




Office of the City Manager

INFORMATION REPORT

April 1, 2014

To: Honorable Mayor and Members of the City Council
From:  Christine Daniel, City Manager
Submitted by: Andrew Clough, Director, Public Works
Subject: Facility Condition Assessments and Maintenance Management Options for Parks Recreation & Waterfront, and Public Works Departments

SUMMARY AND REPORT STRUCTURE

The objective of the facility condition assessment was to augment and update pricing information of surveys done in 1997 and 2000, and to:

- ✓ Determine the physical condition of each City facility by identifying and documenting backlog repairs (deficiencies) through a visual assessment of key building systems;
- ✓ Recommend corrective action; and
- ✓ Provide a budget-level cost estimate for correcting each identified repair.

Effective maintenance management of City facility assets requires documenting the current condition of the City's facilities, and identifying continuing maintenance and capital repair requirements. This report is intended to serve as a guidance document for identifying and allocating resources over the next 5 years for the maintenance and repair of building systems and components. It should be viewed as a dynamic document subject to change, enhancement, and amendment, in order to reflect changing facility operations parameters, facility utilization and City funding priorities.

This report has separated the City's facility program into 2 main parts: 1) Parks Recreation & Waterfront Facilities Program (PRW-FP); and 2) Public Works Facilities Program (PW-FP). There is a total of 95 buildings being maintained with 39 buildings in PRW-FP and 56 buildings in PW-FP. The City's 5 Library Facilities and City facilities leased to independent entities are not included in this report. Future leases will require the lessee to perform maintenance repairs, capital renovations/improvements, and upgrades to leased facilities, and some recent leases already include this requirement.

PRW-FP and PW-FP are subdivided into operational categories to better focus maintenance planning/programming for each of the programs. The operational categories for PRW-FP in Attachment 1, Table 1A are:

1. Community/Recreation Centers
2. Pools and Swim Centers
3. Parks
4. Park Restrooms
5. Marina Administration
6. Marina Corporation Yard
7. Marina Restrooms

The operational categories for PW-FP in Attachment 2, Table 1B are:

1. Administration
2. Police/Fire
3. Fire Facilities (Other than Stations)
4. Fire Stations
5. Health Services
6. Community Services
7. Corporation Yard – Maintenance
8. Zero Waste – Transfer Station
9. Others

CURRENT SITUATION AND ITS EFFECTS

Existing Condition of Facilities and Repair Backlog

This facility condition assessment, along with those conducted in 1997 and 2000, provides the City with baseline data for multi-year maintenance planning and programming for its facilities. The 3 maintenance management options in Attachment 3, Table 2 for PRW and PW were based on physical inspections done in 2013 (11 facilities¹), 2000 (24), and 1997 (19); for the balance of facilities, facility condition mathematical modeling was used.

Facility Condition Assessment is performed by a qualified group of trained professionals analyzing the condition of a group of facilities that may vary in terms of age, design, construction methods, and materials. The industry professionals are typically architects and engineers of various disciplines and skilled-trade technicians. The analysis can be done by walk-through inspection, mathematical modeling, or a combination of both. The most accurate way of determining the condition requires a walk-through to collect baseline data.

The purpose of conducting this facility condition assessment is to augment and update pricing information of previous condition surveys done approximately 15 years ago, and to comprehensively review maintenance and repair (M&R) needs. Once the baseline data is quantified, the City is able to: 1) establish a list of M&R priorities; 2) analyze budget implications and maintenance management options; and 3) develop protocols for on-going monitoring of facilities' conditions, work performed, and record information.

Tables 1A and 1B (Attachments 1 and 2) summarize the results of the facility condition assessments, and identify backlog repairs (meaning deficiencies, which are distinct from Renovation/Improvements and Seismic Retrofits that are discussed later in the report) for PRW-FP of \$4.9 million; and for PW-FP of \$16.4 million. Seismic retrofit costs are not included in Tables 1A and 1B, but it should be noted that if major renovation work is planned for any individual facility, some cost savings for both maintenance repairs and seismic retrofit costs could be realized. A facility grade has been assigned to each facility which describes its condition:

“A” Good Facility will look clean and functional.

“B” Fair Facility will begin to show signs of wear.

“C” Average Facility will look worn with apparent and increasing deterioration.

¹ A total of 16 facilities were assessed by Kitchell CEM; 5 facilities assessed are City-owned facilities leased to independent entities.

“D” Critical Facility will look worn with obvious deterioration.

“F” Unusable ... Facility is unusable.

For comparability and analysis, the identified backlog repairs were divided into 5 years, with a 3% escalation factor per year applied for years 2 through 5. Then a budgetary annual maintenance amount was calculated based on industry standards of 1-4% of the replacement value of the facility. The annual budgetary amount was determined for industry historical maintenance records to keep a facility in line with “A” to “B” (good to fair) criteria, and to extend the useful life of the facility. Again, for analysis purposes and based on the existing condition, size, construction type, and age of the facilities a 3% value was used for PRW-FP and 1% for PW-FP.

Maintenance Management Options

For use of these Maintenance Management Options, all maintenance, repair and renovation/improvement activities are classified into 5 categories:

1. Scheduled Maintenance*
2. Minor Repair*
3. Recurring Maintenance
4. Capital Repair
5. Renovation/Improvement.

*Scheduled Maintenance and Minor Repair are not included in this analysis, since they fall under the operating fund. In addition, City facilities leased to outside entities are not included in this analysis, since their maintenance and repairs needs are negotiated with, and become the responsibility of the facility tenants.

The remaining 3 maintenance categories fall under the Capital Improvement Projects (CIP) funding classification. Capital Repair is 1-time, large dollar items repairs, usually involving major equipment and/or component replacement. Recurring Maintenance is unscheduled major maintenance items, the need for which can be expected to reoccur with some regularity every few years. Typical activities would include large area painting, roof re-coating and asphalt surface resealing. Renovation/Improvement is 1-time activities designed to substantially improve or upgrade a facility, typically replacement of a large number of building systems or extensive interior and/or exterior building modifications. Existing budgeted funds have often been used as matching funds for other, often external funding sources for larger capital renovations/improvements.

Attachment 3, Table 2 compares maintenance management options for PRW and PW facilities programs. Option 1 is the optimal maintenance management option for each program. It completes all backlog repairs in a 5 year period and establishes an annual maintenance budget to keep facilities in line with “A” to “B” (good to fair) criteria.

