CITY OF OAKLAND
AGENDA REPORT

To: Office of the City Administrator
Attn: Deborah Edgerly
From: Public Works Agency, Finance and Management Agency, and Budget Office
Date: May 11, 2004

Re: Discussion of the City's Infrastructure and Resolution Establishing Prioritization Methods for the City of Oakland's Facilities and Structures, Parks and Open Space, Sewers, Storm Drains, Streets, Sidewalks, and Traffic Improvement Infrastructure Needs

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SUMMARY

This report provides an overview of the City's infrastructure, including general information about each type of infrastructure, current methods used to assess and prioritize needs, resources, and next steps to address the condition of the infrastructure. The types of infrastructure discussed (in Attachments A – G) include the following:

A. Facilities and Structures
B. Parks and Open Space
C. Sanitary Sewers
D. Storm Drains
E. Streets
F. Sidewalks
G. Traffic Improvements

Table 1 summarizes the funding information, needs, and prioritization methods that are more fully described in Attachments A – G. This table is located at the end of this report on pages ii – vi before Attachments A – G.

Staff recommends that the City Council establish a policy for prioritizing infrastructure needs and adopt the proposed resolution to that effect.

FISCAL IMPACT

There is no direct fiscal impact anticipated from the adoption of the proposed resolution. However, this report illustrates the City's significant funding needs for Public Improvement Projects and Capital Maintenance Projects in most of the infrastructure categories, as well as for On-Going Operations and Maintenance.

BACKGROUND

At the request of several City Council members, this report provides an overview of the City's infrastructure by type, and methods used to prioritize infrastructure needs. Information is provided for better understanding of the City's infrastructure needs, and to facilitate a discussion about prioritization practices.

Item # 8
Public Works Committee
May 11, 2004

This report is scheduled for discussion at the May 11, 2004 Public Works Committee and again at the May 18, 2004 Special City Council meeting on the FY 2004-05 Mid-cycle Budget Review.

Terminology
Infrastructure-related terms used in this report are defined below to provide a common language for effective discussion purposes.

Term	Definition
Capital Improvement Program (CIP)	This term refers to the City of Oakland's Five-Year Capital Improvement Program plan, which is adopted by the City Council during each biennial budget cycle.
Public Improvement Project	The broadest category of improvements. A Public Improvement Project is any defined location, specified public facility, building, utility, street, or any other City right-of-way improvement, capital improvement, park, recreational facility, trail, or environmental improvement that requires the City of Oakland's involvement in its design, site or building acquisition, site preparation, utilities emplacement, installation, construction, or reconstruction. The term "Public Improvement Project" is often used interchangeably with the term, "Capital Improvement Project." A Public Improvement Project, however, does not include minor projects that do not significantly affect the level of service provided to the public. These types of projects are referred to as "Capital Maintenance Projects."
Capital Improvement Project	A Capital Improvement Project is a Public Improvement Project that is included in the City's CIP. A Capital Improvement Project typically involves the erection, construction, demolition, alteration, upgrade, repair, or improvement of any public structure, equipment, building, leased space, infrastructure, park, road, or City right-of-way. The term "Capital Improvement Project" is often used interchangeably with the broader term, "Public Improvement Project."
Capital Maintenance Project	A Capital Maintenance Project is a minor project that does not significantly affect the level of service provided to the public. Examples include the repair, renovation, or maintenance of existing public buildings or facilities such as roofing, HVAC

improvements, carpeting, or other similar work.

For purposes of discussion, this report refers to three categories of Capital Maintenance Projects, which have historically been funded through the City's CIP:

- Major Capital Replacement – replacement of system components and equipment such as pumps, furnaces, generators, HVAC, fuel tanks, facility pavements, etc.
- Capital and Minor Maintenance – miscellaneous repairs to facilities, fencing, security gates, etc., usually not exceeding $15,000.
- Roof Replacement and Repairs – repair and/or replacement of facility rooftops.

On-Going Operations and Maintenance

On-Going Operations and Maintenance refers to the continuing costs to support and sustain the operation and useful life of any location, specified public facility, building, utility, street, City right-of-way, park, recreational facility, trail, or leased space.

On-going operations and maintenance is two-fold:

1) Expenditures required to provide a specified level of service to the public, including program functions, utilities, custodial, etc., and

2) Expenditures required for scheduled maintenance needs to sustain the useful life of the infrastructure.

Five-Year Capital Improvement Program

During each biennial budget development cycle, the City Council adopts a Five-Year Capital Improvement Program (CIP) plan that consists of capital investments, repairs, and replacements. The CIP forecasts capital needs over a five-year period, but the funding schedule is formally adopted every two years and reviewed annually to reflect changing conditions. Outside the budget development process, the City Council may adopt independent resolutions that authorize the City Administrator to apply for, accept, and appropriate funds, as grant opportunities arise for funding of Capital Improvement Projects.

KEY ISSUES AND IMPACTS

Current CIP Review and Prioritization Process

The Five-Year CIP budget is the culmination of a process coordinated by the Budget Office and the Public Works Agency, as follows:

1. Sponsoring agencies and departments prepare and submit project requests for funding.
2. For all project requests, staff convenes a review process to evaluate the methodology used to determine cost estimates. Each project sponsor participates in this review process and engages in discussions about the necessity and proposed cost estimates for each project. Project sponsors subsequently submit revised project requests, as necessary.
3. The Budget Office recommends funding for projects for City Administrator review based on (1) availability of funding, (2) resolution of health and safety issues, (3) compliance with Federal or State mandates, and (4) reduction of City operating costs or increased City revenue.

Prioritization Methods by Infrastructure Type

Attachments A – G contain descriptions of the current or proposed prioritization methods that staff applies to each infrastructure type for funding or implementation, based on each infrastructure type's unique characteristics. As evidenced in the criteria across all of the infrastructure types, current prioritization practice tends to address immediate health and safety needs. Given financial constraints, in practice, funding opportunities or availability also drives prioritization of projects. For instance, to the extent that a designated funding source exists for the sanitary sewer system, the needs of the sanitary sewer system can be prioritized vis-à-vis this funding source.

Council approval of the proposed resolution would codify the prioritization methods outlined in Attachments A – G as City policy.

