622,304				$2,941,385
C3020410	Concrete												
C3020410	VCT	$698,071											$698,071
C3030	Ceiling Finishes	$453,897									$1,779,709		$2,233,606

Uniformat	System Description	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
D1010	Elevators and Lifts												
D2010	Plumbing Fixtures	$304,118											$304,118
D2020	Domestic Water Distribution	$94,779											$94,779
D2040	Rain Water Drainage	$86,538											$86,538
D3010	Energy Supply	$2,506,708											$2,506,708
D3010550	Heating - Gas Fired Hot Water												
D3030	Cooling Generating Systems					$7,872,151							$7,872,151
D4010	Sprinklers	$1,413,449											$1,413,449
D4020	Standpipes	$74,175											$74,175
D5010	Electrical Service/Distribution				$241,133								$241,133
D5020	Lighting and Branch Wiring	$5,229,348											$5,229,348
D5030	Communications and Security	$1,203,286											$1,203,286
D5090	Other Electrical Systems	$127,746											$127,746
E1020	Institutional Equipment												
E1090350	Kitchen Equipment												
E20	Furnishings												

Deficiency Summary by System

Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart lists all current deficiencies associated with this facility.



Budget Estimate Total: $65,492,265

Condition Detail

System: B1000 - Siesmic Upgrade

Analysis: The system The system was installed at an unknown date.

Location:	**Building Systems**
Material:	**Steel Joists Beams and Deck on column**
Distress:	**Inadequate**
Category:	**Life Safety**
Priority:	**1 - Currently Critical (Immediate)**
Correction:	**Seismic Upgrade to City Hall**
Qty:	**1-Ea.**
Estimate:	**$23,315,278.25**
Assessor Name:	**Tom Moe**
Date Created:	**09/12/2013**

Notes: **Seismic upgrade to City Hall - Estimate prepared by 3D/I in 2005 - escalated to today''s (2013) cost. Estimate is attached in the plans and documents.**

System: B2020 - Exterior Windows

Analysis: The system is in poor condition. The system was installed in 1976. It has a 30-year service life which expired in 2006.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$8,870,110.75**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

Notes: **The curtain wall and window system has reached the end of it''s expected life and should be replaced with a dual pane system for savings on heating and cooling, comfort and noise reduction.**

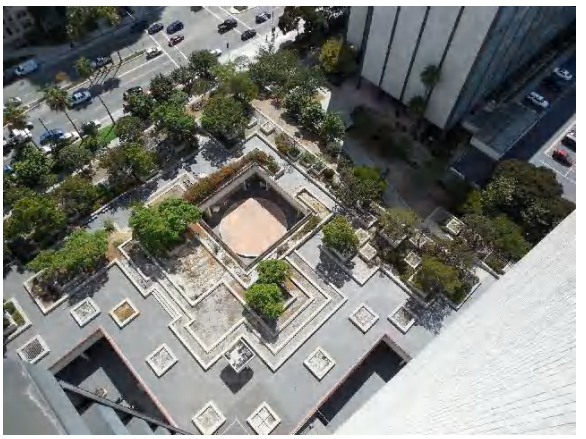
System: B2030 - Exterior Doors

Analysis: The system is in poor condition. The system was installed in 1976. It has a 30-year service life which expired in 2006.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$164,421.57**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: B3010 - Roof Coverings

Analysis: The system is in poor condition. The system was installed at an unknown date. It has a 25-year service life.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$10,572,430.26**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: B3020 - Roof Openings

Analysis: The system is in poor condition. The system was installed at an unknown date. It has a 25-year service life.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$918,947.59**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: C1000 - ADA Restroom Upgrades

Analysis: The system The system was installed at an unknown date.

Location:	**Building Systems**
Material:	**ADQ Restroom Upgrades - Per Restroom**
Distress:	**Inadequate**
Category:	**Code Compliance**
Priority:	**2 - Potentionally Critical**
Correction:	**Upgrade restrooms to meet ADA requirements**
Qty:	**34-Ea.**
Estimate:	**$3,835,739.32**
Assessor Name:	**Tom Moe**
Date Created:	**09/12/2013**

Notes: Upgrade restrooms to meet ADA requirements - estimated based on a per restroom average cost

System: C1030 - Fittings

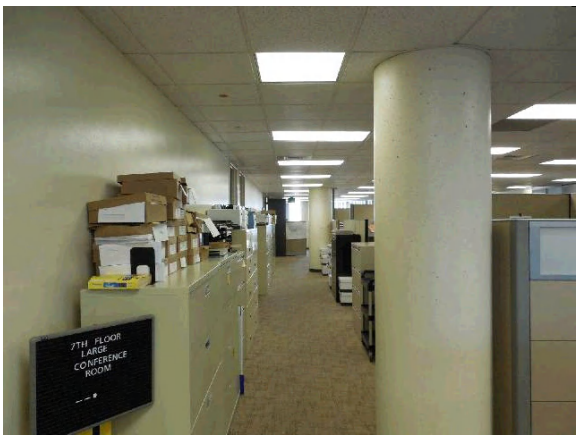
Analysis: The system is in poor condition. The system was installed in 1976. It has a 20-year service life which expired in 1996.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$374,996.55**
Assessor Name:	**Tom Moe**
Date Created:	**09/12/2013**

Notes: R & R fittings like the Council Chamber Curtains, counters and other fitting items.

System: C3010 - Wall Finishes

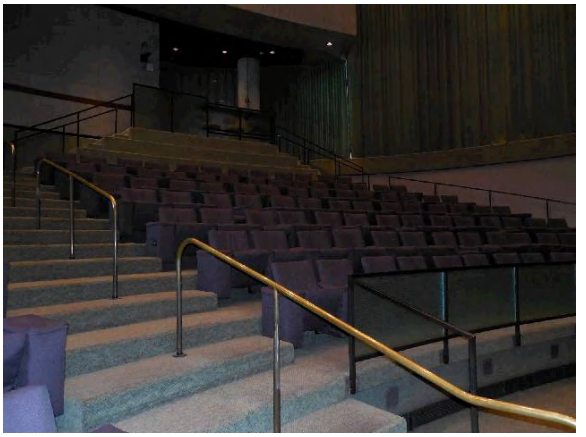
Analysis: The system is in poor condition. The system was installed at an unknown date. It has a 5-year service life.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$383,238.23**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: C3020410 - Carpet Tile

Analysis: The system is in poor condition. The system was installed at an unknown date. It has a 7-year service life.

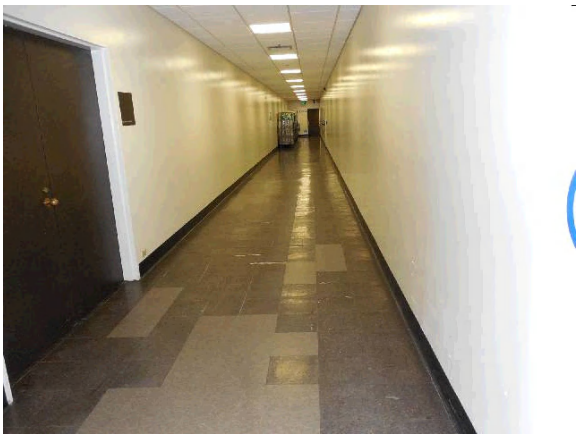


Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$1,319,081.28**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

Notes: Carpet througout City Hall is in various stages of deteriation and will need to be replaced.

System: C3020410 - VCT

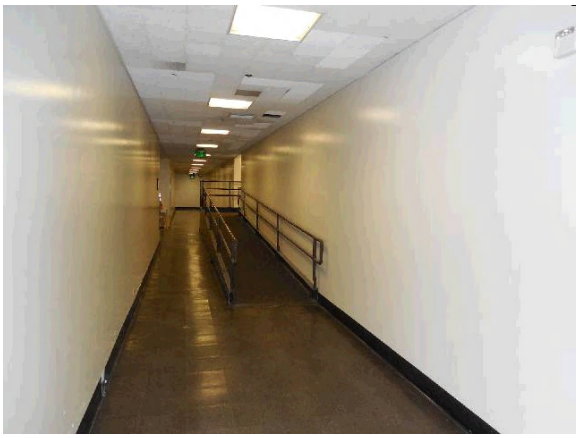
Analysis: The system is in poor condition. The system was installed in 1997. It has a 12-year service life which expired in 2009.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$698,070.50**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: C3030 - Ceiling Finishes

Analysis: The system is in good condition. The system was installed in 1997. It has a 25-year service life. However, in the assessment, it was found to be currently deficient.



Location:	**Building Systems**
Material:	**Ceilings Suspended ACT-Tile Only/SF**
Distress:	**Damaged**
Category:	**Deferred Maintenance**
Priority:	**3 - Necessary / Not Critical**
Correction:	**Replace ACT**
Qty:	**100,000-S.F.**
Estimate:	**$453,896.55**
Assessor Name:	**Tom Moe**
Date Created:	**09/13/2013**

Notes: **Portions of the suspended acoustical ceilings are beyond expected life, damaged or in need of replacement.**

System: D2010 - Plumbing Fixtures

Analysis: The system is in poor condition. The system was installed in 1976. It has a 30-year service life which expired in 2006.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$304,118.08**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D2020 - Domestic Water Distribution

Analysis: The system is in poor condition. The system was installed at an unknown date. It has a 30-year service life.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$94,779.35**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: D2040 - Rain Water Drainage

Analysis: The system is in poor condition. The system was installed in 1976. It has a 30-year service life which expired in 2006.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$86,537.67**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

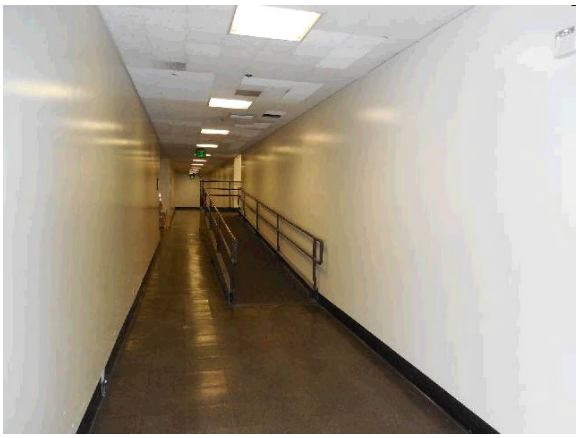
System: D3010 - Energy Supply

Analysis: The system is in poor condition. The system was installed at an unknown date. It has a 30-year service life.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$2,506,707.72**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: D4010 - Sprinklers

Analysis: The system is in poor condition. The system was installed in 1976. It has a 30-year service life which expired in 2006.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$1,413,448.54**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

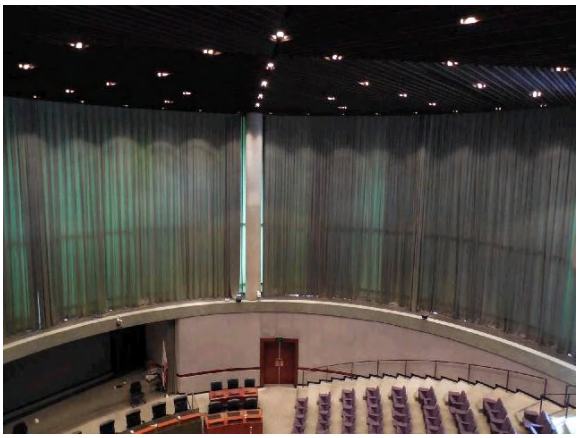
System: D4020 - Standpipes

Analysis: The system is in poor condition. The system was installed in 1976. It has a 30-year service life which expired in 2006.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$74,175.14**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D5020 - Lighting and Branch Wiring

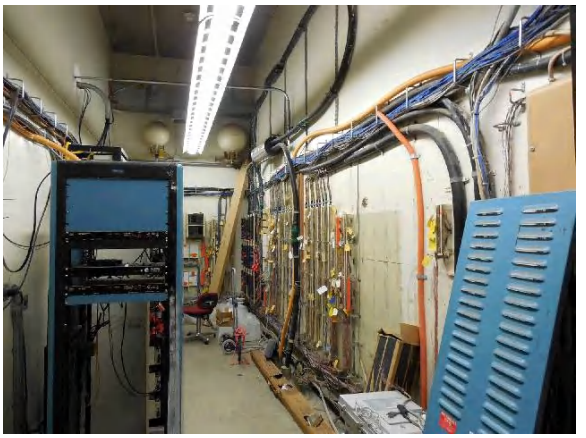
Analysis: The system is in poor condition. The system was installed in 1976. It has a 30-year service life which expired in 2006.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$5,229,347.52**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D5030 - Communications and Security

Analysis: The system is in poor condition. The system was installed in 1976. It has a 15-year service life which expired in 1991.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$1,203,285.64**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

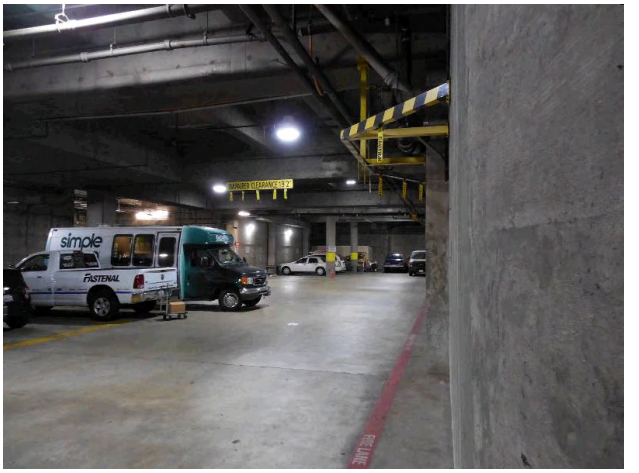
System: D5090 - Other Electrical Systems

Analysis: The system is in poor condition. The system was installed in 1976. It has a 20-year service life which expired in 1996.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$127,746.08**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

City Hall Concourse Parking

Executive Summary



Gross Area (SF):	24,774
Year Built:	1977
Last Reno:	1977
Replacement Value:	$2,884,640
Repair Cost:	$1,136,395
Total FCI:	39.39%
Total RSLI:	6%
Condition Score:	3.03

Facility Description:
The Concourse Parking under City Hall and the pedestrian plaza area is used for VIP parking and truck delivery activity. It is tall enough for large trucks and contains approximately 24,774 GSF of area. The ingress and egress ramps are on the north side of the facility from and to Broadway. Access to the parking area is controled by guards. The ramp is not included in the GSF of the parking structure. The entire area is cast in place concrete and is below the pedestrian mall above. There is air handling and HVAC equipment in the facility to remove exhaust fumes from the vehicles and refresh the air. It was built in approximately 1977 along with the City Hall and Main Library Complex. The area is depicted by the attached drawings as the hatched area.