Option 3 is the current funding level option. It's important to note that PRW does not currently have funding for maintenance activities, and at the current funding level it will take PW-FP 19.3 years to complete the identified backlog repairs. Based on the annual maintenance funding needs, PRW-FP is underfunded by approximately \$1.5 million and PW-FP is underfunded by \$3.5 million. Buildings in both programs will continue to deteriorate to the “D” to “F” (critical to unusable) criteria.

Option 2 for PW and Option 2a for PRW are the recommended maintenance management option levels, which establishes the annual CIP funding level for PRW-FP at \$750,000 (no existing funding), and increases PW-FP funding to \$2.0 million (existing funding \$900,000). It would take 7 years to complete the backlog repairs for PRW-FP and 8.7 years for PW-FP. With this funding, buildings in each program could be maintained at the “B” to “C” criteria level; and a portion of the funding could be used as matching funds to attract outside funding for capital renovation/improvements, as well as to provide aesthetically pleasing and operationally functional buildings for the public and municipal programs.

A gradual transition could be pursued between current funding levels and Options 2 and 2a funding levels. ***However, with no funding for PRW-FP and the current funding level for PW-FP buildings will continue to deteriorate at an ever increasing rate, and deferred maintenance needs and costs will continue to grow each year.***

The City has been focusing efforts on scheduled, periodic maintenance activities to reduce the frequency of equipment breakdowns and to maximize the available maintenance costs and to try to extend the life expectancy of buildings and building components. The useful life of an asset (facility) is not necessarily equivalent to its physical life or economic life, a number of other factors may result in an asset’s useful life being reduced, including: 1) obsolescence; 2) changes in community expectations; 3) increased demands on capacity; and 4) new legal requirements (code requirements). The useful life of most buildings and building components will naturally depend on a wide range of environmental factors, but it is usually necessary to adopt a standard useful life for a range of asset types for asset management, preventative maintenance, and budgeting purposes. Attachment 4, Table 3 is a list of the average estimated useful lives for building components, building services, park improvements, marina improvements, and street lights.

PRW CIP RENOVATION/IMPROVEMENTS (HIGH USE PARK BUILDINGS)

Of the 39 City Parks buildings (excluding the resident camps), 4 community centers and 2 swimming pools have by far the highest use and are visited by thousands of Berkeley residents each year. These high-use buildings have outdated systems and are in a state of disrepair and degraded appearance.

The Facilities Condition Assessment consultant performed a seismic “screening phase” evaluation on the Live Oak and MLK Community Centers, and budgetary estimates of the seismic retrofits have been added to the costs. SOHA Engineers/Structural Engineering Services performed a detailed seismic review of the James Kenny Community Center, and its estimated cost was part of the [Council report from PRW on February 11, 2014](#).² Initial recommendations for capital improvements for selected parks buildings are presented in the table below.

² PRW Department Facilities Assessment and Funding Options:
www.ci.berkeley.ca.us/Clerk/City_Council/2014/02_Feb/Documents/2014-02-11_WS_Item_01b_Parks_Recreation_and_Waterfront_Department.aspx

High Use Park Buildings – Renovations Needed (Unfunded)	
King Pool*	Unfunded (\$2,250,000): Renovation of locker room, piping, and new sprinkler system
West Campus*	Unfunded (\$1,950,000): Renovation of locker room, piping, and new sprinkler system
MLK Community Center**	Unfunded (\$959,918): Renovate doors, floors, walls, windows, roof coverings, plumbing, heat & distribution, sprinklers, electrical, lighting, communication & security.
James Kenny Community Center*	Unfunded (\$2,298,000): Renovate Entry, Lobby, Inclusion room, Kiln room, doors, HVAC, sprinkler, restroom upgrades, seismic upgrades, and exterior cladding replacement
Live Oak Community Center**	Unfunded (\$1,528,364): Renovate doors, floors, walls, windows, roof coverings, plumbing, heat & distribution, sprinklers, electrical, lighting, communication & security, ADA improvements.
Frances Albrier Community Center**	Unfunded (\$914,074): Renovate doors; floors; walls, windows, roof coverings, plumbing, heat & distribution, sprinklers, electrical, lighting, communication & security, Front office, kiln room, kitchen
High Use Park Buildings Total Unfunded\$9,900,356 Seismic Retrofits*** Added since Feb 2014 Report \$2,000,000 Revised Total Unfunded\$11,900,356	

* Cost estimate developed in 2011-2012 by an independent professional estimator in collaboration with Public Works Engineering staff.

** Cost estimate developed in 2013 by Kitchell CEM, plus additional programmatic elements estimated in 2011-2012 by an independent professional estimator in collaboration with Public Works Engineering staff.

*** Seismic Reports and estimates were not available for PRW's February 2014 Worksession

PW CAPITAL RENOVATION/IMPROVEMENTS

Public Works’ goal is to provide safe, accessible, functional facilities so City programs can provide service to their customers. Annual budget allocations include \$300,000 for deferred maintenance CIP projects, \$500,000 for urgent building repair costs, and \$100,000 for ADA upgrades. During the past 25 years, the City has deferred maintenance on many City buildings, decreasing the value of the assets and diminishing the utility of the buildings for City programs. To partially address the problem, bonds have been approved to rebuild a number of City buildings, including the Civic Center Building, Animal Shelter, and various Fire Stations. However, many outdated structures remain (e.g.: recreation, community and senior centers) that require major improvements. FY 2014 projects include:

- Civic Center Building and Public Safety Building Data Center Upgrades
- Fire Station No. 1 – Planning & Design Renovations
- North Berkeley Senior Center Roofing
- Health Clinic (830 University) – Building (Energy) Management System
- Public Safety Building – Building (Energy) Management System
- 1947 Center Street – Cooling Tower & Boiler Replacement

- Street Light Conversion to LED Project
- Center Street Garage – Planning & Design

Seismic Retrofits

The following seismic upgrade projects are planned in FY 2014 and FY 2015.