On-Going Operations and Maintenance Needs

Once prioritized, funded, designed and constructed, a new or enhanced facility or park is announced with a "Grand Opening." Albeit a wonderful asset to our community, the City organization is now challenged with supporting the On-Going Operations and Maintenance of the new facility or park. For instance, a new park or ball field would require a budget for program staff, grounds crew for day-to-day maintenance, utilities (water, gas, and electricity), custodial staff, and future preventive maintenance needs to keep the park in good condition. For an expansion or improvement of an existing facility, the additional budget required would be incremental relative to the services currently provided and maintained.

Existing resources are insufficient to adequately maintain all of the City's infrastructure. The current list of 130 unfunded Capital Maintenance Projects requires a preliminary estimate of $20 million to address the identified problems.

Notwithstanding the Five-Year Capital Improvement Program process, the City is primarily reactive in addressing our infrastructure needs (rather than having a planned, long-range approach). We lack an up-to-date and comprehensive assessment of our infrastructure needs, and significant funding is required to address known capital, capital maintenance, and on-going operations and maintenance needs.

The existing 25-year sanitary sewer system program and the Storm Drainage Master Plan are exceptions, to the extent that a funding source is secured. The Pedestrian Safety Plan and the Bicycle Master Plan also provide the City with program-oriented plans though not necessarily on a year-by-year project basis. Voter-approved General Obligation Bond programs such as Measure DD are also exceptions to the extent that they have master plans for Public Improvement Projects. The key issue for the City will be to commit funding for the On-Going Operations and Maintenance costs associated the Capital Improvement Projects completed through local, county, and state bond funds.

Studies and Best Practices

The California Multi-Agency Capital Improvement Projects Benchmarking Study (August 2002), among the six major cities in California, indicates that there are several common best management practices that are necessary for effective planning of capital projects. The best practices include the following:

1. Project feasibility studies are completed before the final scope and budget are defined.
2. Capital projects are well defined with respect to scope and budget only at the end of the planning phase.
3. Each capital project has a master schedule that identifies the proposed start and finish dates.
4. Board/Council project-prioritization system is in place.
5. Projects listed in a comprehensive capital improvement program have identified staff resources.
6. Projects are shown on a geographical information system.

Also completed in 2002, the City's Moving Oakland Forward! (MOF) Initiative recommended that each Capital Improvement Project include a comprehensive financial timeline for the first five years, including prospective incremental allocations for On-Going Operations and Maintenance. The recommendation details state that City Council approval of a Capital Improvement Project should be considered a City Council mandate to provide funding in the budget for the incremental operating and maintenance costs.

Another key MOF recommendation with respect to capital projects asks that the City Council deliberate on the City's CIP (Capital Improvement Program) budget prior to discussion of the operating budget to ensure that incremental operations and maintenance costs resulting from capital projects are incorporated into the operating budget.

In sum, the City's infrastructure needs are challenged by lack of funding to address the demand for Public Improvement Projects, as well as On-Going Operations and Maintenance. The City needs to better prioritize and move toward a planned, long-range approach to addressing our infrastructure needs.

SUSTAINABLE OPPORTUNITIES

There are no direct economic, environmental, or social equity opportunities or impacts associated with the City Council action requested in this report. However, economic opportunities may be impacted by the condition of the City's infrastructure. Environmental impacts can also be associated with the condition of the City's infrastructure. For instance, a well-maintained building has environmental benefits such as clean water and good circulation. Also, with respect to facility infrastructure projects, individual projects may have opportunities for the utilization of green building standards.

DISABILITY AND SENIOR ACCESS

There are no direct opportunities for enhancing disabled or senior access associated with the City Council action requested in this report.

RECOMMENDATION AND RATIONALE

Toward developing a project-prioritization system, staff recommends that the City Council establish a policy for prioritizing the City's Facilities and Structures, Parks and Open Space, Sewers, Storm Drains, Streets, Sidewalks, and Traffic Improvement infrastructure needs.

The proposed resolution includes the following prioritization criteria, which are more fully described in Attachments A – G:

Infrastructure Type	Prioritization Method
Facilities and Structures (Capital Maintenance Projects)	Prioritize calls for service from high to low using the following factors: ***High*** o Life safety issues o Mandated service o Hazardous situations o Security breaches o Preventive maintenance of emergency response systems ***Medium*** o Scheduled preventive maintenance projects ***Low*** o Deferred maintenance projects
Parks (Park Facilities) and Open Space	Apply the Open Space Conservation and Recreation (OSCAR) Element of the Oakland General Plan. OSCAR states that in order to reduce deficiencies in parks and recreational facilities

	resulting from decline and deferred maintenance, outdated facilities, and factors such as vandalism and safety, the focus should be on maintenance, rehabilitation and safety improvements. This is cited as currently the highest priority since it protects public investment and maximizes the effective delivery of park services. (Objective REC-3.) Criteria to prioritize future infrastructure needs related to parks and open space are: o Projects that resolve existing health and safety issues. o Projects that replace existing deteriorated facilities, fields, tot lots, etc. o Projects that leverage existing improvements that are already funded, or in design or construction. o Projects that are partially funded and suitable for grant-funding opportunities. Projects that provide new or enhanced infrastructure, raising the level of service standards to meet community needs, and that would incur additional operations and maintenance costs would be a low priority.
Sanitary Sewers	Use the Infiltration and Inflow (I/I) Correction Program that has established a 25-year program to rehabilitate 30% of the sewer system sub-basins based on greatest to least infiltration and inflow of rainwater problems. The program includes a year-by-year prioritization of projects and is expected to be completed by 2013. Apply the same criteria to plan and prioritize the rehabilitation and replacement of the remaining 70% of the system.
Storm Drainage	Use the Storm Drain Master Plan that prioritizes projects using the following factors: o Type of problem (flooding, erosion, etc.) o Location of impact (commercial, public street, private property, etc.) o Type of system (City-owned culvert, open channel, etc.)
Streets	Prioritize streets proposed for rehabilitation using the Pavement Management System based on the Pavement Condition Index (PCI), visual inspection, and cost effectiveness. Streets are ranked on scale of 1 – 100 with 100 being best.