Current Investment Requirement and Condition by Uniformat Classification

Uniformat Classification	RSLI%	FCI%	Current Repair Amount
A10 Foundations	NR	0.00	$0
A20 Basement Construction	NR	0.00	$0
B10 Superstructure	NR	0.00	$0
B30 Roofing	0.00	119.53	$479,476
C20 Stairs	16.00	42.86	$1,081
D20 Plumbing	0.00	100.00	$18,380
D30 HVAC	0.00	100.00	$353,552
D40 Fire Protection	0.00	100.00	$91,542
D50 Electrical	0.00	102.21	$162,811
E10 Equipment	0.00	100.00	$29,553
G10 Site Preparation	64.00	0.00	$0
Total:	**6.14**	**39.39**	**$1,136,395**

System Listing for City Hall Concourse Parking

Uniformat	System Description	Unit Price	UoM	Life	Install Year	Calc Next Renewal	Next Renewal[1]	RSL [2]	RSLI%	REMR	FCI%	Current Repair Amt	Current Replacement Amt
A1010	Standard Foundations	$5.16	S.F.	100	1977	NR			NR		0.00	$0	$127,942
A1030	Slab on Grade	$7.27	S.F.	100	1977	NR			NR		0.00	$0	$180,200
A2010	Basement Excavation	$15.30	S.F.	100	1977	NR			NR		0.00	$0	$379,141
A2020	Basement Walls	$13.09			1977	NR			NR		0.00	$0	$324,360
B1020	Roof Construction	$28.48	S.F.	100	1977	NR			NR		0.00	$0	$705,663
B3010	Roof Coverings	$15.81	S.F.	20	1977	1997		0	0.00		1	$470,105	$391,755
B3020	Roof Openings	$0.38			1977	1977		0	0.00		1	$9,370	$9,370
C2010	Stair Construction	$0.06	S.F.	50	1977	2027		14	28.00		0.00	$0	$1,442
C2020	Stair Finishes	$0.04	S.F.		1977	1977		0	0.00		1.00	$1,081	$1,081
D2040	Rain Water Drainage	$0.74	S.F.	30	1977	2007		0	0.00		1	$18,380	$18,380
D3030	Cooling Generating Systems	$4.42	S.F.		1977	1977		0	0.00		1	$109,562	$109,562
D3040	Distribution Systems	$8.02	S.F.		1977	1977		0	0.00		1	$198,580	$198,580
D3060	Controls & Instrumentation	$1.40	S.F.		1977	1977		0	0.00		1	$34,598	$34,598
D3070	System Test & Balance	$0.44	S.F.		1977	1977		0	0.00		1	$10,812	$10,812
D4010	Sprinklers	$3.70	S.F.		1977	1977		0	0.00		1	$91,542	$91,542
D5010	Electrical Service/Distribution	$2.84	S.F.	30	1977	2007		0	0.00		1	$73,792	$70,278
D5020	Lighting and Branch Wiring	$2.34	S.F.	30	1977	2007		0	0.00		1	$58,024	$58,024
D5030	Communications and Security	$0.32	S.F.	15	1977	1992		0	0.00		1	$7,929	$7,929
D5090	Other Electrical Systems	$0.93	S.F.	15	1977	1992		0	0.00		1	$23,066	$23,066
E1030	Vehicular Equipment	$1.19	S.F.	15	1977	1992		0	0.00		1	$29,553	$29,553
G1010	Site Clearing	$1.45	S.F.	100	1977	2077		64	64.00		0.00	$0	$36,040
G1020	Site Demolition and Relocations	$1.45	S.F.	100	1977	2077		64	64.00		0.00	$0	$36,040
G1030	Site Earthwork	$1.59	S.F.	100	1977	2077		64	64.00		0.00	$0	$39,284

[1] For blank cells default to dates shown in Calculated Next Renewal Column

[2] Cells are left blank for Non Renewable Systems, no RSL will be calculated. Systems are expected to expire at the end of their life cycle.

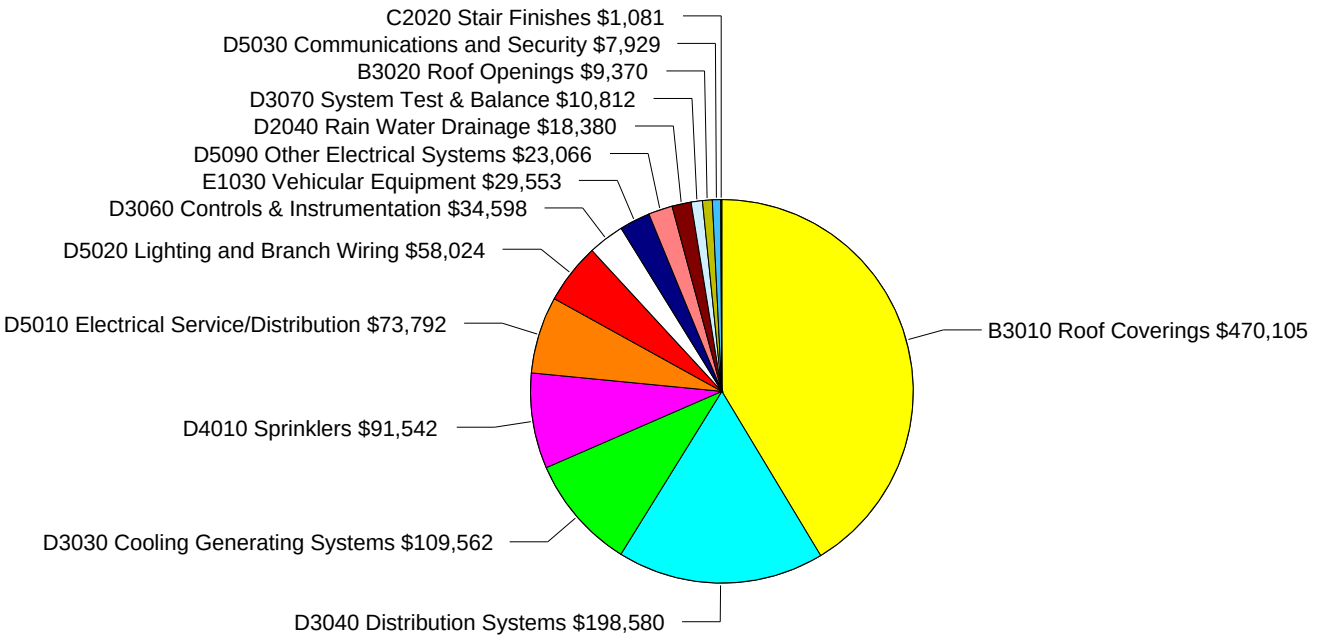
Renewal Schedule

Uniformat	System Description	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total		$1,136,394											$1,136,394
A1010	Standard Foundations												
A1020	Special Foundations												
A1030	Slab on Grade												
A2010	Basement Excavation												
A2020	Basement Walls												
B1010	Floor Construction												
B1020	Roof Construction												
B3010	Roof Coverings	$470,105											$470,105
B3020	Roof Openings	$9,370											$9,370
C2010	Stair Construction												
C2020	Stair Finishes	$1,081											$1,081
C3010	Wall Finishes												
C3020	Floor Finishes												
C3030	Ceiling Finishes												
D1010	Elevators and Lifts												
D1020	Escalators and Moving Walks												
D1090	Other Conveying Systems												
D2010	Plumbing Fixtures												
D2020	Domestic Water Distribution												
D2030	Sanitary Waste												
D2040	Rain Water Drainage	$18,380											$18,380
D2090	Other Plumbing Systems												
D3010	Energy Supply												
D3020	Heat Generating Systems												
D3030	Cooling Generating Systems	$109,562											$109,562
D3040	Distribution Systems	$198,580											$198,580
D3050	Terminal & Package Units												
D3060	Controls & Instrumentation	$34,598											$34,598
D3070	System Test & Balance	$10,812											$10,812

Uniformat	System Description	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
D3090	Other HVAC Systems/Equip												
D4010	Sprinklers	$91,542											$91,542
D4020	Standpipes												
D4030	Fire Protection Specialties												
D4090	Other Fire Protection Systems												
D5010	Electrical Service/Distribution	$73,792											$73,792
D5020	Lighting and Branch Wiring	$58,024											$58,024
D5030	Communications and Security	$7,929											$7,929
D5090	Other Electrical Systems	$23,066											$23,066
E1030	Vehicular Equipment	$29,553											$29,553
G1010	Site Clearing												
G1020	Site Demolition and Relocations												
G1030	Site Earthwork												
G1040	Hazardous Waste Remediation												
G2010	Roadways												
G2020	Parking Lots												
G2030	Pedestrian Paving												
G2040	Site Development												
G2050	Landscaping												

Deficiency Summary by System

Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart lists all current deficiencies associated with this facility.



Budget Estimate Total: $1,136,395

Condition Detail

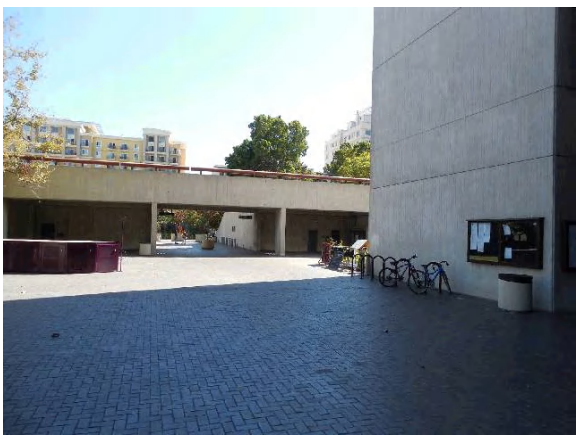
System: B3010 - Roof Coverings

Analysis: The system is in poor condition. The system was installed in 1977. It has a 20-year service life which expired in 1997.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$470,105.45**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: B3020 - Roof Openings

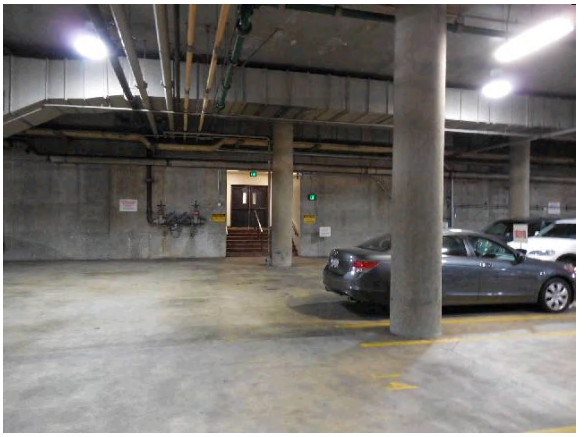
Analysis: The system is in poor condition. The system was installed in 1977. It has a 0-year service life which expired in 1977.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$9,370.39**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: C2020 - Stair Finishes

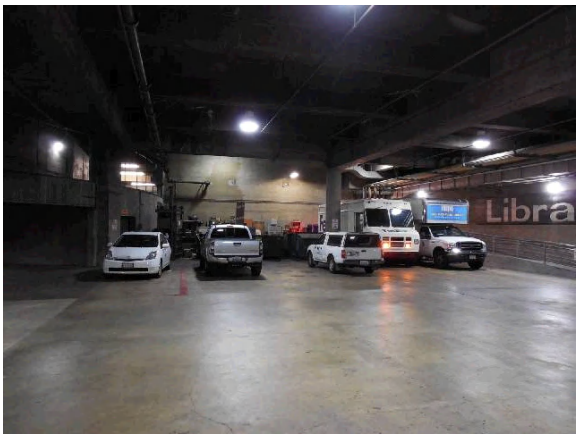
Analysis: The system is in poor condition. The system was installed in 1977. It has a 0-year service life which expired in 1977.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$1,081.20**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D2040 - Rain Water Drainage

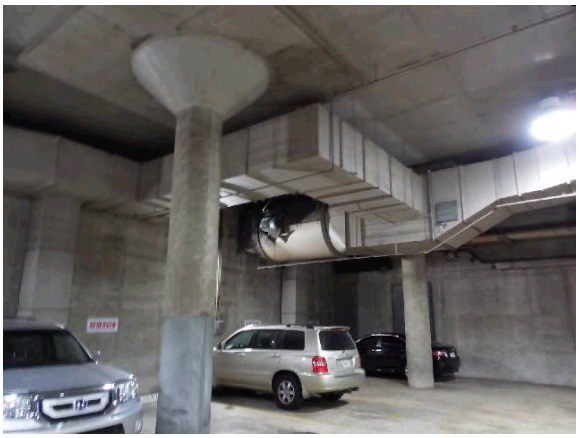
Analysis: The system is in poor condition. The system was installed in 1977. It has a 30-year service life which expired in 2007.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$18,380.39**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D3030 - Cooling Generating Systems

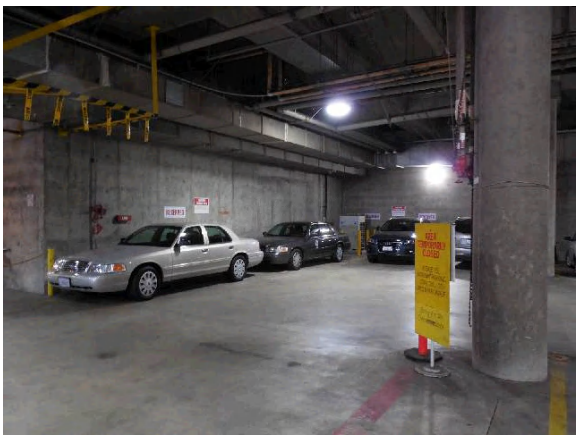
Analysis: The system is in poor condition. The system was installed in 1977. It has a 0-year service life which expired in 1977.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$109,561.53**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D3040 - Distribution Systems

Analysis: The system is in poor condition. The system was installed in 1977. It has a 0-year service life which expired in 1977.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$198,580.27**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D3060 - Controls & Instrumentation

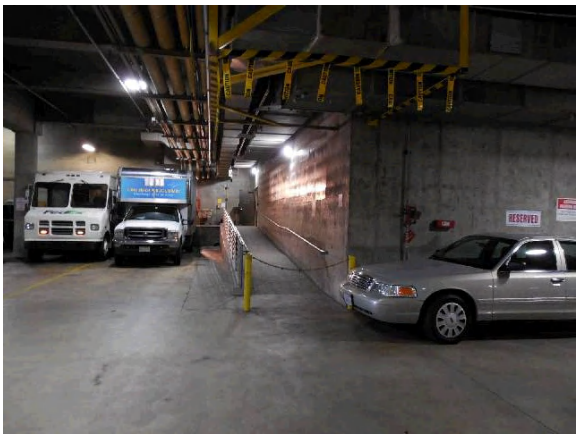
Analysis: The system is in poor condition. The system was installed in 1977. It has a 0-year service life which expired in 1977.