- James Kenny Recreation Center: (In conjunction with PRW-FP planned renovation above.) Staff has been working with CalEMA and FEMA to re-allocate a \$734,000 grant for non-structural seismic upgrades of the Veteran’s Building for seismic improvements of the James Kenny Recreation/Community Center, which is identified as an emergency shelter. The City has tentative approval, and is finishing the application and cost-benefit analysis to be submitted by the end of March 2014. The grant requires a 25% local match.
- Adult Mental Health Clinic: The Department of Health, Housing and Community Services is evaluating the existing facility at 2640-2636 MLK, Jr. Way to determine the best approach to renovating the facility. Public Works and an outside architectural consultant are working with HHCS staff to analyze programming needs at this location. Mental Health Service Act capital funding is the likely source of funding for a renovation, along with a portion of PW-FP annual funding to renovate and seismically upgrade the facility. A seismic upgrade will most likely need to be phased because of funding limitations. The Mental Health programming analysis is currently underway, and a decision is expected in FY 2015.
- Center Street Garage: The City’s Center Street Garage needs to be replaced, as it was previously deemed infeasible to perform a seismic upgrade on the existing structure. Estimated project costs are \$25 to \$35 million. The Off-Street Parking Fund has a projected balance of \$10 million as of FY 2013, and a portion of funding may come from project partners, including the Peralta Community College District. The remainder of the replacement costs needs to be financed. Work on developing project partnerships and beginning project design has started in FY 2014.

The City’s estimate of \$78 million worth of unfunded seismic retrofitting (or replacement) needs to be updated, since it’s over 5 years old. Replacement of the Center Street Parking Garage (\$25 to \$35 million, described above); retrofit of the Veteran’s Memorial Building (\$20 million); and retrofit of Old City Hall (\$30 million; or \$35 million) make up over half of unfunded seismic retrofit estimates. There are about 20 other facilities important in an emergency response effort that have not yet been fully evaluated, and are estimated to require \$15 – \$40 million of work. The total unfunded needs for seismic retrofits are \$93 to \$118 million. Below is a partial list of facilities.

Frances Albrier Center	Grove (MLK) Center	Live Oak Center
North Berkeley Senior Ctr	South Berkeley Senior Ctr	West Berkeley Senior Ctr
TS* Tipping Floor Bldg	TS Fuel Pumps & Tanks	CY** Fuel Pumps & Tanks
Other CY Buildings	Marina Admin Bldg	1947 Center Street

*TS: Transfer Station; **CY: Corporation Yard

FACILITY PROGRAMS FUNDING NEEDS

The table below is a summary of Maintenance Management Backlog Repairs, separated for each Department’s facility program of Unfunded Capital Renovation/Improvements, and Seismic Retrofit needs discussed in this report. Each element is manageable, and when grouped together there are some savings realized, versus doing each element separately. Staff in both the PRW and Public Works Departments continue to seek outside funding sources that can be utilized to supplement available funding. To reiterate: ***at the current funding levels maintenance, renovations and/or improvements will continue to be planned and implemented, however deferred maintenance (backlog repairs) will continue to grow, and existing facilities will continue to deteriorate at an increasing rate.***

	FY 2013 \$DOLLARS		
	PRW	PW	Total
Maintenance Management (Backlog Repairs)	\$4,920,651	\$16,394,078	\$21,314,729
Unfunded Capital Renovation or Improvements (Excluding Seismic Retrofits)	\$9,900,356	Not quantified at this time	\$9,900,356
Seismic Retrofits (Rough Estimates Only* – needs additional evaluation to determine construction costs)	\$15,000,000	\$103,000,000	\$118,000,000
Program Total	\$29,821,007	\$119,394,078	\$149,215,085

*Upper range of estimated seismic retrofit costs was used, broken out between PRW and PW.

BACKGROUND

In 1997 and 1998 a comprehensive facility condition survey (1997 Municipal Facility Condition Survey) was conducted for 40 facilities included in the PRW-FP and PW FP. The focus of the survey was to identify and document deficiencies (backlog repairs) that would qualify as capital repair projects, and to further identify deficiencies that should be addressed as part of the operational facility maintenance process. The survey consisted of a comprehensive assessment of structural, roof, HVAC, plumbing, and electrical systems, as well as select site components. A total of 452 deficiencies were identified, with an estimated 1997 repair cost of \$5.8 million (or a 2013 value of \$9.6 million). The City has made progress on about 66% of the projects identified in the 1997 report, and the remaining projects are estimated to cost about \$5.2 million in 2013 dollars.

The Kitchell CEM, Inc. contract was approved by Council in April 2013 and effective that June for a term ending June 30, 2014. The initial phase has focused on 16 facilities identified as essential for use in case of emergency or disaster situations. The City needed to update the facilities condition assessments done between 1997 and 2000, as staff was working off the list of deficiencies (backlog repairs) listed in those existing reports. There was a critical need to re-evaluate the facilities and establish a new priority list for maintenance and repairs. The new condition assessment was conducted

in an electronic format that uses checklist-type forms for rapid evaluations, and specifies deficiencies observed, and probable repair costs. A life-cycle cost analysis is included for each facility as the basis for an operating plan, preventive and deferred maintenance planning, and schedules for short-term maintenance and repair priorities and long-term maintenance budgeting needs.

ENVIRONMENTAL SUSTAINABILITY

The City's Facility Program is implementing sustainable development and green building practices in its project design and maintenance activities. Water and energy efficiency and material resource conservation considerations were integrated into the facility condition assessments. The initial phase of the project included assessing the condition of water and energy systems, in order to identify energy and water efficiency upgrades for inclusion with capital renovations and improvements. Structural and seismic improvements are inherently sustainable because they improve durability of the building stock, reducing waste and conserving material resources.

POSSIBLE FUTURE ACTION

Staff will continue to seek outside funding sources to augment available funding for maintenance management; capital renovations/improvements, and seismic retrofits.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

The fiscal impacts will depend upon future budgetary decisions, but could include the need for additional CIP funding of \$1.85 million annually if the maintenance management option suggested above is approved.