Sidewalks	Prioritize sidewalks using a Sidewalk Management System based on the Sidewalk Condition Index (SCI) and a completed survey of damaged sidewalks throughout the City. The Sidewalk Management System uses a combination of factors including distress type and severity and pedestrian usage and location to index the damage locations. Priorities are determined by those damaged locations having the lowest ranking first.
Traffic Improvements	Prioritize traffic signal needs based on criteria established by the State of California, Department of Transportation (Caltrans) as follows: o Vehicular volumes o Interruption of continuous traffic o Pedestrian volumes o Accident data o Other, site specific special condition Prioritize Neighborhood Traffic Safety Program needs through input from the community and City Council offices, and an engineering assessment. Requests are prioritized using criteria as follows: o Documented accident history o Field evaluation o Assessment of non-standard or changed conditions o Citizen complaints o Other, site specific factors Prioritize Bicycle Program needs using the 1999 Bicycle Master Plan. The plan's criteria for designating priority bikeways are: o Eliminate gaps in existing bikeways o Overcome significant obstacles and barriers such as bridges, tunnels, and freeways o Facilitate regional connections with bikeways in neighboring cities o Target improvements in corridors with identified safety concerns o Provide facilities in service districts that have no existing bikeways o Provide direct connection to BART, ferry, or other transit station o Provide direct connection to a major employment center

ACTION REQUESTED OF THE CITY COUNCIL
Staff requests that the City Council accept this report and approved the proposed resolution.

Respectfully submitted,

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APPROVED FOR FORWARDING TO THE
PUBLIC WORKS COMMITTEE

OFFICE OF THE CITY ADMINISTRATOR

Attachments:

Table 1: Summary of Public Improvement and Capital Maintenance Projects, Resources, Needs, and Prioritization Methods

A. Facilities and Structures (Capital Maintenance)
B. Parks and Open Space
C. Sanitary Sewers
D. Storm Drains
E. Streets
F. Sidewalks
G. Traffic Improvements

The following table summarizes current funding information, needs, and prioritization methods that are more fully described in Attachments A – G. The table does not include On-Going Operations and Maintenance costs as those estimates are not complete at this time.

Table 1: Summary of Public Improvement Project and Capital Maintenance Project Resources, Needs, and Prioritization Methods

Infrastructure Type	FY 03-05 Resources	Needs Statement	Prioritization Method
A. Facilities and Structures (Capital Maintenance Projects)	$0	The true need is unknown due to the lack of a comprehensive assessment. However, staff has identified 130 projects with a preliminary cost estimate of $20 million.	Prioritize calls for service from high to low using the following factors: ***High*** o Life safety issues o Mandated service o Hazardous situations o Security breaches o Preventive maintenance of emergency response systems ***Medium*** o Scheduled preventive maintenance projects ***Low*** o Deferred maintenance projects
B. Parks (Park Facilities) and Open Space	Over $96 million, including $70.7 million supported by Measure DD, Series A	The City lacks a comprehensive assessment. However, staff maintains a list of known open-space, parks and recreation capital projects. The list identifies project needs, cost estimates and proposed funding sources. Gap funding is required for many of these identified projects.	Apply the Open Space Conservation and Recreation (OSCAR) Element of the Oakland General Plan. OSCAR states that in order to reduce deficiencies in parks and recreational facilities resulting from decline and deferred maintenance, outdated facilities, and factors such as vandalism and safety, the focus should be on maintenance, rehabilitation and safety improvements. This is cited as currently the highest priority since it protects public investment and maximizes the effective delivery of park services. (Objective REC-3.)

Infrastructure Type	FY 03-05 Resources	Needs Statement	Prioritization Method
			Criteria to prioritize future infrastructure needs related to parks and open space are: o Projects that resolve existing health and safety issues. o Projects that replace existing deteriorated facilities, fields, tot lots, etc. o Projects that leverage existing improvements that are already funded, or in design or construction. o Projects that are partially funded and suitable for grant-funding opportunities. Projects that provide new or enhanced infrastructure, raising the level of service standards to meet community needs, and that would incur additional operations and maintenance costs would be a low priority.
C. Sanitary Sewers	$20 million	Complete I/I Correction Program, which covers 30% of sanitary sewer system. Develop plan for rehabilitation or replacement of remaining 70% of system.	Use the Infiltration and Inflow (I/I) Correction Program that has established a 25-year program to rehabilitate 30% of the sewer system sub-basins based on greatest to least infiltration and inflow of rainwater problems. The program includes a year-by-year prioritization of projects and is expected to be completed by 2013. Apply the same criteria to plan and prioritize the rehabilitation and replacement of the remaining 70% of the system.

Infrastructure Type	FY 03-05 Resources	Needs Statement	Prioritization Method
D. Storm Drains	$0	Rehabilitation/Replacement Projects: Approximately 30,000 linear feet of pipe have been identified for rehabilitation/replacement due to deteriorated pipe conditions at an estimated cost of $32 million. Capacity Correction Projects: Approximately 100,000 linear feet of pipe have been identified for capacity enhancement due to lack of hydraulic capacity at an estimated cost of $155 million. Of these, approximately $18 million has been identified as high priority to prevent flooding. System Expansion: New facilities are needed in under-served areas or where storm drainage system is non-existent at an estimated cost of $11 million.	Use the Storm Drain Master Plan that prioritizes projects using the following factors: o Type of problem (flooding, erosion, etc.) o Location of impact (commercial, public street, private property, etc.) o Type of system (City-owned culvert, open channel, etc.)
E. Streets	$6.4 million	$26.6 million per year for the next 25 years to improve the paving cycle from 85 years to 25 years. An additional $1.2 million annually is required for preventive maintenance.	Prioritize streets proposed for rehabilitation using the Pavement Management System based on the Pavement Condition Index (PCI), visual inspection, and cost effectiveness. Streets are ranked on scale of 1 – 100 with 100 being best.
F. Sidewalks	$1.4 million	$20 million per year is required to maintain a 5-year sidewalk repair cycle. The backlog of known tree-related sidewalk damage is $17 million (1.3 million square feet).	Prioritize sidewalks using a Sidewalk Management System based on the Sidewalk Condition Index (SCI) and a completed survey of damaged sidewalks throughout the City. The Sidewalk Management System uses a combination of factors including distress type and severity and pedestrian usage and location to index