Photo is not available.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$34,598.38**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D3070 - System Test & Balance

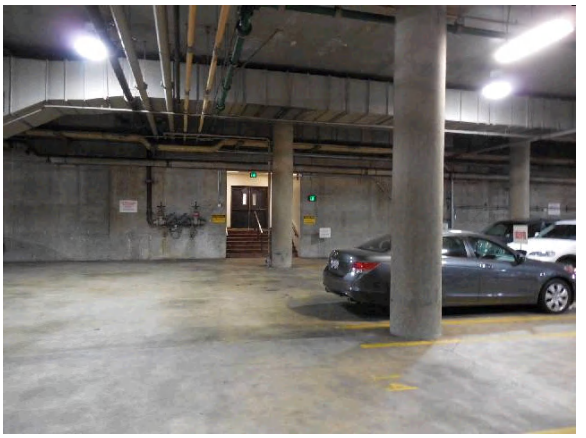
Analysis: The system is in poor condition. The system was installed in 1977. It has a 0-year service life which expired in 1977.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$10,811.99**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D4010 - Sprinklers

Analysis: The system is in poor condition. The system was installed in 1977. It has a 0-year service life which expired in 1977.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$91,541.54**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D5010 - Electrical Service/Distribution

Analysis: The system is in poor condition. The system was installed in 1977. It has a 30-year service life which expired in 2007.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$73,791.85**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D5020 - Lighting and Branch Wiring

Analysis: The system is in poor condition. The system was installed in 1977. It has a 30-year service life which expired in 2007.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$58,024.36**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D5030 - Communications and Security

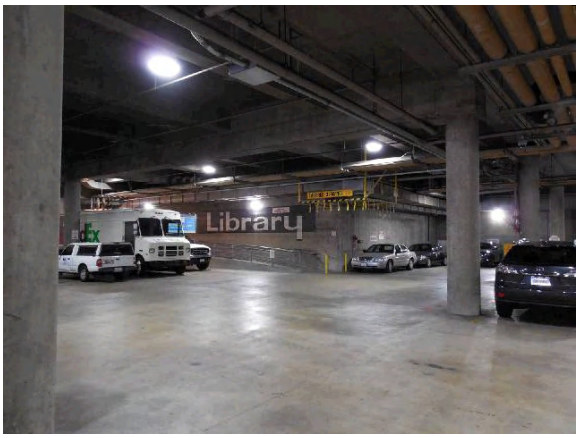
Analysis: The system is in poor condition. The system was installed in 1977. It has a 15-year service life which expired in 1992.

Photo is not available.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$7,928.79**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D5090 - Other Electrical Systems

Analysis: The system is in poor condition. The system was installed in 1977. It has a 15-year service life which expired in 1992.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$23,065.58**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: E1030 - Vehicular Equipment

Analysis: The system is in poor condition. The system was installed in 1977. It has a 15-year service life which expired in 1992.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$29,552.78**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

Civic Centre Main Library

Executive Summary

Gross Area (SF):	135,000
Year Built:	1977
Last Reno:	
Replacement Value:	$57,371,263
Repair Cost:	$41,959,745
Total FCI:	73.14%
Total RSLI:	12%
Condition Score:	1.34

Facility Description:
The Long Beach Main Library is located at Broadway and Pacific Avenue in Long Beach, California. The facility is located in a combination commercial and residential neighborhood. The 2 story 135,000 square feet building is adjacent to the City Hall building is the main library for the city and was originally constructed in 1977.There has been no major additions or renovations except little routine maintenance.

Site: Parking is available on-site. There is regular parking available for the residents on the street and nearby parking structures. Landscaping is mature. Drainage on site is generally adequate and is handled by area drains. Glazed Concrete pavers immediately adjacent to the facility are in good condition.

Structural/Exterior Closure: The reinforced concrete structure has precast concrete panels and structural columns and beams. The exterior finish is mostly exposed concrete. There are storefront aluminum framed windows and doors with tempered glass throughout. All window wells and planters are water infiltration areas for the building and should be addressed. The majority of the issues relate to the water intrusion through the structure. Records of the damaged areas were provided to our staff and they indicate that the building's site drainage is inadequate. The building's structural integrity should be addressed by a professional engineer and solutions or management plans should be implemented.

Seismic Upgrade: A FEMA-310 Tier 1 seismic upgrade study was performed by TMAD Taylor & Gaines in May, 2006. The study was not accompanied by a conceptual cost estimate. This FCA provides a conceptual estimate based on the SF of the building area to implement the seismic upgrade study. A copy of the study is attached to this database in the drawings / attachments section.

Roofing: The roof is also structural concrete slabs with continuous water proof membrane. The roof functions as a park with landscape paving, planters and plantings. There are a number of reported leaks throughout the building. Epoxy injections were done at the clerestories to address the water intrusion issues in 2002, but the majority of the water intrusion issues remain. There are also parking spaces located at the lower level. The site has concrete walks, brick pavers, planters and concrete seating/courtyard areas.

Interiors: There is a 298 seat capacity Auditorium located at the lower level, a Special Collections area also located at the lower level. A Kids Story room located at the plaza level, reading areas, special storage areas and a multitude of administrative areas throughout the both the lower and plaza levels. There are four clerestories at the plaza level and a number of landscape terraces. Partition wall types include painted drywall, aluminum and glass partitions. The interior wall finishes are generally in good condition. Most ceilings are 2x2 suspended acoustical panels, painted plaster, that are in poor condition. Ceilings on second floor are suspended grooved metal slats. Flooring in common areas is glazed concrete pavers.

Flooring in occupied spaces is generally carpet and VCT. Interior doors are generally solid core, laminated wood doors. Interior graphics and/or signage are adequate. Ceilings, carpet and curtains for the auditorium are being replaced in 2006. The window and doors are aluminum framed, the exterior doors are mostly tempered glass and the interior doors are solid wood. The interior finishes are past their life expectancy, except for the reception area which was renovated recently. Most carpeted areas and suspended ceilings have signs of past water damage. There are two staircases in the building. One is an emergency staircase located outside the building. The other staircase is in the main foyer. The staircases are in metal frame with concrete treads covered with carpet.

Mechanical/Plumbing: The Heating system is hot water system and is connected to the City Hall building through a underground piping loop. Heating is provided from the two City Hall natural gas fired boilers that produce a total of 4.74 MBTU. The boilers are located in the main mechanical room in the City Hall building and are original 1976 equipment. The boilers and the visible areas of the piping system are in very good condition and should meet or exceed life cycle projections. Like the Heating System, the Cooling System is connected to the City Hall building through a underground piping loop. The Cooling System is a chilled water system and chilled water is supplied from the two City Hall 400 Ton centrifugal chillers that circulate chilled water to the air handling units. The chillers were installed in 1997 and are well maintained and in very good condition. Visible areas of the cooling system piping are in good condition and it is expected that the chillers will meet life cycle expectations. The heating/cooling air distribution system is provided by a network of steel duct work using air handlers. Fresh air is supplied by the air handling units. The air handlers and air

distribution system for the building appear to be original equipment and are in overall good condition. With current and continued levels of maintenance the air distribution system should last beyond the next five years. Roof mounted exhaust fans are installed to serve the bathrooms and ventilation is adequate and the exhaust equipment is in overall good condition. Some of the plumbing fixtures were upgraded in recent years and some of the fixtures are original. Newer fixtures are generally in good condition and should meet life cycle expectations, but the older fixtures will require replacement in the next five years. Domestic water piping is copper and sanitary and roof drain piping is cast iron, and is original. With the exception of the roof drain piping the overall condition of the water and sanitary piping is good. Temperature controls are a combination of pneumatic and electric devices and are controlled through a central energy management system located in City Hall. With the exception of the older plumbing fixtures and rain water drainage piping, the mechanical and plumbing systems for this building are in overall good condition.

Electrical: The electrical system is fed from pad mounted transformers that a deliver 4160 volt, 3-phase, 4-wire, service to the main electrical switch gear located in City Hall. This voltage is further stepped down to either 277/480 volt or 120/208 volt 3-phase where needed. The electrical distribution system is original equipment and is in good condition and should exceed life cycle projections. Lighting is typically grid mounted or recessed and is typically fluorescent. While several lighting fixtures have been upgraded in recent years, illumination is generally inadequate throughout the building. A majority of the branch circuit wiring throughout the building appears to be original construction will need consideration for replacement as technology requirements on the system mandate. Emergency lights are present and exit signs are present at exit doors and near stairways and are typically illuminated. The building is connected to the City Hall 250 kW emergency generator that serves as back up power for egress lighting and other dedicated data and communication systems. The security system consists of intrusion, motion and surveillance equipment and was upgraded in 1996.

Fire Protection/Life Safety Systems: The fire alarm system consists of audible and strobe annunciators that are located in common spaces, rest rooms and interior corridors. The system is activated by pull stations and smoke detectors and is centrally monitored. Maintenance contacts for the building indicated the system was original equipment. Fire alarm devices appear to be original 1976 equipment which indicated the system will need replacement to meet current technology standards. The building has a wet pipe fire sprinkler system that includes a fire pump and controls. It is estimated that the existing sprinkler system covers approximately one-third (44,550 SF) of the building area. While the the sprinkler system does not cover 100% of the building, the system that is in place is in good condition and should meet life cycle projections. However, it is recommended that the sprinkler system be extended to provide fire protection to the unprotected areas of the building.

Conveying: The building has a total of four elevators. The elevators and their controls appear to be original 1977 equipment that is worn and aged with one of the elevators being inoperable at the time of the assessment. It is recommended that the elevators be overhauled and upgraded.

Current Investment Requirement and Condition by Uniformat Classification

Uniformat Classification	RSLI%	FCI%	Current Repair Amount
A10 Foundations	NR	0.00	$0
A20 Basement Construction	NR	0.00	$0
B10 Superstructure	NR	82.23	$7,107,399
B20 Exterior Enclosure	53.16	57.56	$4,433,544
B30 Roofing	0.00	120.00	$2,320,729
C10 Interior Construction	27.93	60.33	$1,324,550
C20 Stairs	28.00	0.00	$0
C30 Interior Finishes	0.00	100.00	$5,445,929
D10 Conveying	0.00	110.00	$2,091,174
D20 Plumbing	3.43	60.30	$718,792
D30 HVAC	5.73	46.92	$6,491,713
D40 Fire Protection	0.00	115.64	$5,745,912
D50 Electrical	0.00	100.29	$5,989,344
E10 Equipment	0.00	100.00	$290,659
Total:	**12.49**	**73.14**	**$41,959,745**

System Listing for Civic Centre Main Library

Uniformat	System Description	Unit Price	Qty	UoM	Life	Install Year	Calc Next Renewal	Next Renewal[1]	RSL [2]	RSLI %	REMR	FCI%	Current Repair Amt	Current Replacement Amt
A1010	Standard Foundations	$5.25	135,000	S.F.	100	1977	NR			NR		0.00	$0	$708,972
A1030	Slab on Grade	$7.77	135,000	S.F.		1977	NR			NR		0.00	$0	$1,048,729
A2010	Basement Excavation	$0.48	135,000	S.F.	100	1977	NR			NR		0.00	$0	$64,809
A2020	Basement Walls	$4.63	135,000	S.F.	100	1977	NR			NR		0.00	$0	$624,524
B1000	Seismic Upgrade	$0.00	0				NR			NR		-	$7,107,399	$0
B1010	Floor Construction	$54.03	135,000	S.F.	100	1977	NR			NR		0.00	$0	$7,293,971
B1020	Roof Construction	$9.99	135,000	S.F.	100	1977	NR			NR		0.00	$0	$1,349,208
B2010	Exterior Walls	$47.40	135,000	S.F.	100	1977	2077		64	64.00		0.00	$0	$6,398,427
B2010	Exterior Walls - Seismic Stiffening	$0.00	0	S.F.		1977	NR			NR		-	$3,064,304	$0
B2020	Exterior Windows	$8.31	135,000	S.F.	30	1977	2007		0	0.00		1	$1,177,464	$1,121,394
B2030	Exterior Doors	$1.35	135,000	S.F.	30	1977	2007		0	0.00		1	$191,776	$182,644
B3010	Roof Coverings	$24.44	74,268	S.F.	25	1977	2002		0	0.00		1	$2,178,114	$1,815,095
B3020	Roof Openings	$1.60	74,268	S.F.	25	1977	2002		0	0.00		1	$142,615	$118,846
C1000	ADA Restroom Upgrade	$0.00	0				NR		0	NR		-	$1,128,159	$0
C1010	Partitions	$7.29	135,000	S.F.	75	1977	2052		39	52.00		0.00	$0	$983,920
C1020	Interior Doors	$7.52	135,000	S.F.	40	1977	2017		4	10.00		0.00	$0	$1,015,343
C1030	Fittings/Specialties	$1.45	135,000	S.F.	20	1977	1997		0	0.00		1	$196,391	$196,391
C2010	Stair Construction	$6.24	135,000	S.F.	50	1977	2027		14	28.00		0.00	$0	$842,518
C3010	Wall Finishes	$1.82	135,000	S.F.	5	1977	1982		0	0.00		1	$245,489	$245,489
C3020410	Carpet - 50%	$11.48	135,000	S.F.	7	1977	1984		0	0.00		1	$1,549,527	$1,549,527
C3020410	VCT - 50%	$11.48	135,000	S.F.	12	1977	1989		0	0.00		1	$1,549,527	$1,549,527
C3030	Ceiling Finishes	$15.57	135,000	S.F.	25	1977	2002		0	0.00		1	$2,101,386	$2,101,386
D1010	Elevators and Lifts	$14.08	135,000	S.F.	30	1977	2007		0	0.00		1	$2,091,174	$1,901,067
D2010	Plumbing Fixtures	$4.80	135,000	S.F.	30	1977	2007		0	0.00		0.90	$583,282	$648,091
D2020	Domestic Water Distribution	$3.03	135,000	S.F.	30	1977	2007	2017	4	10.00		0.00	$0	$408,494
D2040	Rain Water Drainage	$1.00	135,000	S.F.	30	1977	2007		0	0.00		1	$135,510	$135,510
D3020	Heat Generating Systems	$23.45	135,000	S.F.	30	1977	2007	2017	4	10.00		0.00	$0	$3,165,827
D3030	Cooling Generating Systems	$43.72	135,000	S.F.	20	1977	1997		0	0.00		1	$6,491,713	$5,901,557
D3040	Distribution Systems	$35.32	135,000	S.F.	30	1977	2007	2017	4	10.00		0.00	$0	$4,768,380
D4010	Sprinklers - Areas Not Sprinkled	$20.67	135,000	S.F.	20			2006	0	0.00		1	$3,567,933	$2,790,720
D4010	Sprinklers - Sprinkled Areas	$16.13	135,000	S.F.	30	1977	2007		0	0.00		1	$2,177,979	$2,177,979
D5010	Electrical Service/Distribution	$2.53	135,000	S.F.	30	1977	2007		0	0.00		1	$358,807	$341,721
D5020	Lighting and Branch Wiring	$36.95	135,000	S.F.	30	1977	2007		0	0.00		1	$4,988,338	$4,988,338
D5030	Communications and Security	$4.55	135,000	S.F.	15	1977	1992		0	0.00		1	$614,705	$614,705
D5090	Other Electrical Systems	$0.20	135,000	S.F.	30	1977	2007		0	0.00		1	$27,495	$27,495
E1020	Institutional Equipment	$2.15	135,000	S.F.	30	1977	2007		0	0.00		1	$290,659	$290,659

[1] For blank cells default to dates shown in Calculated Next Renewal Column

[2] Cells are left blank for Non Renewable Systems, no RSL will be calculated. Systems are expected to expire at the end of their life cycle.