CONTACT PERSON

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Attachments:

- 1: Table 1A Parks Recreation Waterfront – Facility Program – Maintenance Needs
- 2: Table 1B Public Works – Facility Program – Maintenance Needs
- 3: Table 2 Comparison of Three Maintenance Management Options
- 4: Table 3 Useful Life – Buildings, Building Components, and Other Assets

Table 1A
Parks Recreation Waterfront - Facility Program
Maintenance Needs

	A	C	D	E	F	AK	AL	AM	AN	AO	AP	AQ	AR
	Facility Description	Replacement Costs (\$2013)	Sq Ft.	Replacement Costs Per SF	Repair Backlog (\$2013)	Facility Grade at 2013 Backlog Level	FY 1	FY 2 (3% Escalator over FY 1)	FY 3 (6% Escalator over FY 1)	FY 4 (9% Escalator over FY 1)	FY 5 (12% Escalator over FY 1)	Projected Facility Grade (end of 5 Yrs)	Annual Budget Needs
1													
2	PARKS, RECREATION & WATERFRONT												
3	PARKS												
4	Recreation Centers												
5	Frances Albrier Center	\$ 3,677,076	13,260	\$ 277	\$ 805,374	C	\$ 161,075	\$ 165,907	\$ 170,884	\$ 176,011	\$ 181,291	B+	\$ 110,312
14	Grove - MLK YAP Bldg (YAP)	\$ 6,697,080	10,600	\$ 632	\$ 838,418	C	\$ 167,684	\$ 172,714	\$ 177,896	\$ 183,232	\$ 188,729	B+	\$ 200,912
16	James Kenney Community Center	\$ 11,995,270	18,038	\$ 665	\$ 278,312	D	\$ 55,662	\$ 57,332	\$ 59,052	\$ 60,824	\$ 62,649	C	\$ 359,858
27	Live Oak Community Center	\$ 9,910,134	14,860	\$ 667	\$ 1,223,364	C	\$ 244,673	\$ 252,013	\$ 259,573	\$ 267,361	\$ 275,381	B	\$ 297,304
32	Pools and Swim Centers												
33	King Pool Locker & Mtce. Bldgs.	\$ 1,647,855	3,329	\$ 495	\$ 66,808	C	\$ 13,362	\$ 13,762	\$ 14,175	\$ 14,601	\$ 15,039	C	\$ 49,436
38	West Campus Swim Center Locker Room	\$ 1,316,700	2,660	\$ 495	\$ 257,586	C	\$ 51,517	\$ 53,063	\$ 54,655	\$ 56,294	\$ 57,983	C	\$ 39,501
41	West Campus Swim Center Equip Bldg	\$ 545,490	1,102	\$ 495	\$ -	C	\$ -	\$ -	\$ -	\$ -	\$ -	C	\$ 16,365
43	Willard Swim Center Locker Room	\$ 1,641,420	3,316	\$ 495	\$ 573,513	D	\$ 114,703	\$ 118,144	\$ 121,688	\$ 125,339	\$ 129,099	B	\$ 49,243
44	Parks												
45	Cragmont Rock Observatory Shelter	\$ 161,250	645	\$ 250	\$ -	B	\$ -	\$ -	\$ -	\$ -	\$ -	B	\$ 4,838
47	Great Stone Face Park - Storage Shed	\$ 24,000	96	\$ 250	\$ 127	B	\$ 25	\$ 26	\$ 27	\$ 28	\$ 29	B	\$ 720
48	Harrison Blue Barn + Ext. Restrm	\$ 874,000	1,900	\$ 460	\$ 8,740	B	\$ 1,748	\$ 1,800	\$ 1,854	\$ 1,910	\$ 1,967	B	\$ 26,220
49	John Himkle Park - Scout Building	\$ 216,000	480	\$ 450	\$ -	F	\$ -	\$ -	\$ -	\$ -	\$ -		\$ 6,480
50	John Himkle Park Club House	\$ 507,150	1,127	\$ 450	\$ 135,506	C	\$ 27,101	\$ 27,914	\$ 28,752	\$ 29,614	\$ 30,503	C	\$ 15,215
51	Terrace View Park Shelter	\$ 80,350	800	\$ 100	\$ 3,190	B	\$ 638	\$ 657	\$ 677	\$ 697	\$ 718	B	\$ 2,411
52	Virginia McGee & Restroom (Totland)	\$ 368,000	800	\$ 460	\$ 12,430	B	\$ 2,486	\$ 2,561	\$ 2,637	\$ 2,717	\$ 2,798	B	\$ 11,040
53	Willard Center	\$ 207,000	450	\$ 460	\$ -	C	\$ -	\$ -	\$ -	\$ -	\$ -	C	\$ 6,210

**Table 1A
Parks Recreation Waterfront - Facility Program
Maintenance Needs**

	A	C	D	E	F	AK	AL	AM	AN	AO	AP	AQ	AR
	Facility Description	Replacement Costs (\$2013)	Sq Ft.	Replacement Costs Per SF	Repair Backlog (\$2013)	Facility Grade at 2013 Backlog Level	FY 1	FY 2 (3% Escalator over FY 1)	FY 3 (6% Escalator over FY 1)	FY 4 (9% Escalator over FY 1)	FY 5 (12% Escalator over FY 1)	Projected Facility Grade (end of 5 Yrs)	Annual Budget Needs
1													
56	Parks Restrooms												
57	Restroom - Cragmont Park	\$ 273,780	600	\$ 456	\$ -	F	\$ -	\$ -	\$ -	\$ -	\$ -		\$ 8,213
58	Restroom - Grove Park	\$ 276,000	600	\$ 460	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -		\$ 8,280
59	Restroom - La Loma Park	\$ 276,000	600	\$ 460	\$ 5,689	C	\$ 1,138	\$ 1,172	\$ 1,207	\$ 1,243	\$ 1,281	B+	\$ 8,280
60	Restroom - Peoples Park	\$ 386,400	840	\$ 460	\$ 4,391	C	\$ 878	\$ 905	\$ 932	\$ 960	\$ 988	B	\$ 11,592
61	Restroom - Rose Garden	\$ 308,660	671	\$ 460	\$ 1,285	C	\$ 257	\$ 265	\$ 273	\$ 281	\$ 289	C	\$ 9,260
62	Restroom - San Pablo Park	\$ 502,320	1,092	\$ 460	\$ 18,532	D	\$ 3,706	\$ 3,818	\$ 3,932	\$ 4,050	\$ 4,172	D	\$ 15,070
63	Restroom - Strawberry Park	\$ 276,000	600	\$ 460	\$ 3,100	C	\$ 620	\$ 639	\$ 658	\$ 677	\$ 698	B+/C	\$ 8,280
64	Restroom - Willard Park	\$ 276,000	600	\$ 460	\$ 620	C	\$ 124	\$ 128	\$ 132	\$ 135	\$ 140	C	\$ 8,280
67	Toilet Shelter - Codornices Park	\$ 55,200	120	\$ 460	\$ 8,917	C	\$ 1,783	\$ 1,837	\$ 1,892	\$ 1,949	\$ 2,007	C	\$ 1,656
68	Toilet Shelter - Live Oak Park	\$ 46,000	100	\$ 460	\$ 251	C	\$ 50	\$ 52	\$ 53	\$ 55	\$ 57	C	\$ 1,380
69	MARINA												
70	Marina Admin.												
71	Marina - Admin Building (& Restroom 3)	\$ 1,188,630	2,529	\$ 470	\$ 26,840	C	\$ 5,368	\$ 5,529	\$ 5,695	\$ 5,866	\$ 6,042	C	\$ 35,659
72	Shorebird Nature Center - Classrooms	\$ 451,200	960	\$ 470	\$ 37,073	B	\$ 7,415	\$ 7,637	\$ 7,866	\$ 8,102	\$ 8,345	B	\$ 13,536
73	Marina - Strawbale Building	\$ 301,000	860	\$ 350	\$ -	A	\$ -	\$ -	\$ -	\$ -	\$ -		\$ 9,030
74	Marina Corp Yard												
75	Marina - Corp Yard/Office/Storage/	\$ 2,225,340	3,170	\$ 702	\$ 368,017	C	\$ 73,603	\$ 75,812	\$ 78,086	\$ 80,428	\$ 82,841	C	\$ 66,760
76	Marina Hoists												
77	Marina - North Hoist/boathouse	\$ 67,650	187	\$ 362	\$ 2,116	B	\$ 423	\$ 436	\$ 449	\$ 462	\$ 476	B	\$ 2,030
78	Marina - South Hoist/boathouse	\$ 67,650	187	\$ 362	\$ 2,116	B	\$ 423	\$ 436	\$ 449	\$ 462	\$ 476	B	\$ 2,030