Infrastructure Type	FY 03-05 Resources	Needs Statement	Prioritization Method
			the damage locations. Priorities are determined by those damaged locations having the lowest ranking first.
G. Traffic Improvements Traffic signals	$1.5 million	While the Citywide Traffic Signal Priority list has over 300 intersections evaluated and rated, only about 25 - 30 locations would warrant installation of a traffic signal.	Prioritize traffic signal needs based on criteria established by the State of California, Department of Transportation (Caltrans) as follows: o Vehicular volumes o Interruption of continuous traffic o Pedestrian volumes o Accident data o Other, site specific special condition
Neighborhood Traffic Safety Program	$0.5 million	Approximately 3,000 requests for traffic safety measures are submitted each year.	Prioritize Neighborhood Traffic Safety Program needs through input from the community and City Council offices, and an engineering assessment. Requests are prioritized using criteria as follows: o Documented accident history o Field evaluation o Assessment of non-standard or changed conditions o Citizen complaints o Other, site specific factors
Bicycle Program	$0.9 million	The 1999 Bicycle Master Plan identifies 188 miles of bikeway priorities. In addition, there is a current list of 100 sites of requested bicycle parking.	Prioritize Bicycle Program needs using the 1999 Bicycle Master Plan. The plan's criteria for designating priority bikeways are:

Infrastructure Type	FY 03-05 Resources	Needs Statement	Prioritization Method
			○ Eliminate gaps in existing bikeways ○ Overcome significant obstacles and barriers such as bridges, tunnels, and freeways ○ Facilitate regional connections with bikeways in neighboring cities ○ Target improvements in corridors with identified safety concerns ○ Provide facilities in service districts that have no existing bikeways ○ Provide direct connection to BART, ferry, or other transit station ○ Provide direct connection to a major employment center

FACILITIES AND STRUCTURES (CAPITAL MAINTENANCE)

General Facts

The Public Works Agency / Facilities Management and Maintenance Division is responsible for performing Capital Maintenance Projects for the following:

- 309 facilities, including 3 million square feet of space
- fueling stations (4 underground; 31 above ground; 1 compressed natural gas)
- 38 emergency generators
- 4 Uninterrupted Power Supply (UPS) battery packs (including 911 radio dispatch, Hall of Justice computers and lights, Emergency Operation Center radio dispatch, and Eastmont Police Station]
- 134 tot lots and playgrounds
- 51 field house restrooms
- 87,628 linear feet of park fencing
- 101,688 linear feet of park pathways
- 74 basketball courts
- 48 tennis courts
- 5 swimming pools
- all park amenities (including 471 tables, 1,119 benches, 73 bleachers, and 110 barbeque pits)

To some extent, this same staff is also involved in Capital Improvement Projects, such as minor renovations and capital equipment replacement. In the past, the City's CIP (Capital Improvement Program) has included funding for major capital replacement. In addition, grant funding for Capital Improvements Projects sometimes includes maintenance and repair work for building structures, tot lots, paving, and restrooms in the parks, and minor site repairs (fence repairs, bleachers, picnic table installations, signage, etc) as part of a larger rehabilitation project.

Prioritization Method

For the most part, staff response to Capital Maintenance Projects is based on projects that are identified by program staff (e.g., Parks and Recreation, Fire, Police, Senior Centers). These calls for service are prioritized from high to low using the following factors.

High Priority

- ***life safety issues***, such as poor air quality from a ventilation system and fire stations doors not operating;
- ***mandated service***, such as Cal/OSHA regulations (California Occupational Safety and Health Act), annual State mandated inspections and repairs of tot lots, elevator inspections, underground storage tank inspections;
- ***hazardous situations***, such as leaking sewage pipes and environmental remediation issues;
- ***security breach***, such as broken window or door lock;
- ***preventive maintenance of emergency response systems*** such as emergency generators and UPS, fire extinguishers.

Medium Priority	• ***scheduled preventive maintenance projects*** based on industry standards (roofs, equipment inspections, tot lots).
Low Priority	• ***deferred maintenance projects*** – preventive maintenance that has been deferred due to lack of funding

Needs Assessment
The true "need" is unknown. Most of our Capital Maintenance Projects are reactive, rather than preventive.

Staff maintains a running list of Capital Maintenance Projects that have been identified over the years. This list is included in the request for funding within the Capital Improvement Program each budget cycle. The current list includes 130 projects, with a total preliminary estimate of $20 million. All project estimates on this list were computed based on a visual inspection only of the site. More comprehensive estimates will be required before an accurate funding request could be attached to any individual project.

Examples of the types of projects included on this list are as follows:

- Roof replacement at various fire stations, field houses, and the main library
- Furnace replacement at various recreation centers, senior center, fire stations
- Restroom upgrades throughout City parks
- Tot lot equipment replacements throughout City parks
- Window and door upgrades at various facilities
- Tennis court resurfacing of various tennis courts
- Veterans Memorial Building elevators, doors and window, steam/condensate pipe electrical outlet replacement; floor refinishing
- City Hall air conditioning above third floor, elevator and window replacement or upgrade
- Henry J. Kaiser boiler, sewer pipe and steam pipe replacement

Repairs needed at the Hall of Justice Complex, which are extensive, are not included on this sample list.

Approximately 80% of the City's facilities are 30 years old or older. This means that many of the major facility systems (heating, ventilation, electrical, plumbing) are functioning beyond their expected lifespan. Much of the existing resources are spent repairing these old systems that need to be replaced. These types of repairs are unscheduled, unplanned, expensive, and short-term.

Due to the large volume of deferred maintenance at City facilities, the majority of resources are spent on high priority service calls. Approximately 80% of the work assignments result from reports by facility tenants of equipment failure (ventilation, plumbing, electrical), which require immediate attention to mitigate a health safety issue or to prevent more severe damage to the facility; 10% of work assignments are mandated inspections and maintenance; and 10% of work assignments are scheduled preventive maintenance calls.