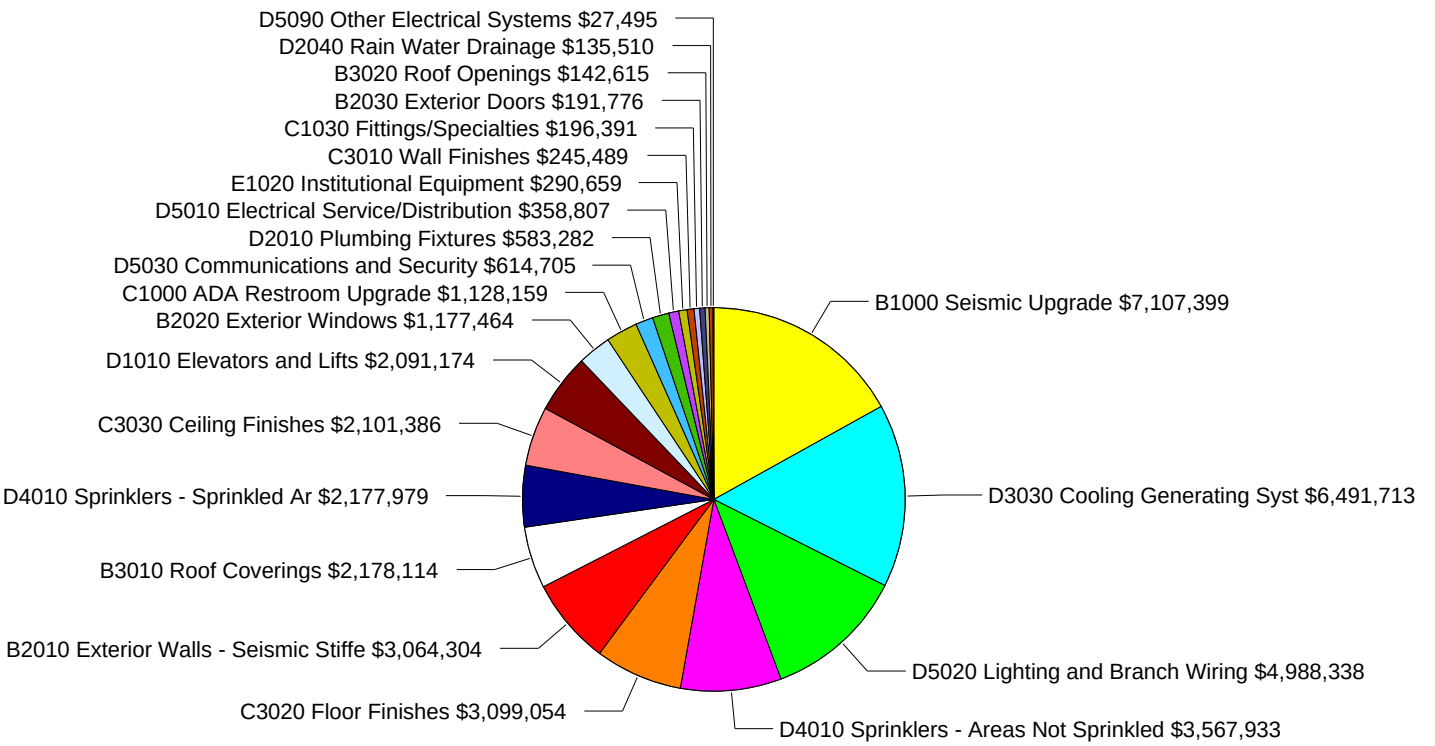
Renewal Schedule

Uniformat	System Description	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total		$41,182,533				$11,505,557	$284,589		$1,905,723			$329,917	$55,208,319
A1010	Standard Foundations												
A1030	Slab on Grade												
A2010	Basement Excavation												
A2020	Basement Walls												
B1000	Seismic Upgrade	$7,107,399											$7,107,399
B1010	Floor Construction												
B1020	Roof Construction												
B2010	Exterior Walls												
B2010	Exterior Walls - Seismic Stiffening	$3,064,304											$3,064,304
B2020	Exterior Windows	$1,177,464											$1,177,464
B2030	Exterior Doors	$191,776											$191,776
B3010	Roof Coverings	$2,178,114											$2,178,114
B3020	Roof Openings	$142,615											$142,615
C1000	ADA Restroom Upgrade	$1,128,159											$1,128,159
C1010	Partitions												
C1020	Interior Doors					$1,222,772							$1,222,772
C1030	Fittings/Specialties	$196,391											$196,391
C2010	Stair Construction												
C3010	Wall Finishes	$245,489					$284,589					$329,917	$859,995
C3020410	Carpet - 50%	$1,549,527							$1,905,723				$3,455,250
C3020410	VCT - 50%	$1,549,527											$1,549,527
C3030	Ceiling Finishes	$2,101,386											$2,101,386
D1010	Elevators and Lifts	$2,091,174											$2,091,174
D2010	Plumbing Fixtures	$583,282											$583,282
D2020	Domestic Water Distribution					$459,763							$459,763
D2040	Rain Water Drainage	$135,510											$135,510
D3020	Heat Generating Systems					$3,919,483							$3,919,483

Uniformat	System Description	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
D3030	Cooling Generating Systems	$6,491,713											$6,491,713
D3040	Distribution Systems					$5,903,539							$5,903,539
D4010	Sprinklers - Areas Not Sprinkled	$2,790,720											$2,790,720
D4010	Sprinklers - Sprinkled Areas	$2,177,979											$2,177,979
D5010	Electrical Service/Distribution	$358,807											$358,807
D5020	Lighting and Branch Wiring	$4,988,338											$4,988,338
D5030	Communications and Security	$614,705											$614,705
D5090	Other Electrical Systems	$27,495											$27,495
E1020	Institutional Equipment	$290,659											$290,659

Deficiency Summary by System

Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart lists all current deficiencies associated with this facility.



Budget Estimate Total: $41,959,745

Condition Detail

System: B1000 - Seismic Upgrade

Analysis: The system The system was installed at an unknown date.

Location: Building Systems
Material: Steel Joists Beams and Deck on column
Distress: Inadequate
Category: Life Safety
Priority: 2 - Potentionally Critical
Correction: Seismic Upgrade to Library
Qty: 135,000-S.F.
Estimate: $7,107,399.34
Assessor Name: Tom Moe
Date Created: 09/12/2013

Notes: **Engineer and construct seismic upgrade to Library Structure - estimate per SF of building area. See the attached FEMA-310 Tier 1 Study.**

System: B2010 - Exterior Walls - Seismic Stiffening

Analysis: The system is in poor condition. The system was installed in 1977. It has a 0-year service life which expired in 1977 and is non-renewable.

Photo is not available.

Location: Building Systems
Material: Cast In Place Concrete
Distress: Inadequate
Category: Life Safety
Priority: 3 - Necessary / Not Critical
Correction: Repair/Repaint Cast in Place Concrete
Qty: 1-S.F.
Estimate: $3,064,304.46
Assessor Name: John Oualline
Date Created: 09/16/2013

Notes: Seismic wall stiffening.

System: B2020 - Exterior Windows

Analysis: The system is in poor condition. The system was installed in 1977. It has a 30-year service life which expired in 2007.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$1,177,463.74**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: B2030 - Exterior Doors

Analysis: The system is in poor condition. The system was installed in 1977. It has a 30-year service life which expired in 2007.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$191,776.06**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: B3010 - Roof Coverings

Analysis: The system is in poor condition. The system was installed in 1977. It has a 25-year service life which expired in 2002.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$2,178,114.08**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: B3020 - Roof Openings

Analysis: The system is in poor condition. The system was installed in 1977. It has a 25-year service life which expired in 2002.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$142,614.61**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: C1000 - ADA Restroom Upgrade

Analysis: The system The system was installed at an unknown date.

Location:	**Building Systems**
Material:	**ADQ Restroom Upgrades - Per Restroom**
Distress:	**Inadequate**
Category:	**Code Compliance**
Priority:	**2 - Potentionally Critical**
Correction:	**Upgrade restrooms to meet ADA requirements**
Qty:	**10-Ea.**
Estimate:	**$1,128,158.62**
Assessor Name:	**Tom Moe**
Date Created:	**09/12/2013**

Notes: Upgrade restrooms to meet ADA requirements as required

System: C1030 - Fittings/Specialties

Analysis: The system is in poor condition. The system was installed in 1977. It has a 20-year service life which expired in 1997.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$196,391.25**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

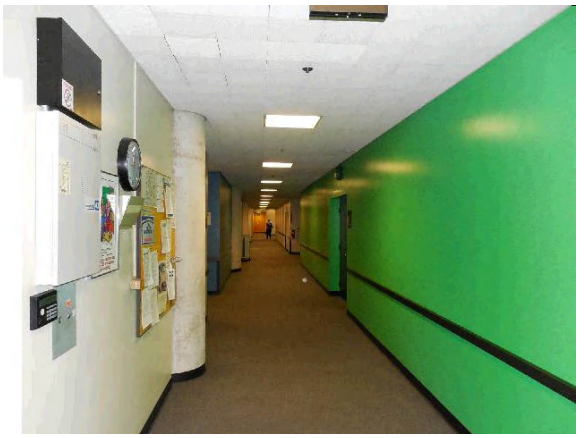
System: C3010 - Wall Finishes

Analysis: The system is in poor condition. The system was installed in 1977. It has a 5-year service life which expired in 1982.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$245,489.06**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: C3020410 - Carpet - 50%

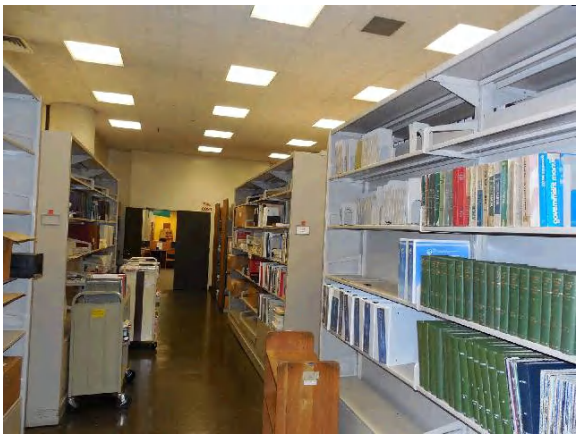
Analysis: The system is in poor condition. The system was installed in 1977. It has a 7-year service life which expired in 1984.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$1,549,526.96**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: C3020410 - VCT - 50%

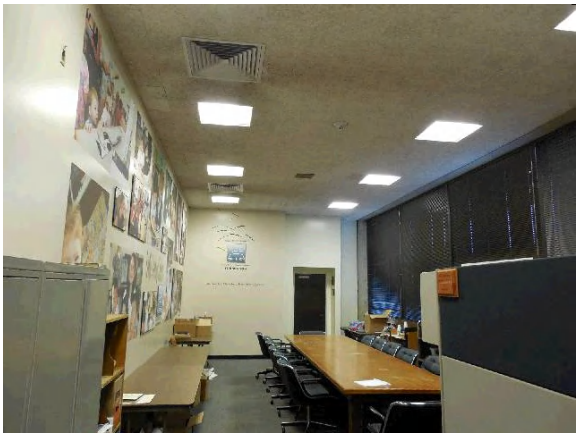
Analysis: The system is in poor condition. The system was installed in 1977. It has a 12-year service life which expired in 1989.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$1,549,526.96**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: C3030 - Ceiling Finishes

Analysis: The system is in poor condition. The system was installed in 1977. It has a 25-year service life which expired in 2002.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$2,101,386.37**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: D1010 - Elevators and Lifts

Analysis: The system is in poor condition. The system was installed in 1977. It has a 30-year service life which expired in 2007.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$2,091,174.03**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: D2010 - Plumbing Fixtures

Analysis: The system is in poor condition. The system was installed in 1977. It has a 30-year service life which expired in 2007.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$583,282.01**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: D2040 - Rain Water Drainage

Analysis: The system is in poor condition. The system was installed in 1977. It has a 30-year service life which expired in 2007.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$135,509.96**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: D3030 - Cooling Generating Systems

Analysis: The system is in poor condition. The system was installed in 1977. It has a 20-year service life which expired in 1997.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$6,491,712.77**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D4010 - Sprinklers - Areas Not Sprinkled

Analysis: The system is in poor condition. The system was installed at an unknown date. It has a 20-year service life.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$2,790,719.66**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: D4010 - Sprinklers - Sprinkled Areas

Analysis: The system is in poor condition. The system was installed in 1977. It has a 30-year service life which expired in 2007.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$2,177,978.96**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: D5010 - Electrical Service/Distribution

Analysis: The system is in poor condition. The system was installed in 1977. It has a 30-year service life which expired in 2007.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$358,806.81**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

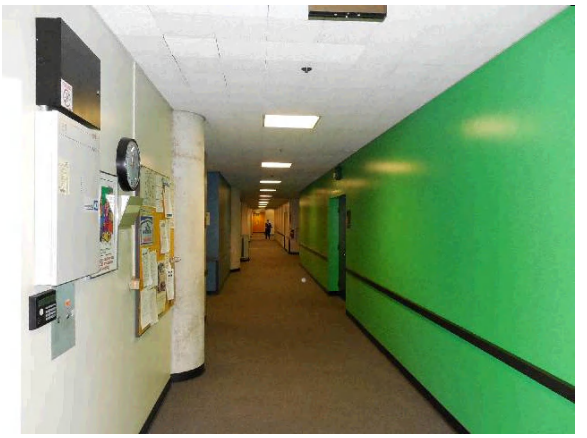
System: D5020 - Lighting and Branch Wiring

Analysis: The system is in poor condition. The system was installed in 1977. It has a 30-year service life which expired in 2007.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$4,988,337.75**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

System: D5030 - Communications and Security

Analysis: The system is in poor condition. The system was installed in 1977. It has a 15-year service life which expired in 1992.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$614,704.61**
Assessor Name:	**Tom Moe**
Date Created:	**09/10/2013**

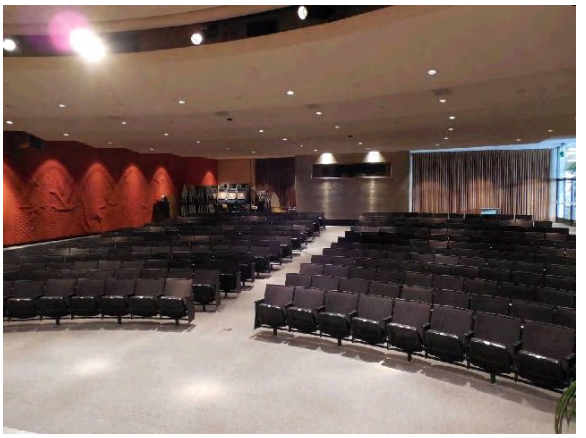
System: D5090 - Other Electrical Systems

Analysis: The system is in poor condition. The system was installed in 1977. It has a 30-year service life which expired in 2007.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$27,494.77**
Assessor Name:	**John Oualline**
Date Created:	**09/12/2013**

System: E1020 - Institutional Equipment

Analysis: The system is in poor condition. The system was installed in 1977. It has a 30-year service life which expired in 2007.



Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$290,659.05**
Assessor Name:	**Tom Moe**
Date Created:	**09/12/2013**

Notes: **Replace auditorium seating.**

Civic Centre Site

Executive Summary

Gross Area (SF):	633,868
Year Built:	1976
Last Reno:	
Replacement Value:	$12,651,479
Repair Cost:	$5,499,607
Total FCI:	43.47%
Total RSLI:	14%
Condition Score:	2.83

Facility Description:
The City of Long Beach Civic Centre Site is a campus with City Hall, the Civic Centre Library (AKA Main Library) and the Broadway Parking Structure. It also includes the Lincoln Park Parking Structure and Lincoln Park but neither were a part of this study. A large portion of the site is over subterranean parking and lower levels of the City Hall and Library facilities along with the lower Concourse Parking for City Hall and the Library VIP parking and delivery areas. The landscaping surrounding the library is in terrible condition and should be renewed. The interlocking pavers making up much of the plaza level are cracked, distorted and in need of replacement. There are areas of ponding including on the north side of the site by the Broadway Parking Garage. Proper sloping and improved drainage is needed in this area.

Current Investment Requirement and Condition by Uniformat Classification

Uniformat Classification	RSLI%	FCI%	Current Repair Amount
G10 Site Preparation	NR	0.00	$0
G20 Site Improvements	7.42	79.98	$3,075,355
G30 Site Mechanical Utilities	26.00	0.00	$0
G40 Site Electrical Utilities	0.00	110.00	$2,424,252
Total:	**13.68**	**43.47**	**$5,499,607**

System Listing for Civic Centre Site

Uniformat	System Description	Unit Price	UoM	Life	Install Year	Calc Next Renewal	Next Renewal[1]	RSL [2]	RSLI%	REMR	FCI%	Current Repair Amt	Current Replacement Amt
G1010	Site Clearing	$0.87	S.F.	50	1976	NR			NR		0.00	$0	$553,272
G1020	Site Demolition and Relocations	$1.73	S.F.	50	1976	NR			NR		0.00	$0	$1,097,322
G1030	Site Earthwork	$0.87	S.F.	50	1976	NR			NR		0.00	$0	$553,272
G2030	Pedestrian Paving	$2.60	S.F.	30	1976	2006		0	0.00		1	$1,815,653	$1,650,594
G2040	Site Development	$1.73	S.F.	50	1976	2026		13	26.00		0.05	$52,647	$1,097,322
G2050	Landscaping	$1.73	S.F.	30	1976	2006		0	0.00		1	$1,207,054	$1,097,322
G3010	Water Supply	$1.73	S.F.	50	1976	2026		13	26.00		0.00	$0	$1,097,322
G3020	Sanitary Sewer	$2.60	S.F.	50	1976	2026		13	26.00		0.00	$0	$1,650,594
G3030	Storm Sewer	$2.60	S.F.	50	1976	2026		13	26.00		0.00	$0	$1,650,594
G4010	Electrical Distribution	$1.73	S.F.	30	1976	2006		0	0.00		1	$1,207,054	$1,097,322
G4020	Site Lighting	$0.87	S.F.	30	1976	2006		0	0.00		1	$608,599	$553,272
G4030	Site Communications & Security	$0.87	S.F.	30	1976	2006		0	0.00		1	$608,599	$553,272

[1] For blank cells default to dates shown in Calculated Next Renewal Column

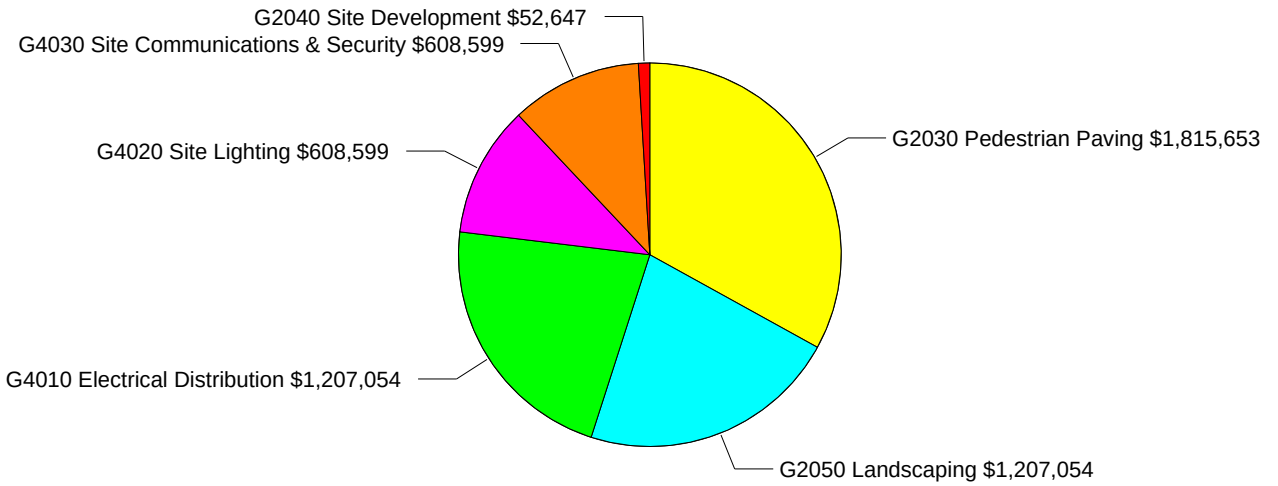
[2] Cells are left blank for Non Renewable Systems, no RSL will be calculated. Systems are expected to expire at the end of their life cycle.

Renewal Schedule

Uniformat	System Description	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total		$5,499,606											$5,499,606
G1010	Site Clearing												
G1020	Site Demolition and Relocations												
G1030	Site Earthwork												
G1040	Hazardous Waste Remediation												
G2010	Roadways												
G2020	Parking Lots												
G2030	Pedestrian Paving	$1,815,653											$1,815,653
G2040	Site Development	$52,647											$52,647
G2050	Landscaping	$1,207,054											$1,207,054
G3010	Water Supply												
G3020	Sanitary Sewer												
G3030	Storm Sewer												
G3040	Heating Distribution												
G3050	Cooling Distribution												
G3060	Fuel Distribution												
G3090	Other Site Mechanical Utilities												
G4010	Electrical Distribution	$1,207,054											$1,207,054
G4020	Site Lighting	$608,599											$608,599
G4030	Site Communications & Security	$608,599											$608,599
G4090	Other Site Electrical Utilities												
G9010	Service and Pedestrian Tunnels												
G9090	Other Site Systems & Equipment												

Deficiency Summary by System

Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart lists all current deficiencies associated with this facility.



Budget Estimate Total: $5,499,607

Condition Detail

System: G2030 - Pedestrian Paving

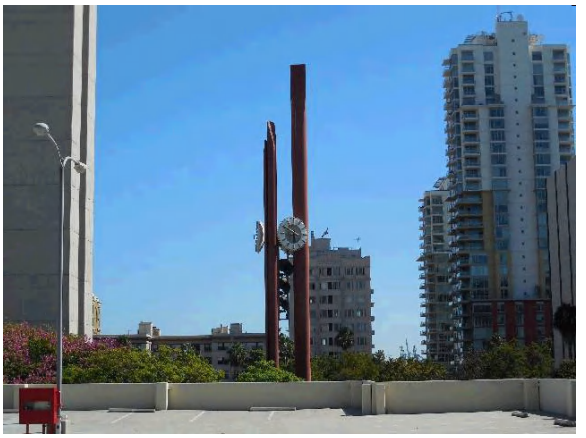
Analysis: The system is in poor condition. The system was installed in 1976. It has a 30-year service life which expired in 2006.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$1,815,653.24**
Assessor Name:	**Tom Moe**
Date Created:	**09/13/2013**

Notes: **The pedestrian paving, both interlocking pavers and sidewalks, have reached the end of the expected life and should be replaced. There is evidence of cracking and many of the pavers are over the concourse parking structure which may lead to leaking. There is also an area that ponds on the Broadway side of the site near the Broadway Parking Structure.**

System: G2040 - Site Development

Analysis: The system is in good condition. The system was installed in 1976. It has a 50-year service life. However, in the assessment, it was found to be currently deficient.



Location:	**Building Systems**
Material:	**Clock Tower**
Distress:	**Failing**
Category:	**Deferred Maintenance**
Priority:	**4 - Recommended**
Correction:	**Repair stopped clock on clock tower**
Qty:	**1-Ea.**
Estimate:	**$52,647.40**
Assessor Name:	**Tom Moe**
Date Created:	**09/13/2013**

Notes: **The clock has stopped on the clock tower. Repair clock mechanism to make it functional.**

System: G2050 - Landscaping

Analysis: The system is in poor condition. The system was installed in 1976. It has a 30-year service life which expired in 2006.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$1,207,054.39**
Assessor Name:	**Tom Moe**
Date Created:	**09/13/2013**

Notes: **The landscape, especially around the library, is in very poor condition and needs to be completely refreshed.**

System: G4010 - Electrical Distribution

Analysis: The system is in poor condition. The system was installed in 1976. It has a 30-year service life which expired in 2006.

Location:	**Building Systems**
Material:	**System**
Distress:	**Beyond Useful Life**
Category:	**Capital Renewal**
Priority:	**4 - Recommended**
Correction:	**Renew System**
Qty:	**1-Ea.**
Estimate:	**$1,207,054.39**
Assessor Name:	**Tom Moe**
Date Created:	**09/13/2013**

System: G4020 - Site Lighting

Analysis: The system is in poor condition. The system was installed in 1976. It has a 30-year service life which expired in 2006.

Location: Building Systems
Material: System
Distress: Beyond Useful Life
Category: Capital Renewal
Priority: 4 - Recommended
Correction: Renew System
Qty: 1-Ea.
Estimate: $608,598.85
Assessor Name: Tom Moe
Date Created: 09/13/2013

Notes: The site lighting has reached the end of it''s expected life and should be renewed with better lighting with reduced cost to operate systems.

System: G4030 - Site Communications & Security

Analysis: The system is in poor condition. The system was installed in 1976. It has a 30-year service life which expired in 2006.

Location: Building Systems
Material: System
Distress: Beyond Useful Life
Category: Capital Renewal
Priority: 4 - Recommended
Correction: Renew System
Qty: 1-Ea.
Estimate: $608,598.85
Assessor Name: Tom Moe
Date Created: 09/13/2013

Notes: Renew and update site communication systems for security and emergency use.

Glossary

ABMA	American Boiler Manufacturers Association http://www.abma.com/
ACEEE	American Council for an Energy-Efficient Economy
ACGIH	American Council of Governmental and Industrial Hygienists
AEE	Association of Energy Engineers
AFD	Adjustable Frequency Drive
AFTC	After Tax Cash Flow
AGA	American Gas Association
AHU	Air Handling Unit
Amp	Ampere
ANSI	American National Standards Institute
ARI	Air Conditioning and Refrigeration Institute
ASD	Adjustable Speed Drive
ASHRAE	American Society of Heating Refrigerating and Air-Conditioning Engineers Inc.
ASME	American Society of Mechanical Engineers
Assessment	Visual survey of a facility to determine its condition. It involves looking at the age of systems reviewing information from local sources and visual evidence of potential problems to assign a condition rating. It does not include destructive testing of materials or testing of systems or equipment for functionality.
ATS	After Tax Savings
AW	Annual worth
BACNET	Building Automation Control Network
BAS	Building Automation System
BCR	Benefit Cost Ratio
BEP	Business Energy Professional (AEE)
BF	Ballast Factor
BHP	Brake Horsepower (motors)
BHP	Boiler Horsepower (boilers)
BLCC	Building Life Cycle Cost analysis program (FEMP)
BOCA	Building Officials and Code Administrators
BTCF	Before Tax Cash Flow
BTS	Before Tax Savings
Btu	British thermal unit
Building	A fully enclosed and roofed structure that can be traversed internally without exiting to the exterior.
Building Addition	An area space or component of a building added to a building after the original building's year built date.
CAA	Clean Air Act
CAAA-90	Clean Air Act Amendments of 1990
CABO	Council of American Building Officials
CAC	Conventional Air Conditioning

CADDET	Center for the Analysis and Dissemination of Demonstrated Energy Technologies
Calculated Next Renewal	The year a system or element would be expected to expire based solely on the date it was installed and the expected useful lifetime for that kind of system.
Capital Renewal	Capital renewal is condition work (excluding suitability and energy audit work) that includes the replacement of building systems or elements (as they become obsolete or beyond their useful life) not normally included in an annual operating budget. Calculated next renewal The year a system or element would be expected to expire based solely on the date it was installed and the expected useful lifetime for that kind of system. Next renewal The assessor adjusted expected useful life of a system or element based on on-site inspection.
Category	Category refers to the type or class of a user defined deficiency grouping with shared or similar characteristics. Category descriptions are: ADA Non Compliance; Appearance; Building Envelope; Building Structural; Code Compliance; Energy; Environmental; Functionality; Life-Safety Code
CDD	Cooling Degree Days
CDGP	Certified Distributed Generation Professional
CEC	California Energy Commission
CEM	Certified Energy Manager
CEP	Certified Energy Procurement Professional
CFC	Chlorofluorocarbon
CFD	Cash Flow Diagram
CFL	Compact Fluorescent Light
CFM cfm	Cubic Feet per Minute
CHP	Combined Heat and Power (a.k.a. cogeneration)
CHW	Chilled Water
Condition	Condition refers to the state of physical fitness or readiness of a facility system or system element for its intended use.
Condition Budget	The Condition Budget, also known as Condition Needs, represents the budgeted contractor installed costs plus owner's soft costs for the repair, replacement or renewal for a component or system level deficiency. It excludes contributing costs for other components or systems that might also be associated with the cortrective actions due to packaging the work.
COP	Coefficient of Performance