**Table 1A
Parks Recreation Waterfront - Facility Program
Maintenance Needs**

	A	C	D	E	F	AK	AL	AM	AN	AO	AP	AQ	AR
	Facility Description	Replacement Costs (\$2013)	Sq Ft.	Replacement Costs Per SF	Repair Backlog (\$2013)	Facility Grade at 2013 Backlog Level	FY 1	FY 2 (3% Escalator over FY 1)	FY 3 (6% Escalator over FY 1)	FY 4 (9% Escalator over FY 1)	FY 5 (12% Escalator over FY 1)	Projected Facility Grade (end of 5 Yrs)	Annual Budget Needs
79	Marina Restrooms												
80	Restroom 1 - Marina	\$ 138,000	300	\$ 460	\$ 3,100	B	\$ 620	\$ 639	\$ 658	\$ 677	\$ 698	B	\$ 4,140
81	Restroom 2 - Marina	\$ 276,000	600	\$ 460	\$ 3,100	B	\$ 620	\$ 639	\$ 658	\$ 677	\$ 698	B	\$ 8,280
83	Restroom 4 - Marina	\$ 276,000	600	\$ 460	\$ 52,284	C	\$ 10,457	\$ 10,771	\$ 11,094	\$ 11,426	\$ 11,769	B	\$ 8,280
84	Restroom 5 - Marina	\$ 184,000	400	\$ 460	\$ 34,856	C	\$ 6,971	\$ 7,180	\$ 7,396	\$ 7,618	\$ 7,846	B	\$ 5,520
85	Restroom 6 - Marina	\$ 184,000	400	\$ 460	\$ 34,856	C	\$ 6,971	\$ 7,180	\$ 7,396	\$ 7,618	\$ 7,846	B	\$ 5,520
86	Restroom 7 - Marina	\$ 184,000	400	\$ 460	\$ 34,856	C	\$ 6,971	\$ 7,180	\$ 7,396	\$ 7,618	\$ 7,846	B	\$ 5,520
87	Restroom 8 - Marina	\$ 276,000	600	\$ 460	\$ 52,284	C	\$ 10,457	\$ 10,771	\$ 11,094	\$ 11,426	\$ 11,769	B	\$ 8,280
88	AQUATIC PARK												
89	Aquatic Park - Dreamland	\$ 230,000	500	\$ 460	\$ 23,000	B	\$ 4,600	\$ 4,738	\$ 4,880	\$ 5,027	\$ 5,177		\$ 6,900
92	PARKS, RECREATION & WATERFRONT TOTAL	\$ 48,594,605			\$ 4,920,651		\$ 984,130	\$ 1,013,654	\$ 1,044,064	\$ 1,075,386	\$ 1,107,647		\$ 1,457,838
128				Description	Impact on Building		Condition Index Range						
129	1997 Pack Report	A	Good condition	Facility will look clean & functional	Facility will look clean & functional		0-5%						
130	2000 Pack Report	B	Fair Condition	Facility will begin to show signs of wear	Facility will begin to show signs of wear		6-10%						
131	Kitchell FCA	C	Average Condition	Facility will look worn with apparent & increasing deterioration	Facility will look worn with apparent & increasing deterioration		11-30%						
132	FACTS Report	D	Critical Condition	Facility will look worn with obvious deterioration	Facility will look worn with obvious deterioration		> 30%						
133	*Figures do not include seismic retrofits	F	Unusable										