A best practice in managing facility maintenance is to re-distribute workload such that equipment failure calls represent 40% of the work assignments, mandated inspections and maintenance is increased to 20% of the work assignments, and scheduled preventive maintenance is increased to 40% of the work assignments. Achieving this best practice requires an infusion of funds to replace aging and irreparable facility systems and equipment.

Resources

At one point in time, the City provided consistent funding for several categories of Capital Maintenance Projects (Major Capital Replacement, Capital and Minor Maintenance, and Roof Replacement and Repairs) as shown in the table below. These appropriations were supported by the Municipal Improvement Capital fund (5500).

Historical Funding for Major and Minor Capital Maintenance Projects

Category	91-92	92-93	93-94	94-95	95-96	96-97	97-98
Major Capital Replacement (Replacement of equipment such as pumps, furnaces, generators, fuel tanks, facility pavement, etc.)			195,000	0	0	0	0
Capital and Minor Maintenance (Miscellaneous emergency repairs to facilities, fencing, security gates, etc.)	265,000	250,000	250,000	250,000	250,000	200,000	190,000
Roof Replacement and Repairs	250,000	250,000	0	100,000	150,000	150,000	100,000
Totals	**515,000**	**500,000**	**445,000**	**350,000**	**400,000**	**350,000**	**290,000**

Category	98-99	99-00	00-01	01-02	02-03	03-04	04-05
Major Capital Replacement (Replacement of equipment such as pumps, furnaces, generators, fuel tanks, facility pavement, etc.)	923,000	1,000,000	1,000,000	0	0	0	0
Capital and Minor Maintenance (Miscellaneous emergency repairs to facilities, fencing, security gates, etc.)	250,000	250,000	250,000	250,000	250,000	0	0
Roof Replacement and Repairs	250,000	0	0	0	0	0	0
Totals	**1,423,000**	**1,250,000**	**1,250,000**	**250,000**	**250,000**	**0**	**0**

The major capital replacement money was used to replace system components and equipment as they became inoperable and irreplaceable. FY 2000-01 was the last year for which $1 million was budgeted for major capital replacements. FY 2002-03 was the last year for which $250,000 was budgeted for capital and minor maintenance, and FY 1998-99 was the last year for which any funds were budgeted for roof replacement and repairs.

It is also worth noting that in addition to the funding for these categories of Capital Maintenance Projects, each year the City's CIP also included funding for individual major and minor capital projects. A few examples include the installation of Hall of Justice security barrier (FY 1996-97), installation of ventilation exhaust systems in various fire stations (FY 1996-97), installation of security items at various fire stations (FY 1997-98), Brookfield Branch Library air conditioning (FY 1997-98), resurface and restripe concrete floors of Museum (FY 1997-98), Community Centers repair and restoration (FY 1999-00 and FY 2000-01), and East Oakland Senior Center air conditioning (FY 2000-01).

On-Going Operations and Maintenance

In FY 1987-88, the Office of General Services/Municipal Buildings Division employed 156 FTE and maintained approximately 2.5 million square feet of space, with a total budget of over $10 million.

Today, the Public Works Agency/Facilities Management and Maintenance Division (FMMD) employs 99 FTE and maintains more than 3 million square feet of space, with a FY 2003-04 adopted budget of $18 million. Of this total budget, about 28% ($5 million) is designated for fixed costs, specifically utility costs (electricity, gas, and potable water). The remainder of the budget provides for maintenance and repairs and includes 55% ($9.9 million) for personnel and 17% ($3.1 million) for materials, parts, and supplies.

Facilities, parks, and structures have been added to the City's inventory without accompanying funding for the on-going operations and maintenance of these additions.

As an internal service provider, the Facilities Management and Maintenance Division budget is supported by an internal service charge to each City department. At one time, the FMMD budget was funded based on actual services provided to each City department in the immediately preceding fiscal year. Today that is no longer the case, in large part due to reductions in staff that used to track and calculate the actual services and because user departments have not been able to afford costs increases needed to maintain the facilities they use.

FMMD is currently in the process of writing specifications for the purchase of a Computerized Maintenance Management System. To the extent that such a system can be funded and implemented, one benefit is that we would have a comprehensive, readily available data source to track actual FMMD costs associated with specific facilities, and be able to charge user departments based on this data.

Next Steps

- Fund and implement a comprehensive assessment of existing facilities and structures. (This would be coordinated with the assessment that is recommended under the Parks and Open Space category – Attachment B.)
- Work towards eliminating the operating deficit within the internal service fund that supports the Facilities Management and Maintenance Division.
- Incorporate into the internal service charge rate an amount for future capital replacement needs.
- Secure funding for major capital replacement needs.

PARKS (PARK FACILITIES) AND OPEN SPACE (CAPITAL IMPROVEMENT PROJECTS)

General Facts

The City has over 2,500 acres of open space with over 100 parks and public grounds.
The City also has three golf courses.
Located in or near the parks are 23 recreation centers, 53 multi-use sport fields, seven pools, seven community gardens, two discovery centers, and six rental facilities.

Prioritization Method

The City Council adopted the Open Space Conservation and Recreation (OSCAR) Element of the Oakland General Plan in 1996. OSCAR identifies the objective (Objective REC-3) to reduce deficiencies in parks and park facilities in the most equitable, cost effective way possible. With respect to existing park infrastructure that has declined because of deferred maintenance, outdated facilities, and factors like vandalism and safety concerns, OSCAR states that the focus should be on maintenance, rehabilitation and safety improvements. This is cited as the highest priority since it protects public investment and maximizes the effective delivery of park services. OSCAR states that, "In general, the City's resources should not be directed towards new parks until the deficiencies in maintenance and safety at existing parks have been addressed."

Consistent with OSCAR, staff proposes the following criteria in prioritizing future infrastructure needs related to parks and open space.

- Projects that resolve existing health and safety issues.
- Projects that replace existing deteriorated facilities, fields, tot lots, etc.
- Projects that are partially funded and suitable for grant-funding opportunities.
- Projects that leverage existing improvements that are already funded, or in design or construction.

Projects that provide new or enhanced infrastructure, raising the level of service standards to meet community needs, and that would incur additional operations and maintenance costs would be a low priority.