Correction	Correction refers to an assessor's recommended deficiency repair or replacement action. For any system or element deficiency, there can be multiple and alternative solutions for its repair or replacement. A Correction is user defined and tied to a material defined in a Uniformat II element, or system it is intended to address. It excludes other peripheral costs that may also be included in the pacakaging of repair, replacement or renewal improvements that may also be triggered by the deficiency correction.
Cp	Heat Capacity of Material
CPUC	California Public Utility Commission
CRI	Color Rendering Index
CRT	Cathode Ray Tube VDT HMI
CTC	Competitive Transition Charge
Cu	Coefficient of Utilization
Current Replacement Value (CRV)	CRV represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to its optimal condition (excluding auxiliary facilities) under current codes and construction standards.
Cv	Value Coefficient
CWS	Chilled Water System
D d	Distance (usually feet)
DB	Dry Bulb
DCV	Demand Control Ventilation
DD	Degree Day
DDB	Double Declining Balance
DDC	Direct Digital Controls
Deferred maintenance	Deferred maintenance is condition work (excluding suitability and energy audit needs) deferred on a planned or unplanned basis to a future budget cycle or postponed until funds are available.
Deficiency	A deficiency is a repair item that is damaged missing inadequate or insufficient for an intended purpose.
Delta	Difference
Delta P	Pressure Difference
Delta T	Temperature Difference
DG	Distributed Generation

Distress	Distress refers to a user defined root cause of a deficiency. Distress descriptions are: ADA Non Compliance; Beyond Expected Life; Beyond Service Life; Beyond Useful Life; Code Issue; Damaged; Failing; Inadequate; Missing; Obsolete Material
DOE	Department of Energy
DP	Dew Point
DR	Demand Response
DX	Direct Expansion Air Conditioner
EA	Energy Audit
EBITDA	Earnings before Interest Taxes Depreciation and Amortization
ECI	Energy Cost Index
ECM	Energy Conservation Measure
ECO	Energy Conservation Opportunity
ECPA	Energy Conservation and Production Act
ECR	Energy Conservation Recommendation
ECS	Energy Control System
EER	Energy Efficiency Ratio
EERE	Energy Efficiency and Renewable Energy division of US DOE
EIA	Energy Information Agency
EIS	Energy Information System
Element	Elements are the major components that comprise building systems as defined by Uniformat
EMCS	Energy Management Computer System
EMO	Energy Management Opportunity
EMP	Energy Management Project
EMR	Energy Management Recommendation
EMS	Energy Management System
Energy Utilization Index (EUI)	EUI is the measure of total energy consumed in the cooling or heating of a building in a period expressed as British thermal unit (BTU) per (cooled or heated) gross square foot.
EO	Executive Order
EPA	Environmental Protection Agency
EPACT	Energy Policy Act of 1992

EPCA	Energy Production and Conservation Act of 1975
EPRI	Electric Power Research Institute
EREN	Efficiency and Renewable Energy (Division of USDOE)
ERV	Energy Recovery Ventilator
ESCO	Energy Service Company
ESPC	Energy Savings Performance Contract
EUI	Energy Use Index
EWG	Exempt Wholesale Generators
Expected Life	Expected Life refers to the intrinsic period of time a system or element is expected to perform as intended. Useful life is generally provided by manufacturers of materials, systems and elements through their literature, testing and experience. Useful Lives in City of Houston data base are derived from the Building Owners and Managers (BOMA) organization's guidelines, RSMeans cost data, and from user defined historical experience.
Extended Facility Condition Index (EFCI)	EFCI is calculated as the condition needs for the current year plus facility system renewal needs going out to a set time in the future divided by Current Replacement Value.
F	Fahrenheit
f	Frequency
Facility	A facility refers to site(s) building(s) or building addition(s) or combinations thereof that provide a particular service.
Facility Condition Assessment (FCA)	FCA is a process for evaluating the condition of buildings and facilities for programming and budgetary purposes through an on site inspection and evaluation process.
Facility Condition Index (FCI)	FCI is an industry-standard measurement of a facility's condition that is the ratio of the cost to correct a facility's deficiencies to the Current Replacement Value of the facilities. The higher the FCI the poorer the condition of a facility. After an FCI is established for all buildings within a portfolio a building's condition can be ranked relative to other buildings. The FCI may also represent the condition of a portfolio based on the cumulative FCIs of the portfolio's facilities.
FC	Footcandle
FCA	Fuel Cost Adjustment
FEMIA	Federal Energy Management Improvement Act of 1988
FEMP	Federal Energy Management Program
FERC	Federal Energy Regulatory Commission
FESR	Fuel Energy Savings Ratio
FLA	Full Load Amps
FLF	Facility Load Factor (usually monthly)
FLRPM	Full Load Revolutions per Minute
FMS	Facility Management System
FPM fpm	Feet per Minute (velocity)
FSEC	Florida Solar Energy Center
Ft	Foot
GPM gpm	Gallons per Minute
GRI	Gas Research Institute
Gross Square Feet (GSF)	The size of the enclosed floor space of a building in square feet measured to the outside face of the enclosing wall.

GUI	Graphical User Interface
H h	Enthalpy Btu/lb
HCFC	Hydrochlorofluorocarbons
HDD	Heating Degree days
HFC	Hydrofluorocarbons
HHV	Higher Heating Value
HID	High Intensity Discharge (lamp)
HMI	Human Machine Interface
HMMI	Human Man Machine Interface
HO	High Output (lamp)
HP Hp hp	Horsepower
HPS	High Pressure Sodium (lamp)
HR	Humidity Ratio
Hr hr	Hour
HRU	Heat Recovery Unit
HVAC	Heating Ventilation and Air-Conditioning
Hz	Hertz
I	Intensity (lumen output of lamp)
I i	Interest rate or Discount rate
IAQ	Indoor Air Quality
ICA	International Cogeneration Alliance
ICBO	International Conference of Buildings Officials
ICC	International Code Council
ICP	Institutional Conservation Program
IECC	International Energy Conservation Code
IEEE	Institute of Electrical and Electronic Engineers
IESNA	Illuminating Engineering Society of North America
Install year	The year a building or system was built or the most recent major renovation date (where a minimum of 70% of the system's Current Replacement Value (CRV) was replaced).
IRP	Integrated Resource Planning
IRR	Internal Rate of Return
ISO	Independent System Operator
ITA	Independent Tariff Administrator
K	Kelvins (color temperature of lamp)
k	Kilo multiple of thousands in SI system
K k	Thermal Conductivity of Material
KVA	Kilovolt Ampere
KVAR	Kilovolt Ampere Reactive
kW	kiloWatt
kWh	kiloWatt hour

L	Length (usually feet)
LCC	Life Cycle Costing
LDC	Local Distribution Company
LEED	Leadership in Energy and Environmental Design
LEED EB	LEED for Existing Buildings
LEED NC	LEED for new construction
LF	Load Factor
LHV	Lower Heating Value
Life cycle	The period of time that a building or site system or element can be expected to adequately serve its intended function.
LPS	Low Pressure Sodium (lamp)
Lu	Lumen Output of a Lamp or Fixture
M	Mega multiple of millions in SI system
M&V	Measurement and Verification
MACRS	Modified Accelerated Cost Recovery System
MARR	Minimum Attractive Rate of Return
Mbtu	Thousand Btu
MCF	Thousand Cubic Feet (usually of gas)
MEC	Model Energy Code
Mm	Multiple of Thousands in I/P System
MMBtu	Million Btu
MMCS	Maintenance Management Computer System
MMI	Man Machine Interface
MMS	Maintenance Management System
MSE 2000	Management System for Energy 2000 (ANSI Georgia Tech Univ)
MW	MegaWatt
MWH MWh	MegaWatt hour
NAAQS	National Ambient Air Quality Standards
NAESCO	National Association of Energy Service Companies
NAIMA	North American Insulation Manufacturers Association
NEA	National Energy Act of 1978
NECPA	National Energy Conservation Policy Act
NEMA	National Electrical Manufacturer's Association
NERC	North American Electric Reliability Council
Next Renewal	The Next Renewal date is an override of the "Calculated Next Renewal" date and is based upon the assessor’s visual inspection.
NFPA	National Fire Protection Association
NGPA	National Gas Policy Act of 1978
NLRPM	No Load Revolutions per Minute (speed)
Nn	Equipment or Project lifetime in economic analysis
NOPR	Notice of Proposed Rule Making from FERC

NOx	Nitrogen Oxide Compounds
NPV	Net present value in economic analysis
NREL	National Renewable Energy Laboratory
NUG	Non-Utility Generator
O&M	Operation and Maintenance
OA	Outside Air
ODP	Ozone Depletion Potential
OPAC	Off-Peak Air Conditioning
Order of Magnitude	Order of Magnitude refers to a rough approximation made with a degree of knowledge and confidence that the budgeted, projected or estimated cost falls within a reasonable range of cost values.
P	Present value in economic analysis
PBR	Performance Based Rates
PEA	Preliminary Energy Audit
PF	Power Factor
PID	Proportional plus integral plus derivative (control system)
PM	Preventive Maintenance
PM	Portfolio Manager in Energy Star rating system
PoolCo	Power Pool Company or Organization
POU	Point of Use
PQ	Power Quality
Priority	Priority refers to a deficiency's urgency for repair as determined by the assessment team and does not reflect the priority assigned to proposed project repairs for the City of Houston Facility or maintenance departments.The following are the COH pre-determined deficiencies priorites: 1- Currently Critical (Immediate) 2- Potentially Critical (Year 1) 3- Necessary/Not Yet Critical (Years 2-5) 4- Recommended (Years 6-10) 5- Does Not Meet Current Codes but is “Grandfathered”
PSC	Public Service Commission
PSIA psia	Pounds per square inch absolute (pressure)
PSIG psig	Pounds per square inch gauge (pressure)
PUC	Public Utility Commission
PUHCA	Public Utilities Holding Company Act of 1935
PURPA	Public Utilities Regulatory Policies of 1978
PV	Photovotaic system
PV	Present Value
PW	Present Worth
PX	Power Exchange

Q	Heat load due to conduction using degree days
q	Rate of heat flow in Btu per hour
QF	Qualifying Facility
R	Electrical resistance
R	Thermal Resistance
RC	Remote controller
RCR	Room Cavity Ratio
RCRA	Resource Conservation and Recovery Act
Remaining Service Life (RSL)	RSL is the number of years service remaining for a system or equipment item. It is automatically calculated based on the difference between the current year and the "Calculated Next Renewal" date or the "Next Renewal" date whichever one is the later date.
Remaining Service Life Index (RSLI)	RSLI is defined as a percentage ratio of the remaining service life of a system. It usually ranges from 0 to 100
REMR	Repair Evaluation Maintenance Rehabilitation (REMR) is a scale used to objectively rank systems based on their condition
Renewal Schedule	A timeline that provides the items that need repair the year in which the repair is needed and the estimated price of the renewal.
RH	Relative Humidity
RLA	Running Load Amps
RMS	Root Mean Square
RO	Reverse Osmosis
ROI	Return on Investment
RPM	Revolutions Per Minute
RTG	Regional Transmission Group
RTO	Regional Transmission Organization
RTP	Real Time Pricing
SBCCI	Southern Building Code Congress International
SC	Scheduling Coordinator
SC	Shading Coefficient
SCADA	Supervisory Control and Data Acquisition Systems
SEER	Seasonal Energy Efficiency Ratio
SHR	Sensible Heat Ratio
Site	The grounds and utilities roadways landscaping fencing and other typical land improvements needed to support the facility.
Soft Cost	An expense item that is not considered direct construction cost. Soft cost include architectural engineering financing legal fees and other pre-and-post construction expenses, as funished by the City of Houston for this FCA Project.
SOx	Sulfur Oxide Compounds
SP	Static Pressure
SP SPB	Simple Payback
SPP	Simple Payback Period

SPP	Small Power Producers
STR	Stack Temperature Rise
SV	Specific Volume
System	System refers to building and related site work elements as described by ASTM Uniformat II Classification for Building Elements (E1557-97) a format for classifying major facility elements common to most buildings. Elements usually perform a given function regardless of the design specification construction method or materials used. See also Uniformat II.
T	Temperature
T	Tubular (lamps)
TAA	Technical Assistance Audit
TCP/IP	Transmission Control Protocol/Internet Protocol
TES	Thermal Energy Storage
THD	Total Harmonic Distortion
TOD	Time of Day
TOU	Time of Use
TQM	Total Quality Management
TransCo	Transmission Company
U	Thermal Conductance
UDC	Utility Distribution Company
UL	Underwriters Laboratories
UNIFORMAT II	The ASTM UNIFORMAT II Classification for Building Elements (E1557-97) a format for classifying major facility components common to most buildings.
Useful Life	Useful Life refers to the intrinsic period of time a system or element is expected to perform as intended. Useful life is generally provided by manufacturers of materials, systems and elements through their literature, testing and experience. Useful Lives in City of Houston data base are derived from the Building Owners and Managers (BOMA) organization's guidelines, RSMeans cost data, and from user defined historical experience.
USGBC	US Green Building Council
V	Volts Voltage
V	Volume
v	Specific Volume
VAV	Variable Air Volume
VDT	Video Display Terminal
VFD	Variable Frequency Drive
VHO	Very High Output
VSD	Variable Speed Drive
W	Watts
W	Width
WB	Wet bulb
WH Wh	Watt Hours
Year built	The year that a building or addition was originally built based on substantial completion or occupancy.