Table 1B
Public Works - Facility Program
Maintenance Needs

	A	C	D	E	F	AK	AL	AM	AN	AO	AP	AQ	AR
	Facility Description	Replacement Costs (\$2013)	Sq Ft.	Replacement Costs Per SF	Repair Backlog (\$2013)	Facility Grade at 2013 Backlog Level	FY 1	FY 2 (3% Escalator over FY 1)	FY 3 (6% Escalator over FY 1)	FY 4 (9% Escalator over FY 1)	FY 5 (12% Escalator over FY 1)	Projected Facility Grade (end of 5 Yrs)	Annual Budget Needs
1													
134	PUBLIC WORKS												
135	ADMINISTRATION												
136	Martin Luther King, Jr. Civic Center	\$ 66,806,250	89,075	\$ 750	\$ 205,958	B	\$ 41,192	\$ 42,427	\$ 43,700	\$ 45,011	\$ 46,362	B	\$ 668,063
137	Civic Center Building Annex	\$ 45,706,625	112,798	\$ 405	\$ 5,011,956	B	\$ 1,002,391	\$ 1,032,463	\$ 1,063,437	\$ 1,095,340	\$ 1,128,200	B	\$ 457,066
138	Animal Shelter	\$ 7,800,000	11,000	\$ 709	\$ -	A	\$ -	\$ -	\$ -	\$ -	\$ -	A	\$ 78,000
139	Old City Hall	\$ 30,000,000	38,400	\$ 781	\$ 963,045	D	\$ 192,609	\$ 198,387	\$ 204,339	\$ 210,469	\$ 216,783	D	\$ 300,000
141	Old City Hall Annex	\$ 2,371,500	4,500	\$ 527	\$ 296,766	D	\$ 59,353	\$ 61,134	\$ 62,968	\$ 64,857	\$ 66,803	D	\$ 23,715
142	Veterans Memorial Hall	\$ 20,000,000	33,254	\$ 601	\$ 240,338	D	\$ 48,068	\$ 49,510	\$ 50,995	\$ 52,525	\$ 54,101	D	\$ 200,000
143	POLICE/FIRE												
144	Public Safety Building (includes Primary EOC)	\$ 45,081,000	60,108	\$ 750	\$ 158,200	B	\$ 31,640	\$ 32,589	\$ 33,567	\$ 34,574	\$ 35,611	B	\$ 450,810
145	Public Safety Building Accessory Building	\$ 1,442,926	2,738	\$ 527	\$ 2,147	B	\$ 429	\$ 442	\$ 456	\$ 469	\$ 483	B	\$ 14,429
146	Fire Facilities (other than Stations)												
147	Drill Tower	\$ 558,500	2,420	\$ 231	\$ 12,000	C	\$ 2,400	\$ 2,472	\$ 2,546	\$ 2,623	\$ 2,701	C	\$ 5,585
148	Fire Dept. Training Bldg. (Alternate EOC)	\$ 1,420,000	3,774	\$ 376	\$ 7,661	B	\$ 1,532	\$ 1,578	\$ 1,626	\$ 1,674	\$ 1,725	B	\$ 14,200
149	Fire Dept. Warehouse	\$ 1,800,000	8,021	\$ 224	\$ -	A	\$ -	\$ -	\$ -	\$ -	\$ -	A	\$ 18,000
150	Fire Stations												
151	Fire Station #1	\$ 2,418,075	4,885	\$ 495	\$ 54,310	C	\$ 10,862	\$ 11,188	\$ 11,523	\$ 11,869	\$ 12,225	C	\$ 24,181
152	Fire Station #2	\$ 6,198,390	12,522	\$ 495	\$ 311,956	B	\$ 62,391	\$ 64,263	\$ 66,191	\$ 68,177	\$ 70,222	B	\$ 61,984
153	Alarm Headquarters (Fire Station #2)	\$ 294,000	840	\$ 350	\$ 5,112	D	\$ 1,022	\$ 1,053	\$ 1,085	\$ 1,117	\$ 1,151	D	\$ 2,940
154	Fire Station #3	\$ 2,524,500	5,100	\$ 495	\$ 41,605	C	\$ 8,321	\$ 8,571	\$ 8,828	\$ 9,093	\$ 9,365	C	\$ 25,245
155	Fire Station #4	\$ 2,643,795	5,341	\$ 495	\$ 232,799	C	\$ 46,560	\$ 47,957	\$ 49,395	\$ 50,877	\$ 52,403	C	\$ 26,438
156	Gas Pump House (Fire Station #4)	\$ 35,350	101	\$ 350	\$ 1,132	C	\$ 226	\$ 233	\$ 240	\$ 247	\$ 255	C	\$ 354
157	Fire Station #5	\$ 4,604,490	9,302	\$ 495	\$ 37,718	B	\$ 7,544	\$ 7,770	\$ 8,003	\$ 8,243	\$ 8,490	B	\$ 46,045
158	Fire Station #6	\$ 2,499,750	5,050	\$ 495	\$ 28,963	B	\$ 5,793	\$ 5,966	\$ 6,145	\$ 6,330	\$ 6,520	B	\$ 24,998
159	Fire Station #7	\$ 11,979,000	24,200	\$ 495	\$ 183,975	A	\$ 36,795	\$ 37,899	\$ 39,036	\$ 40,207	\$ 41,413	B	\$ 119,790