Needs Assessment

Since the adoption of OSCAR, staff has worked to compile and annually update a list of projects requiring funding, including cost estimates for each project, proposed funding sources, and a relative priority ranking. The list needs to be expanded so that it can serve as a comprehensive source for future funding decisions. In order to develop the list into a complete needs assessment, it is essential to establish criteria for evaluation and prioritization, undertake a comprehensive analysis and evaluation of deficiencies at all existing parks and recreational facilities, and develop supportable cost estimates for correcting the deficiencies.

In addition, in 2002 the volunteer group, Oakland Parks Coalition, prepared for the City a report entitled, *Survey of Maintenance at Oakland Parks, Medians and Facilities*. This report provides an excellent resource toward a complete inventory of the City's park facilities. The report surveys conditions at the parks in each City Council District. While the focus of the survey is primarily custodial maintenance, such as litter, bathroom cleanliness, etc., it also provides general indications of structural and safety issues, such as walkways/driveways, poor lighting, broken fixtures and deteriorated bathrooms, and other

items that relate to the infrastructure. The report can be used as a starting point for a more comprehensive assessment that would include associated costs and prioritized improvements.

Categories of funding needs are:

- Open Space Parks – General park maintenance, weeding, mowing, removing garbage.
- Recreation Centers – Maintain buildings structures and systems.
- Rental Facilities – Maintain buildings, structures and systems.
- Tot Lot Equipments and Playgrounds – Replace equipments, new safety surfaces.
- Paved surfaces (within parks): pathways, walkways, parking lots, sports fields (tennis courts and basketball courts) – Replace surfaces, fill pot holes, repair cracks, etc.
- Field drainage systems (subsurface systems) – Grading and new drainage systems. Existing systems are antiquated and either non-functioning or ready to collapse.
- Infrastructure maintenance: Plumbing & sewer systems, electrical lighting, park lighting system. – Maintain underground utility systems and site lighting.

Resources

Recent funding sources for Capital Improvement Projects related to parks and other recreational and cultural facilities include the City's Municipal Improvement Capital funds, State (Proposition 12 and 40) and Federal grant funds, and local general obligation bond measures, such as, Measure K, Measure AA, Measure I, Measure G, and Measure DD.

Concurrently, the City is working on over 73 parks and open space capital improvement projects at various stages, totaling over $96 million, including $70.579 million supported by Measure DD, Series A.

On-Going Operations and Maintenance

Funding sources from most grants and from state and local bond funds are limited to Capital Improvement Projects, i.e., new and replacement facilities, structures, and systems. Maintenance and repair work for the building structures, tot lots, paving, and restrooms in the parks, and minor site repairs (fence repairs, bleachers, picnic table installations, signage, etc) is usually not funded by these programs on an on-going basis or unless it is part of a rehabilitation project. Therefore, facility maintenance and repair work is often deferred due to a shortage of City funds.

Established in 1989, the Landscaping and Lighting Assessment District (LLAD) is a designated funding source for park maintenance. However, revenues from the LLAD have been fixed since FY 1993-04 without any adjustments for inflation or other cost increases. Due to inflation and the addition of new parks, park renovations, street medians and streetscapes, the park maintenance operations are primarily supplemented by the General Purpose Fund.

Next Steps

- Fund and implement a comprehensive assessment of existing facilities and structures in parks that will provide a list prioritized in accord with the above-defined criteria to be used as the basis for future project recommendations. (This would be coordinated with the assessment that is recommended under the Facilities and Structures category – Attachment A.)
- Maximize the number of capital replacement and maintenance projects included in grant applications for Capital Improvement Projects.
- Improve coordination with Facilities Management and Maintenance staff with respect to grant application submissions.

SANITARY SEWERS

General Facts

The City's sanitary sewer collection system includes over 1,000 miles of sanitary sewer pipes and over 25,000 structures throughout the City. Sanitary sewer systems have a serviceable life span of up to 70 years. However, conditions such as ground movement, tree root intrusion, quality of original pipe material, and other factors can significantly decrease the lifespan of sewer pipes and manholes. Most of Oakland's sewer system was built in the early 1920's and is nearing the end of its serviceable life.

In 1987, a 25-year capital improvement program was initiated to rehabilitate up to 300 miles of sewer lines to eliminate wet weather overflows. These lines were determined to be the major contributor to ongoing wet weather overflows. This program does not address the remaining 700 miles of sewer system. Only a small fraction of this remaining portion is rehabilitated on an as-needed basis each year.

Prioritization Method

In 1985, Oakland participated in regional studies to determine what portions of the sewer system had the greatest problems with infiltration and inflow of rainwater, which causes both local overflows and overflows at the regional treatment plant operated by East Bay Municipal Utilities District (EBMUD).

Those studies generated the Infiltration and Inflow (I/I) Correction Program; a 25-year program to rehabilitate the sub-basins of the sewer system found to have the highest infiltration and inflow problems. This program prioritizes on a year-by-year basis which sub-basins and relief lines should be rehabilitated or constructed during a particular year. Approximately 10 miles of sewers are rehabilitated under the program each year. The City started this program in 1987 and aims to complete it by year 2013. Completion of these projects as scheduled is part of Oakland's Compliance Plan under its National Pollutant Discharge Elimination System (NPDES) Permit. When completed, the City will have rehabilitated about 30% of the entire sewer system.

The remaining part of the sanitary sewer system (70%) is not currently planned for rehabilitation or replacement. However, PWA implements as part of the I/I program an annual Cyclic Replacement Program to repair sewers based on complaints of sewer overflows, backups, and collapsed pipelines. The highest priority projects are those with ongoing overflows and backups. This program does not include those lines that have deteriorated but have not yet caused overflows. About one mile of the remaining 700 miles of sewer system is rehabilitated each year under this program. PWA plans to analyze the need for improvements to these remaining parts of the system before the 25-year program is complete.

Needs Assessment

The main objective of the I/I Correction Program is to minimize wet weather overflows. Because this program covers 30% of the sanitary sewer system, there is a pressing need to expand the Cyclic Replacement program to deal with the remaining 700 miles of the system. It is quite obvious that if the current Cyclic Replacement Program continued to progress at the same rate (i.e., one mile per year), it would take approximately 700 years to rehabilitate the entire sewer system in Oakland.