Z	Electrical Impedance

Facility Renewal Details

CLB 2013 Update
Composite Facility Renewal Table

Facility Name	Gross Area(ft)	Replacement Cost($)	FCI (%)	CI (%)	Current Needs	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-Year Renewals	Total Current + Forecast Needs	Average Annual Needs	Projected 35 Year Needs
CLB 2013 Update	658,642	###########	55.83%	17.39%	###########	$2,084,341	$0	$1,452,121	$19,377,707	$754,319	$0	$3,528,026	$0	$1,779,709	$874,463	$29,850,686	###########	$2,985,069	###########
Broadway Parking Structure	215,600	$15,192,920	35.28%	27.51%	$5,360,566	$2,084,341	$0	$435,264	$0	$25,452	$0	$0	$0	$0	$29,506	$2,574,563	$7,935,129	$257,456	$14,371,537
City Hal	283,268	###########	52.04%	21.42%	$65,492,265	$0	$0	$1,016,857	$7,872,151	$444,278	$0	$1,622,304	$0	$1,779,709	$515,040	$13,250,339	$78,742,604	$1,325,034	###########
City Hall Concourse Parking	24,774	$2,884,640	39.39%	6.14%	$1,136,395	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,136,395	$0	$1,136,395
Civic Centre Main Library	135,000	$57,371,263	73.14%	12.49%	$41,959,745	$0	$0	$0	$11,505,556	$284,589	$0	$1,905,723	$0	$0	$329,917	$14,025,785	$55,985,530	$1,402,579	$91,049,993
Civic Centre Site		$12,651,479	43.47%	13.68%	$5,499,607	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,499,607	$0	$5,499,607

Systems	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-Year Renewals	Total Current + Forecast Needs	Average Annual Needs	Projected 35 Year Needs
Total	###########	$2,084,341		$1,452,121	$19,377,707	$754,319		$3,528,026		$1,779,709	$874,463	$29,850,686	###########	$2,985,069	###########
Substructure												$0	$0	$0	$0
Foundations												$0	$0	$0	$0
Standard Foundations												$0	$0	$0	$0
Special Foundations												$0	$0	$0	$0
Slab on Grade												$0	$0	$0	$0
Basement Construction												$0	$0	$0	$0
Basement Excavation												$0	$0	$0	$0
Basement Walls												$0	$0	$0	$0
Shell	$31,778,754	$61,057										$61,057	$31,839,811	$6,106	$31,992,454
Superstructure	$605,831											$0	$605,831	$0	$605,831
Floor Construction	$605,831											$0	$605,831	$0	$605,831
Roof Construction												$0	$0	$0	$0
Exterior Enclosure	$16,881,341	$61,057										$61,057	$16,942,398	$6,106	$17,095,041
Exterior Walls												$0	$0	$0	$0
Exterior Walls - Seismic Stiffening	$6,477,569											$0	$6,477,569	$0	$6,477,569
Exterior Windows	$10,047,574											$0	$10,047,574	$0	$10,047,574
Exterior Doors	$356,198	$61,057										$61,057	$417,255	$6,106	$569,898
Roofing	$14,291,582											$0	$14,291,582	$0	$14,291,582
Roof Coverings	$13,220,650											$0	$13,220,650	$0	$13,220,650
Roof Openings	$1,070,933											$0	$1,070,933	$0	$1,070,933
Interiors	$13,289,399			$775,724	$1,222,772	$754,319		$3,528,026		$1,779,709	$874,463	$8,935,013	$22,224,412	$893,501	$44,561,945
Interior Construction	$571,388			$775,724	$1,222,772							$1,998,496	$2,569,884	$199,850	$7,566,124
Partitions												$0	$0	$0	$0
Interior Doors				$775,724	$1,222,772							$1,998,496	$1,998,496	$199,850	$6,994,736
Fittings	$374,997											$0	$374,997	$0	$374,997
Fittings/Specialties	$196,391											$0	$196,391	$0	$196,391
Stairs	$193,631											$0	$193,631	$0	$193,631
Stair Construction	$192,550											$0	$192,550	$0	$192,550
Stair Finishes	$1,081											$0	$1,081	$0	$1,081
Interior Finishes	$12,524,380					$754,319		$3,528,026		$1,779,709	$874,463	$6,936,517	$19,460,897	$693,652	$36,802,190
Wall Finishes	$2,593,565					$747,047					$866,032	$1,613,079	$4,206,644	$161,308	$8,239,342
Floor Finishes	$5,363,060							$3,528,026				$3,528,026	$8,891,086	$352,803	$17,711,151
Ceiling Finishes	$4,567,755					$7,272				$1,779,709	$8,430	$1,795,411	$6,363,166	$179,541	$10,851,694
Services	$32,741,002	$2,023,284		$241,133	$18,154,935							$20,419,352	$53,160,354	$2,041,935	###########
Conveying	$2,091,174	$302,055										$302,055	$2,393,229	$30,206	$3,148,367
Elevators and Lifts	$2,091,174	$302,055										$302,055	$2,393,229	$30,206	$3,148,367
Escalators and Moving Walks												$0	$0	$0	$0
Other Conveying Systems												$0	$0	$0	$0
Plumbing	$1,222,607	$545,637			$459,763							$1,005,400	$2,228,007	$100,540	$4,741,507
Plumbing Fixtures	$887,400	$61,057										$61,057	$948,457	$6,106	$1,101,100
Domestic Water Distribution	$94,779	$25,844			$459,763							$485,607	$580,386	$48,561	$1,794,404
Sanitary Waste												$0	$0	$0	$0
Rain Water Drainage	$240,428	$458,736										$458,736	$699,164	$45,874	$1,846,004
Other Plumbing Systems												$0	$0	$0	$0
HVAC	$9,351,973				$17,695,172							$17,695,172	$27,047,145	$1,769,517	$71,285,075
Energy Supply	$2,506,708											$0	$2,506,708	$0	$2,506,708
Heat Generating Systems					$3,919,483							$3,919,483	$3,919,483	$391,948	$13,718,191
Cooling Generating Systems	$6,601,274				$7,872,151							$7,872,151	$14,473,425	$787,215	$34,153,803
Distribution Systems	$198,580				$5,903,539							$5,903,539	$6,102,119	$590,354	$20,860,967
Terminal & Package Units												$0	$0	$0	$0
Controls & Instrumentation	$34,598											$0	$34,598	$0	$34,598
System Test & Balance	$10,812											$0	$10,812	$0	$10,812
Other HVAC Systems/Equip												$0	$0	$0	$0
Fire Protection	$7,325,077	$19,383										$19,383	$7,344,460	$1,938	$7,392,918
Sprinklers	$1,504,990											$0	$1,504,990	$0	$1,504,990
Sprinklers - Areas Not Sprinkled	$3,567,933											$0	$3,567,933	$0	$3,567,933
Sprinklers - Sprinkled Areas	$2,177,979											$0	$2,177,979	$0	$2,177,979
Standpipes	$74,175	$19,383										$19,383	$93,558	$1,938	$142,016
Fire Protection Specialties												$0	$0	$0	$0
Other Fire Protection Systems												$0	$0	$0	$0
Electrical	$12,750,171	$1,156,208		$241,133								$1,397,341	$14,147,512	$139,734	$17,640,865
Electrical Service/Distribution	$432,599	$61,057		$241,133								$302,190	$734,789	$30,219	$1,490,264

CLB 2013 Update
Composite Facility Renewal Table

Systems	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-Year Renewals	Total Current + Forecast Needs	Average Annual Needs	Projected 35 Year Needs
Lighting and Branch Wiring	$10,275,710	$1,095,151										$1,095,151	$11,370,861	$109,515	$14,108,739
Communications and Security	$1,863,556											$0	$1,863,556	$0	$1,863,556
Other Electrical Systems	$178,306											$0	$178,306	$0	$178,306
Equipment & Furnishings	$320,212			$435,264								$435,264	$755,476	$43,526	$1,843,636
Equipment	$320,212			$435,264								$435,264	$755,476	$43,526	$1,843,636
Institutional Equipment	$290,659											$0	$290,659	$0	$290,659
Vehicular Equipment	$29,553			$435,264								$435,264	$464,817	$43,526	$1,552,977
Furnishings												$0	$0	$0	$0
Building Sitework	$5,499,607											$0	$5,499,607	$0	$5,499,607
Site Preparation												$0	$0	$0	$0
Site Clearing												$0	$0	$0	$0
Site Demolition and Relocations												$0	$0	$0	$0
Site Earthwork												$0	$0	$0	$0
Hazardous Waste Remediation												$0	$0	$0	$0
Site Improvements	$3,075,355											$0	$3,075,355	$0	$3,075,355
Roadways												$0	$0	$0	$0
Parking Lots												$0	$0	$0	$0
Pedestrian Paving	$1,815,653											$0	$1,815,653	$0	$1,815,653
Site Development	$52,647											$0	$52,647	$0	$52,647
Landscaping	$1,207,054											$0	$1,207,054	$0	$1,207,054
Site Mechanical Utilities												$0	$0	$0	$0
Water Supply												$0	$0	$0	$0
Sanitary Sewer												$0	$0	$0	$0
Storm Sewer												$0	$0	$0	$0
Heating Distribution												$0	$0	$0	$0
Cooling Distribution												$0	$0	$0	$0
Fuel Distribution												$0	$0	$0	$0
Other Site Mechanical Utilities												$0	$0	$0	$0
Site Electrical Utilities	$2,424,252											$0	$2,424,252	$0	$2,424,252
Electrical Distribution	$1,207,054											$0	$1,207,054	$0	$1,207,054
Site Lighting	$608,599											$0	$608,599	$0	$608,599
Site Communications & Security	$608,599											$0	$608,599	$0	$608,599
Other Site Electrical Utilities												$0	$0	$0	$0
Other Site Construction												$0	$0	$0	$0
Service and Pedestrian Tunnels												$0	$0	$0	$0
Other Site Systems & Equipment												$0	$0	$0	$0

CLB 2013 Update
Broadway Parking Structure Facility Renewal

Facility Name	Gross Area(ft)	Replacement Cost($)	FCI (%)	CI (%)	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-Year Renewals	Total Current + Forecast Needs	Average Annual Needs	Projected 35 Year Needs
Broadway Parking Structure	215,600	$15,192,920	35.28%	27.51%	$5,360,566	$2,084,341	$0	$435,264	$0	$25,452	$0	$0	$0	$0	$29,506	$2,574,563	$7,935,129	$257,456	$14,371,537

Systems	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-Year Renewals	Total Current + Forecast Needs	Average Annual Needs	Projected 35 Year Needs
Total	$5,360,566	$2,084,341		$435,264		$25,452					$29,506	$2,574,563	$7,935,129	$257,456	$14,371,537
Substructure												$0	$0	$0	$0
Foundations												$0	$0	$0	$0
Standard Foundations												$0	$0	$0	$0
Slab on Grade												$0	$0	$0	$0
Shell	$4,019,095	$61,057										$61,057	$4,080,152	$6,106	$4,232,795
Superstructure	$605,831											$0	$605,831	$0	$605,831
Floor Construction	$605,831											$0	$605,831	$0	$605,831
Exterior Enclosure	$3,413,265	$61,057										$61,057	$3,474,322	$6,106	$3,626,965
Exterior Walls												$0	$0	$0	$0
Exterior Walls - Seismic Stiffening	$3,413,265											$0	$3,413,265	$0	$3,413,265
Exterior Doors		$61,057										$61,057	$61,057	$6,106	$213,700
Interiors	$870,806					$25,452					$29,506	$54,958	$925,764	$5,496	$1,063,159
Interior Construction												$0	$0	$0	$0
Partitions												$0	$0	$0	$0
Stairs	$192,550											$0	$192,550	$0	$192,550
Stair Construction	$192,550											$0	$192,550	$0	$192,550
Interior Finishes	$678,256					$25,452					$29,506	$54,958	$733,214	$5,496	$870,609
Wall Finishes	$266,782					$18,180					$21,076	$39,256	$306,038	$3,926	$404,178
Floor Finishes	$9,409											$0	$9,409	$0	$9,409
Ceiling Finishes	$402,064					$7,272					$8,430	$15,702	$417,766	$1,570	$457,021
Services	$37,637	$2,023,284										$2,023,284	$2,060,921	$202,328	$7,119,131
Conveying		$302,055										$302,055	$302,055	$30,206	$1,057,193
Elevators and Lifts		$302,055										$302,055	$302,055	$30,206	$1,057,193
Plumbing		$545,637										$545,637	$545,637	$54,564	$1,909,730
Plumbing Fixtures		$61,057										$61,057	$61,057	$6,106	$213,700
Domestic Water Distribution		$25,844										$25,844	$25,844	$2,584	$90,454
Rain Water Drainage		$458,736										$458,736	$458,736	$45,874	$1,605,576
Fire Protection		$19,383										$19,383	$19,383	$1,938	$67,841
Standpipes		$19,383										$19,383	$19,383	$1,938	$67,841
Electrical	$37,637	$1,156,208										$1,156,208	$1,193,845	$115,621	$4,084,365
Electrical Service/Distribution		$61,057										$61,057	$61,057	$6,106	$213,700
Lighting and Branch Wiring		$1,095,151										$1,095,151	$1,095,151	$109,515	$3,833,029
Communications and Security	$37,637											$0	$37,637	$0	$37,637
Equipment & Furnishings				$435,264								$435,264	$435,264	$43,526	$1,523,424
Equipment				$435,264								$435,264	$435,264	$43,526	$1,523,424
Vehicular Equipment				$435,264								$435,264	$435,264	$43,526	$1,523,424

CLB 2013 Update
City Hall Renewal

Facility Name	Gross Area(ft)	Replacement Cost($)	FCI (%)	CI (%)	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-Year Renewals	Total Current + Forecast Needs	Average Annual Needs	Projected 35 Year Needs
City Hall	283,268	$125,850,491	52.04%	21.42%	$65,492,265	$0	$0	$1,016,857	$7,872,151	$444,278	$0	$1,622,304	$0	$1,779,709	$515,040	$13,250,339	$78,742,604	$1,325,034	$111,868,452