**Table 1B
Public Works - Facility Program
Maintenance Needs**

	A	C	D	E	F	AK	AL	AM	AN	AO	AP	AQ	AR
	Facility Description	Replacement Costs (\$2013)	Sq Ft.	Replacement Costs Per SF	Repair Backlog (\$2013)	Facility Grade at 2013 Backlog Level	FY 1	FY 2 (3% Escalator over FY 1)	FY 3 (6% Escalator over FY 1)	FY 4 (9% Escalator over FY 1)	FY 5 (12% Escalator over FY 1)	Projected Facility Grade (end of 5 Yrs)	Annual Budget Needs
1													
160	HEALTH SERVICES												
161	Berkeley Adult Health Center	\$ 1,980,000	4,000	\$ 495	\$ 20,976	C	\$ 4,195	\$ 4,321	\$ 4,451	\$ 4,584	\$ 4,722	C	\$ 19,800
162	Health Clinic	\$ 6,791,176	8,486	\$ 800	\$ 575,783	B	\$ 115,157	\$ 118,611	\$ 122,170	\$ 125,835	\$ 129,610	B	\$ 67,912
164	Mental Health Offices	\$ 8,288,000	11,840	\$ 700	\$ 658,106	C	\$ 131,621	\$ 135,570	\$ 139,637	\$ 143,826	\$ 148,141	C	\$ 82,880
165	COMMUNITY SERVICES												
166	North Berkeley Senior Center	\$ 14,573,520	20,760	\$ 702	\$ 2,047,401	C	\$ 409,480	\$ 421,765	\$ 434,418	\$ 447,450	\$ 460,874	B	\$ 145,735
167	South Berkeley Senior Center	\$ 12,043,512	17,156	\$ 702	\$ 1,322,504	B	\$ 264,501	\$ 272,436	\$ 280,609	\$ 289,027	\$ 297,698	B	\$ 120,435
168	West Berkeley Senior Center	\$ 7,191,990	10,245	\$ 702	\$ 840,644	C	\$ 168,129	\$ 173,173	\$ 178,368	\$ 183,719	\$ 189,230	B	\$ 71,920
169	CORP YARD - MAINTENANCE												
170	Ratcliff Building	\$ 4,432,460	8,126	\$ 545	\$ -	A	\$ -	\$ -	\$ -	\$ -	\$ -	A	\$ 44,325
171	Assembly Building	\$ 600,000	2,405	\$ 249	\$ 8,234	B	\$ 1,647	\$ 1,696	\$ 1,747	\$ 1,800	\$ 1,853	B	\$ 6,000
172	Corp Yard - Equipment Mtce. Building	\$ 5,896,309	12,922	\$ 456	\$ 773,729	C	\$ 154,746	\$ 159,388	\$ 164,170	\$ 169,095	\$ 174,168	B	\$ 58,963
173	Corp Yard - Equipment Shelter	\$ 628,000	3,140	\$ 200	\$ 4,884	B	\$ 977	\$ 1,006	\$ 1,036	\$ 1,067	\$ 1,099	B	\$ 6,280
174	Corp Yard - Fuel Island/underground tanks	\$ 286,500	1,146	\$ 250	\$ 76,783	C	\$ 15,357	\$ 15,817	\$ 16,292	\$ 16,781	\$ 17,284	B	\$ 2,865
175	Corp Yard - Lumber/Pipe Storage	\$ 190,000	774	\$ 245	\$ 704	B	\$ 141	\$ 145	\$ 149	\$ 154	\$ 158	B	\$ 1,900
176	Corp Yard - Nursery Assembly Room	\$ 220,000	864	\$ 255	\$ 5,857	B	\$ 1,171	\$ 1,207	\$ 1,243	\$ 1,280	\$ 1,318	B	\$ 2,200
177	Mobile Building 1	\$ 624,000	3,120	\$ 200	\$ -	A	\$ -	\$ -	\$ -	\$ -	\$ -	B	\$ 6,240
178	Mobile Building 2	\$ 864,000	4,320	\$ 200	\$ -	A	\$ -	\$ -	\$ -	\$ -	\$ -	B	\$ 8,640
179	Corp Yard - Parks Storage	\$ 250,000	1,000	\$ 250	\$ 1,000	C	\$ 200	\$ 206	\$ 212	\$ 219	\$ 225	B	\$ 2,500
180	Corp Yard - Small Warehouse & Office	\$ 1,365,000	3,000	\$ 455	\$ 22,585	C	\$ 4,517	\$ 4,653	\$ 4,792	\$ 4,936	\$ 5,084	C	\$ 13,650
181	Corp Yard - Streets Storage	\$ 325,000	1,300	\$ 250	\$ 24,554	B	\$ 4,911	\$ 5,058	\$ 5,210	\$ 5,366	\$ 5,527	B	\$ 3,250
182	Corp Yard - Traffic Mtce. (sign shop)	\$ 1,965,600	4,320	\$ 455	\$ 9,605	C	\$ 1,921	\$ 1,979	\$ 2,038	\$ 2,099	\$ 2,162	C	\$ 19,656
183	Guard Shack	\$ 10,000	28	\$ 200	\$ 158	B	\$ 32	\$ 33	\$ 34	\$ 35	\$ 36	B	\$ 100
184	Quonset Warehouse	\$ 1,847,700	6,159	\$ 300	\$ 80,969	D	\$ 16,194	\$ 16,680	\$ 17,180	\$ 17,695	\$ 18,226	C	\$ 18,477

**Table 1B
Public Works - Facility Program
Maintenance Needs**

	A	C	D	E	F	AK	AL	AM	AN	AO	AP	AQ	AR
	Facility Description	Replacement Costs (\$2013)	Sq Ft.	Replacement Costs Per SF	Repair Backlog (\$2013)	Facility Grade at 2013 Backlog Level	FY 1	FY 2 (3% Escalator over FY 1)	FY 3 (6% Escalator over FY 1)	FY 4 (9% Escalator over FY 1)	FY 5 (12% Escalator over FY 1)	Projected Facility Grade (end of 5 Yrs)	Annual Budget Needs
1	ZERO WASTE - TRANSFER STATION												
185	Transfer Station - Administration Building	\$ 1,737,190	3,818	\$ 455	\$ 19,890	C	\$ 3,978	\$ 4,097	\$ 4,220	\$ 4,347	\$ 4,477	C	\$ 17,372
187	Transfer Station/Tipping Building	\$ 5,307,120	21,000	\$ 253	\$ 1,306,942	C	\$ 261,388	\$ 269,230	\$ 277,307	\$ 285,626	\$ 294,195	B	\$ 53,071
188	Transfer Station - Vehicle Maintenance	\$ 2,865,564	6,280	\$ 456	\$ 472,082	C	\$ 94,416	\$ 97,249	\$ 100,166	\$ 103,171	\$ 106,266	C	\$ 28,656
189	Transfer Station - Bin Maintenance Building	\$ 3,023,930	6,646	\$ 455	\$ 10,137	C	\$ 2,027	\$ 2,088	\$ 2,151	\$ 2,215	\$ 2,282	C	\$ 30,239
190	Transfer Station - Equipment Shelter	\$ 1,000,000	4,000	\$ 250	\$ 1,321	A	\$ 264	\$ 272	\$ 280	\$ 289	\$ 297	C	\$ 10,000
191	Transfer Station - Fuel Pumps & Tanks	\$ 465,000	2,600	\$ 179	\$ 6,874	D	\$ 1,375	\$ 1,416	\$ 1,459	\$ 1,502	\$ 1,547	D	\$ 4,650
192	Transfer Station - Hazmat Storage No. 1	\$ 80,000	160	\$ 500	\$ 8,000	B	\$ 1,600	\$ 1,648	\$ 1,697	\$ 1,748	\$ 1,801	B	\$ 800
193	Transfer Station - Hazmat Storage No. 2	\$ 80,000	160	\$ 500	\$ 8,000	B	\$ 1,600	\$ 1,648	\$ 1,697	\$ 1,748	\$ 1,801	B	\$ 800
194	Transfer Station - Oil Recovery Shelter	\$ 76,200	381	\$ 200	\$ 7,620	B	\$ 1,524	\$ 1,570	\$ 1,617	\$ 1,665	\$ 1,715	B	\$ 762
195	Transfer Station - Old Storage Building	\$ 314,700	1,600	\$ 197	\$ 1,815	C	\$ 363	\$ 374	\$ 385	\$ 397	\$ 409	C	\$ 3,147
196	Transfer Station - Scale House	\$ 153,560	360	\$ 427	\$ 28,415	C	\$ 5,683	\$ 5,853	\$ 6,029	\$ 6,210	\$ 6,396	C	\$ 1,536
197	Transfer Station - Underground Scales	\$ 510,350	800	\$ 638	\$ 23,461	B	\$ 4,692	\$ 4,833	\$ 4,978	\$ 5,127	\$ 5,281	B	\$ 5,104
198	Transfer Station - Wash Rack	\$ 160,000	800	\$ 200	\$ 638	B	\$ 128	\$ 131	\$ 135	\$ 139	\$ 144	B	\$ 1,600
199	OTHER												
200	Center Street Garage & Commercial space	\$ 29,000,000	175,500	\$ 165	\$ -	D	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ 290,000
201	Oxford Street Garage	\$ 9,000,000	46,000	\$ 196	\$ -	-	\$ -	\$ -	\$ -	\$ -	\$ -	-	\$ 90,000
202	Telegraph/Channing (Sather Gate) Mall &	\$ 56,000,000	224,628	\$ 249	\$ 228,766	B	\$ 45,753	\$ 47,126	\$ 48,540	\$ 49,996	\$ 51,496	B	\$ 560,000
203	Berkeley Way Lot												\$ -
204	Elmwood Lot												\$ -
205	PSB Parking Lot												\$ -
206	PUBLIC WORKS TOTAL	\$ 436,330,532			\$ 16,394,078		\$ 3,278,816	\$ 3,377,180	\$ 3,478,495	\$ 3,582,850	\$ 3,690,336		\$ 4,363,305