Because the age of the Oakland sewer pipes vary from about 70 years to less than few years, the Cyclic Replacement program needs to be expanded to cover a higher number of miles per year. This number of miles depends on many factors such as the condition, age, maintenance history, etc. of each pipe. Staff is considering completing a comprehensive study of the entire sewer system to determine what changes have occurred since the previous study in 1985. PWA's long-term goal is to establish a perpetual sewer

rehabilitation program that will cover the entire 1,000 miles of the sewer network. Studies have indicated that preventive maintenance and rehabilitation costs are significantly lower than costs associated with repairing pipes after failure, damage to private and public property, fines, claims, etc.

Resources

The I/I Program, Cyclic Replacement Program, and sewer maintenance are funded through the Sewer Service Fund (Fund 3100). Fund revenues are generated from a bi-monthly sewer service charge included in the water bill for every property in Oakland and collected by EBMUD. Until recently, this enterprise fund maintained a flat revenue stream while operations and maintenance costs rose due to higher labor costs, inflation, and increases in the cost to construct capital improvements.

FY 2003-04 anticipated revenues in the Sewer Service Fund includes about $8.7 million for the I/I Program, $2.3 million for the Cyclic Replacement Program, and about $8.7 million for operations and maintenance. The current funding of $2.3 million annually for "cyclic repair" work is only adequate for the highest priority sewer replacement projects.

A recent increase in the sewer service charge (from $11.89/month to $13.20/month for a single family residence) was approved by the City Council in late 2003 and took effect in January 2004, with 11% increases through 2009, and further increases tied to the local Consumer Price Index (CPI). The additional revenue enables the City to cover the increased costs of constructing capital improvements and will also be used to replace that portion of the sanitary sewer system that is not included in current rehabilitation programs. The City is currently preparing to issue Revenue Bonds to pay for $60 million worth of planned capital improvement projects to be completed during the next five years. These projects include some that were deferred pending the increase in the sewer service charge. Completion of these projects will the restore the I/I program to its original schedule.

Next Steps

- Forward to City Council for consideration, a resolution to issue Revenue Bonds to support planned sanitary sewer capital projects over the next five years. These bonds would be supported through the recent sewer service charge increase.
- Prepare a recommendation for a comprehensive study of the sanitary sewer system to determine changes since 1985 and identify and prioritize future capital needs.

STORM DRAINAGE

General Facts
The City storm drain system consists of small and scattered networks of pipes and drainage structures that interconnect with creeks, watercourses, Lake Merritt, and the San Francisco Bay. In the Oakland Hills, the network is primarily an unimproved system as street-swales, natural watercourses and creeks service the area. The improved and unimproved system consists of the following:

- 370 miles of closed pipe system
- 40 miles of open creeks and watercourses
- 14,000 structures such as inlets and manholes

Prioritization Method
Oakland's Storm Drain Master Plan study is near its completion compiling system inventory, condition assessment, and a comprehensive capital improvement program. The storm drain capital improvement list is prioritized based on the following factors:

- Type of Problem: Projects are prioritized based on the type of problem, listed in the order from high to low as follows: actual (recorded) flooding, imminent infrastructure failure, erosion, predicted flooding (by hydraulic modeling) and potential infrastructure failure (based on results of field condition assessment).
- Location of Impact: The above ranking is compounded by the following order of priority--from high to low: essential facilities (police stations, hospitals, emergency center, etc.), commercial and public buildings including schools, major (arterial) streets, potential landslide zones, residential areas, other streets (collector and local), unimproved lands and parks.
- Type of System: Finally, the ranking is weighted by the following order of priority—from high to low: public system, creek, no existing system (natural watercourse or street sheet flow), and private system.

Needs Assessment
The Storm Drain Master Plan has identified needed projects by category at an estimated cost of $200 million as follows:

- Rehabilitation/Replacement Projects: Approximately 30,000 linear feet of pipe have been identified for rehabilitation/replacement due to deteriorated pipe conditions at an estimated cost of $32 million.
- Capacity Correction Projects: Approximately 100,000 linear feet of pipe have been identified for capacity enhancement due to lack of hydraulic capacity at an estimated cost of $155 million. Of these, approximately $18 million has been identified as high priority to prevent flooding.
- System Expansion: New facilities are needed in under-served areas or where storm drainage system is non-existent at an estimated cost of $11 million.

The above costs are preliminary estimates based on the American Society of Civil Engineer's cost estimating practices and are provided for overall program planning purposes.

Resources

Through FY 2002-2003, $350,000 was allocated for storm drainage projects from the Municipal Improvement Capital fund (5500). There is no funding in the current budget for capital improvements to the storm drainage system. Because this funding provided for completion of only one to two small drainage projects each year, only the highest priority repair projects were actually completed.

Next Steps

- Adopt a comprehensive storm water management program for Oakland that includes maintenance, capital, water quality and creek programs.
- Secure a dedicated funding source for improvements recommended in the Storm Drain Master Plan, which include capital improvements, expanded operations and maintenance, and enhanced watershed-based storm water management programs.

STREETS

General Facts

The city street network consists of 836 centerline (total length of a street) miles.
The Capital Improvement Program for streets is a maintenance program critical to maintaining the integrity of these assets. It does not include street widening in anticipation of future growth.

Prioritization Method

The City's Pavement Management System (PMS) is used to rank the city streets by Pavement Condition Index (PCI) based on a visual inspection. The PCI is a numerical scale from 0-100 with 100 being the best. The system then determines the total Citywide need and recommends streets for rehabilitation based on a constrained budget.

Specifically, the PMS recommendations are based on the cost-effectiveness to rehabilitate the streets. The lower the PCI ranking, the more costly it is to bring the street back into excellent condition. Thus, the PMS attempts to prevent streets from slipping into lower condition categories. When given a constrained budget, the PMS recommends streets for rehabilitation that are at the lower end of the "good" and "fair" conditions first. If there are remaining funds, it recommends streets that are at the bottom of the "poor" and "very poor" condition categories.