Systems	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-Year Renewals	Total Current + Forecast Needs	Average Annual Needs	Projected 35 Year Needs
Total	$65,492,265			$1,016,857	$7,872,151	$444,278		$1,622,304		$1,779,709	$515,040	$13,250,339	$78,742,604	$1,325,034	$111,868,452
Substructure												$0	$0	$0	$0
Foundations												$0	$0	$0	$0
Standard Foundations												$0	$0	$0	$0
Slab on Grade												$0	$0	$0	$0
Basement Construction												$0	$0	$0	$0
Basement Excavation												$0	$0	$0	$0
Basement Walls												$0	$0	$0	$0
Shell	$20,525,910											$0	$20,525,910	$0	$20,525,910
Superstructure												$0	$0	$0	$0
Floor Construction												$0	$0	$0	$0
Roof Construction												$0	$0	$0	$0
Exterior Enclosure	$9,034,532											$0	$9,034,532	$0	$9,034,532
Exterior Walls												$0	$0	$0	$0
Exterior Windows	$8,870,111											$0	$8,870,111	$0	$8,870,111
Exterior Doors	$164,422											$0	$164,422	$0	$164,422
Roofing	$11,491,378											$0	$11,491,378	$0	$11,491,378
Roof Coverings	$10,572,430											$0	$10,572,430	$0	$10,572,430
Roof Openings	$918,948											$0	$918,948	$0	$918,948
Interiors	$6,775,191			$775,724		$444,278		$1,622,304		$1,779,709	$515,040	$5,137,055	$11,912,246	$513,706	$24,754,884
Interior Construction	$374,997			$775,724								$775,724	$1,150,721	$77,572	$3,090,031
Partitions												$0	$0	$0	$0
Interior Doors				$775,724								$775,724	$775,724	$77,572	$2,715,034
Fittings	$374,997											$0	$374,997	$0	$374,997
Stairs												$0	$0	$0	$0
Stair Construction												$0	$0	$0	$0
Interior Finishes	$6,400,195					$444,278		$1,622,304		$1,779,709	$515,040	$4,361,331	$10,761,526	$436,133	$21,664,854
Wall Finishes	$2,081,293					$444,278					$515,040	$959,318	$3,040,611	$95,932	$5,438,906
Floor Finishes	$2,254,597							$1,622,304				$1,622,304	$3,876,901	$162,230	$7,932,661
Ceiling Finishes	$2,064,305									$1,779,709		$1,779,709	$3,844,014	$177,971	$8,293,287
Services	$11,040,146			$241,133	$7,872,151							$8,113,284	$19,153,430	$811,328	$39,436,640
Conveying												$0	$0	$0	$0
Elevators and Lifts												$0	$0	$0	$0
Plumbing	$485,435											$0	$485,435	$0	$485,435
Plumbing Fixtures	$304,118											$0	$304,118	$0	$304,118
Domestic Water Distribution	$94,779											$0	$94,779	$0	$94,779
Rain Water Drainage	$86,538											$0	$86,538	$0	$86,538
HVAC	$2,506,708				$7,872,151							$7,872,151	$10,378,859	$787,215	$30,059,237
Energy Supply	$2,506,708											$0	$2,506,708	$0	$2,506,708
Cooling Generating Systems					$7,872,151							$7,872,151	$7,872,151	$787,215	$27,552,529
Fire Protection	$1,487,624											$0	$1,487,624	$0	$1,487,624
Sprinklers	$1,413,449											$0	$1,413,449	$0	$1,413,449
Standpipes	$74,175											$0	$74,175	$0	$74,175
Electrical	$6,560,379			$241,133								$241,133	$6,801,512	$24,113	$7,404,345
Electrical Service/Distribution				$241,133								$241,133	$241,133	$24,113	$843,966
Lighting and Branch Wiring	$5,229,348											$0	$5,229,348	$0	$5,229,348
Communications and Security	$1,203,286											$0	$1,203,286	$0	$1,203,286
Other Electrical Systems	$127,746											$0	$127,746	$0	$127,746
Equipment & Furnishings												$0	$0	$0	$0
Equipment												$0	$0	$0	$0
Institutional Equipment												$0	$0	$0	$0
Furnishings												$0	$0	$0	$0

CLB 2013 Update
City Hall Concourse Renewal

Facility Name	Gross Area(ft)	Replacement Cost($)	FCI (%)	CI (%)	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-Year Renewals	Total Current + Forecast Needs	Average Annual Needs	Projected 35 Year Needs
City Hall Concourse Parking	24,774	$2,884,640	39.39%	6.14%	$1,136,395	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,136,395	$0	$1,136,395

Systems	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-Year Renewals	Total Current + Forecast Needs	Average Annual Needs	Projected 35 Year Needs
Total	$1,136,395											$0	$1,136,395	$0	$1,136,395
Substructure												$0	$0	$0	$0
Foundations												$0	$0	$0	$0
Standard Foundations												$0	$0	$0	$0
Special Foundations												$0	$0	$0	$0
Slab on Grade												$0	$0	$0	$0
Basement Construction												$0	$0	$0	$0
Basement Excavation												$0	$0	$0	$0
Basement Walls												$0	$0	$0	$0
Shell	$479,476											$0	$479,476	$0	$479,476
Superstructure												$0	$0	$0	$0
Floor Construction												$0	$0	$0	$0
Roof Construction												$0	$0	$0	$0
Roofing	$479,476											$0	$479,476	$0	$479,476
Roof Coverings	$470,105											$0	$470,105	$0	$470,105
Roof Openings	$9,370											$0	$9,370	$0	$9,370
Interiors	$1,081											$0	$1,081	$0	$1,081
Stairs	$1,081											$0	$1,081	$0	$1,081
Stair Construction												$0	$0	$0	$0
Stair Finishes	$1,081											$0	$1,081	$0	$1,081
Interior Finishes												$0	$0	$0	$0
Wall Finishes												$0	$0	$0	$0
Floor Finishes												$0	$0	$0	$0
Ceiling Finishes												$0	$0	$0	$0
Services	$626,285											$0	$626,285	$0	$626,285
Conveying												$0	$0	$0	$0
Elevators and Lifts												$0	$0	$0	$0
Escalators and Moving Walks												$0	$0	$0	$0
Other Conveying Systems												$0	$0	$0	$0
Plumbing	$18,380											$0	$18,380	$0	$18,380
Plumbing Fixtures												$0	$0	$0	$0
Domestic Water Distribution												$0	$0	$0	$0
Sanitary Waste												$0	$0	$0	$0
Rain Water Drainage	$18,380											$0	$18,380	$0	$18,380
Other Plumbing Systems												$0	$0	$0	$0
HVAC	$353,552											$0	$353,552	$0	$353,552
Energy Supply												$0	$0	$0	$0
Heat Generating Systems												$0	$0	$0	$0
Cooling Generating Systems	$109,562											$0	$109,562	$0	$109,562
Distribution Systems	$198,580											$0	$198,580	$0	$198,580
Terminal & Package Units												$0	$0	$0	$0
Controls & Instrumentation	$34,598											$0	$34,598	$0	$34,598
System Test & Balance	$10,812											$0	$10,812	$0	$10,812
Other HVAC Systems/Equip												$0	$0	$0	$0
Fire Protection	$91,542											$0	$91,542	$0	$91,542
Sprinklers	$91,542											$0	$91,542	$0	$91,542
Standpipes												$0	$0	$0	$0
Fire Protection Specialties												$0	$0	$0	$0
Other Fire Protection Systems												$0	$0	$0	$0
Electrical	$162,811											$0	$162,811	$0	$162,811
Electrical Service/Distribution	$73,792											$0	$73,792	$0	$73,792
Lighting and Branch Wiring	$58,024											$0	$58,024	$0	$58,024
Communications and Security	$7,929											$0	$7,929	$0	$7,929
Other Electrical Systems	$23,066											$0	$23,066	$0	$23,066
Equipment & Furnishings	$29,553											$0	$29,553	$0	$29,553
Equipment	$29,553											$0	$29,553	$0	$29,553
Vehicular Equipment	$29,553											$0	$29,553	$0	$29,553
Building Sitework												$0	$0	$0	$0
Site Preparation												$0	$0	$0	$0
Site Clearing												$0	$0	$0	$0
Site Demolition and Relocations												$0	$0	$0	$0
Site Earthwork												$0	$0	$0	$0
Hazardous Waste Remediation												$0	$0	$0	$0
Site Improvements												$0	$0	$0	$0
Roadways												$0	$0	$0	$0
Parking Lots												$0	$0	$0	$0
Pedestrian Paving												$0	$0	$0	$0
Site Development												$0	$0	$0	$0
Landscaping												$0	$0	$0	$0

CLB 2013 Update
Civic Centre Library Renewal

Facility Name	Gross Area(ft)	Replacement Cost($)	FCI (%)	CI (%)	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-Year Renewals	Total Current + Forecast Needs	Average Annual Needs	Projected 35 Year Needs
Civic Centre Main Library	135,000	$57,371,263	73.14%	12.49%	$41,959,745	$0	$0	$0	$11,505,556	$284,589	$0	$1,905,723	$0	$0	$329,917	$14,025,785	$55,985,530	$1,402,579	$91,049,993

Systems	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-Year Renewals	Total Current + Forecast Needs	Average Annual Needs	Projected 35 Year Needs
Total	$41,959,745				$11,505,556	$284,589		$1,905,723			$329,917	$14,025,785	$55,985,530	$1,402,579	$91,049,993
Substructure												$0	$0	$0	$0
Foundations												$0	$0	$0	$0
Standard Foundations												$0	$0	$0	$0
Slab on Grade												$0	$0	$0	$0
Basement Construction												$0	$0	$0	$0
Basement Excavation												$0	$0	$0	$0
Basement Walls												$0	$0	$0	$0
Shell	$6,754,273											$0	$6,754,273	$0	$6,754,273
Superstructure												$0	$0	$0	$0
Floor Construction												$0	$0	$0	$0
Roof Construction												$0	$0	$0	$0
Exterior Enclosure	$4,433,544											$0	$4,433,544	$0	$4,433,544
Exterior Walls												$0	$0	$0	$0
Exterior Walls - Seismic Stiffening	$3,064,304											$0	$3,064,304	$0	$3,064,304
Exterior Windows	$1,177,464											$0	$1,177,464	$0	$1,177,464
Exterior Doors	$191,776											$0	$191,776	$0	$191,776
Roofing	$2,320,729											$0	$2,320,729	$0	$2,320,729
Roof Coverings	$2,178,114											$0	$2,178,114	$0	$2,178,114
Roof Openings	$142,615											$0	$142,615	$0	$142,615
Interiors	$5,642,321				$1,222,772	$284,589		$1,905,723			$329,917	$3,743,001	$9,385,322	$374,300	$18,742,825
Interior Construction	$196,391				$1,222,772							$1,222,772	$1,419,163	$122,277	$4,476,093
Partitions												$0	$0	$0	$0
Interior Doors					$1,222,772							$1,222,772	$1,222,772	$122,277	$4,279,702
Fittings/Specialties	$196,391											$0	$196,391	$0	$196,391
Stairs												$0	$0	$0	$0
Stair Construction												$0	$0	$0	$0
Interior Finishes	$5,445,929					$284,589		$1,905,723			$329,917	$2,520,229	$7,966,158	$252,023	$14,266,731
Wall Finishes	$245,489					$284,589					$329,917	$614,506	$859,995	$61,451	$2,396,260
Floor Finishes	$3,099,054							$1,905,723				$1,905,723	$5,004,777	$190,572	$9,769,085
Ceiling Finishes	$2,101,386											$0	$2,101,386	$0	$2,101,386
Services	$21,036,934				$10,282,785							$10,282,785	$31,319,719	$1,028,279	$57,026,682
Conveying	$2,091,174											$0	$2,091,174	$0	$2,091,174
Elevators and Lifts	$2,091,174											$0	$2,091,174	$0	$2,091,174
Plumbing	$718,792				$459,763							$459,763	$1,178,555	$45,976	$2,327,963
Plumbing Fixtures	$583,282											$0	$583,282	$0	$583,282
Domestic Water Distribution					$459,763							$459,763	$459,763	$45,976	$1,609,171
Rain Water Drainage	$135,510											$0	$135,510	$0	$135,510
HVAC	$6,491,713				$9,823,021							$9,823,021	$16,314,734	$982,302	$40,872,287
Heat Generating Systems					$3,919,483							$3,919,483	$3,919,483	$391,948	$13,718,191
Cooling Generating Systems	$6,491,713											$0	$6,491,713	$0	$6,491,713
Distribution Systems					$5,903,539							$5,903,539	$5,903,539	$590,354	$20,662,387
Fire Protection	$5,745,912											$0	$5,745,912	$0	$5,745,912
Sprinklers - Areas Not Sprinkled	$3,567,933											$0	$3,567,933	$0	$3,567,933
Sprinklers - Sprinkled Areas	$2,177,979											$0	$2,177,979	$0	$2,177,979
Electrical	$5,989,344											$0	$5,989,344	$0	$5,989,344
Electrical Service/Distribution	$358,807											$0	$358,807	$0	$358,807
Lighting and Branch Wiring	$4,988,338											$0	$4,988,338	$0	$4,988,338
Communications and Security	$614,705											$0	$614,705	$0	$614,705
Other Electrical Systems	$27,495											$0	$27,495	$0	$27,495
Equipment & Furnishings	$290,659											$0	$290,659	$0	$290,659
Equipment	$290,659											$0	$290,659	$0	$290,659
Institutional Equipment	$290,659											$0	$290,659	$0	$290,659

CLB 2013 Update
Civic Centre Campus Site Renewal

Facility Name	Gross Area(ft)	Replacement Cost($)	FCI (%)	CI (%)	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-Year Renewals	Total Current + Forecast Needs	Average Annual Needs	Projected 35 Year Needs
Civic Centre Site		$12,651,479	43.47%	13.68%	$5,499,607	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,499,607	$0	$5,499,607

Systems	Current	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	10-Year Renewals	Total Current + Forecast Needs	Average Annual Needs	Projected 35 Year Needs
Total	$5,499,607											$0	$5,499,607	$0	$5,499,607
Building Sitework	$5,499,607											$0	$5,499,607	$0	$5,499,607
Site Preparation												$0	$0	$0	$0
Site Clearing												$0	$0	$0	$0
Site Demolition and Relocations												$0	$0	$0	$0
Site Earthwork												$0	$0	$0	$0
Hazardous Waste Remediation												$0	$0	$0	$0
Site Improvements	$3,075,355											$0	$3,075,355	$0	$3,075,355
Roadways												$0	$0	$0	$0
Parking Lots												$0	$0	$0	$0
Pedestrian Paving	$1,815,653											$0	$1,815,653	$0	$1,815,653
Site Development	$52,647											$0	$52,647	$0	$52,647
Landscaping	$1,207,054											$0	$1,207,054	$0	$1,207,054
Site Mechanical Utilities												$0	$0	$0	$0
Water Supply												$0	$0	$0	$0
Sanitary Sewer												$0	$0	$0	$0
Storm Sewer												$0	$0	$0	$0
Heating Distribution												$0	$0	$0	$0
Cooling Distribution												$0	$0	$0	$0
Fuel Distribution												$0	$0	$0	$0
Other Site Mechanical Utilities												$0	$0	$0	$0
Site Electrical Utilities	$2,424,252											$0	$2,424,252	$0	$2,424,252
Electrical Distribution	$1,207,054											$0	$1,207,054	$0	$1,207,054
Site Lighting	$608,599											$0	$608,599	$0	$608,599
Site Communications & Security	$608,599											$0	$608,599	$0	$608,599
Other Site Electrical Utilities												$0	$0	$0	$0
Other Site Construction												$0	$0	$0	$0
Service and Pedestrian Tunnels												$0	$0	$0	$0
Other Site Systems & Equipment												$0	$0	$0	$0

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