**Table 1B
Public Works - Facility Program
Maintenance Needs**

	A	C	D	E	F	AK	AL	AM	AN	AO	AP	AQ	AR
	Facility Description	Replacement Costs (\$2013)	Sq Ft.	Replacement Costs Per SF	Repair Backlog (\$2013)	Facility Grade at 2013 Backlog Level	FY 1	FY 2 (3% Escalator over FY 1)	FY 3 (6% Escalator over FY 1)	FY 4 (9% Escalator over FY 1)	FY 5 (12% Escalator over FY 1)	Projected Facility Grade (end of 5 Yrs)	Annual Budget Needs
1													
261	Color Key	Facility Grade	Description	Impact on Building	Condition Index Range								
262	1997 Pack Report	A	Good condition	Facility will look clean & functional	0-5%								
263	2000 Pack Report	B	Fair Condition	Facility will begin to show signs of wear	6-10%								
264	2013 Kitchell FCA	C	Average Condition	Facility will look worn with apparent & increasing	11-30%								
265	FACTS Report	D	Critical Condition	Facility will look worn with obvious deterioration	> 30%								
266	*Figures do not include seismic retrofits	F	Unusable										

Table 2
Comparison of Three Maintenance Management Options

Parks, Recreation & Waterfront									
Option	FY 1	FY 2	FY 3	FY 4	FY 5	Deferred Mtce.	# of Yrs. to Address Repair	Annual Maintenance Budget	Facility Criteria Level
1	\$ 984,130	\$ 1,013,654	\$ 1,044,064	\$ 1,075,385	\$ 1,107,647	\$ -	5.0	\$ 1,457,838	A-B
2a	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 1,474,880	7.0	\$ 750,000	B-C
2b	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 3,224,880	13.1	\$ 400,000	C-D
3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,224,880	∞	\$ -	D-F

Public Works									
Option	FY 1	FY 2	FY 3	FY 4	FY 5	Deferred Mtce.	# of Yrs. to Address Repair Backlog	Annual Maintenance Budget	Facility Criteria Level
1	\$ 3,278,816	\$ 3,377,180	\$ 3,478,496	\$ 3,582,851	\$ 3,690,336	\$ -	5.0	\$ 4,363,305	A-B
2	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 7,407,679	8.7	\$ 2,000,000	B-C
3	\$ 900,000	\$ 900,000	\$ 900,000	\$ 900,000	\$ 900,000	\$ 12,907,679	19.3	\$ 900,000	C-D

* Public Art Fund receives 1.5% of the project budget from facilities capital improvement projects funded by the Capital Improvement Fund.
 First Source Fund receives 1% of the project budget from facilities capital improvement projects funded by the Capital Improvement Fund.
 Funding in the table has not been reduced by these allocations.

Table 3
Useful Life
Building, Building Components & Other Assets

Buildings, building components and building services		
Permanent structures		50 years
Portable structures		25 years
Excavation		50 years
Foundation		50 years
Frame		50 years
Floor structure		50 years
Floor covering	Floor covering includes vinyl, tiles, timber parquetry	15 years
Carpeting		5-10 years
Computer flooring		10 years
Building envelope	Building Envelope include: external walls; internal weight-bearing walls; cladding	50 years
Exterior painting		8-10 years
Roof cover	Roof cover includes: roof sheeting, gutters, and downpipes	10-25 years
Interior construction		15 years
Interior renovation		10 years
Ceiling finish		10 years
Plumbing		20 years
HVAC		20 years
Electrical		20 years
Light fittings		20 years
Fire system	Fire system include: fire extinguishers; fire hoses; fire panels; sprinkler systems; smoke detectors; heat detectors	25 years
Elevators		20 years
Landscaping		10 years
Asphalt - parking lots		20 years
Sidewalks - concrete		30 years
Parks Improvements		
Playground Equipment		15 years
Fencing, gates		20 years
Landscaping		10 years
Outside Sprinkler systems		25 years
Atheltic fields		15 years
Swimming pools		20 years

**Table 3
Useful Life
Building, Building Components & Other Assets**

Tennis courts		20 years
Fountains		20 years
Retaining walls		20 years
Bleachers		20 years
Soccer fields		15 years
Running track		15 years
Outdoor lighting		20 years
Bike/Jogging Paths		
Asphalt		20 years
Concrete		30 years
Gravel		15 years
Dirt		10 years
Marinas		
Piers		50 years
Seawalls		50 years
Bulkheads		50 years
Docks - wood		10 years
Docks - concrete		20 years
Docks - metal		15 years
Street Lighting		
Mast arms		20 years
Hung wire		15 years
Poles - concrete		30 years
Poles - metal		20 years
Poles - wood		15 years
Luminaires		Manufacturer dependent