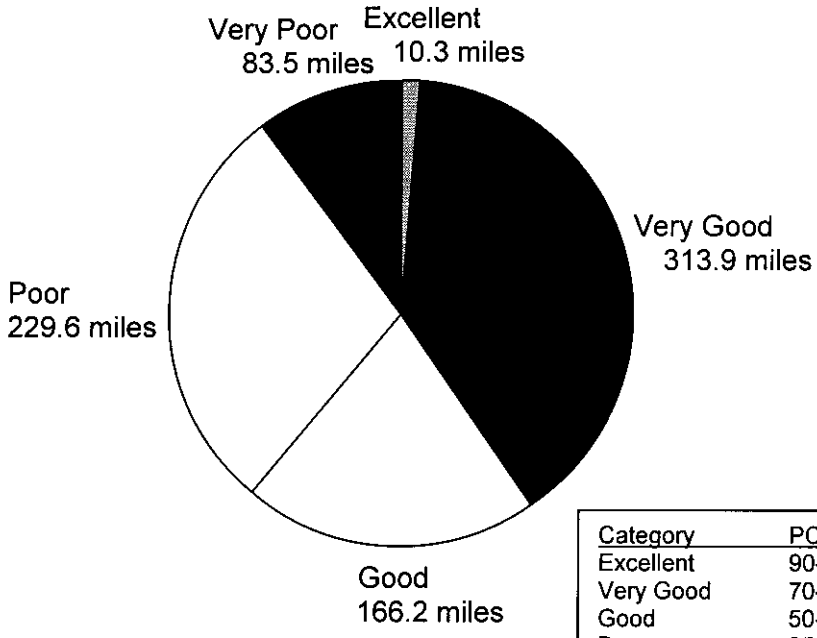
Both the PMS software and visual inspections are in the process of being updated. The software system is being converted from the Infrastructure Management System (IMS) to the Metropolitan Transportation Commission (MTC) Pavement Management System. The new system will allow comparisons to most other bay area jurisdictions. Our current inspection data is over six (6) years old and outdated. Staff is currently in the process of updating this information and hopes to have the entire city inspected by the spring of 2005. MTC requires that all cities and counties submitting pavement maintenance and rehabilitation projects for funding to utilize a Pavement Management System. In order to be certified as a user, a jurisdiction must inspect all arterial and collector streets every two years and residential streets every five years.

Needs Assessment

Street resurfacing is currently at an **85-year** paving cycle. (A best practice is a 25-year cycle.) High incidence of deteriorating streets and potholes Citywide is the result of years of deferred maintenance and crew reductions due to constrained budgets. An under-funded street resurfacing program and deferred maintenance have resulted in a significant amount of base repair on current street resurfacing contracts (as much as half of contract amount), resulting in significantly fewer streets being resurfaced annually.

The pie chart below shows the current condition of the city streets. The information is based on the last street inspection data, which is over six years old. Ten percent (10%) or 83.5 miles is in Very Poor condition, 29% (229.6 miles) in Poor condition, 21% (166.2 miles) in Good condition, 39% (313.9 miles) in Very Good condition, and 1% (10.3 miles) in Excellent condition. The remaining 32.5 centerline miles of the City's street network is unpaved.

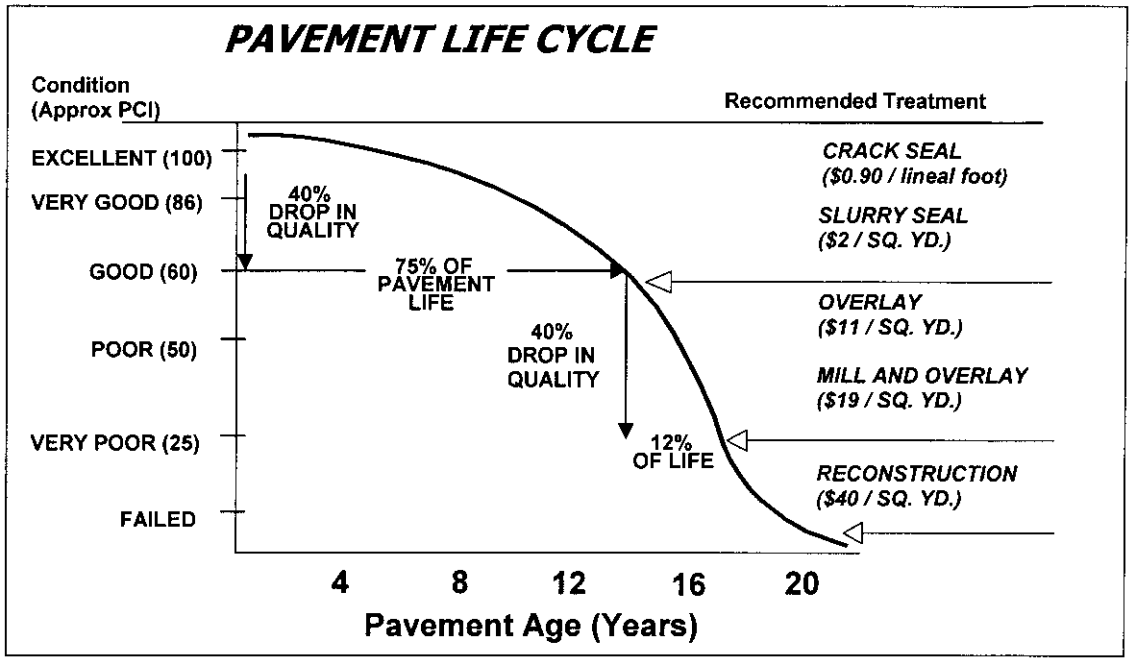
Street Centerline Mileage by Condition



Category	PCI
Excellent	90-100
Very Good	70-89
Good	50-69
Poor	25-49
Very Poor	0-24

The total 25-year needs for pavement rehabilitation required to bring and maintain the City's pavement network to an optimum condition is just over $665 million, or an average of $26.6 million per year. An additional $1.2 million per year is required for preventive maintenance. Preventive maintenance, (e.g., slurry seal and crack seal), if done properly, can extend the life of the pavement as much as rehabilitation, at approximately half the cost.

The graphic below illustrates the benefits of an aggressive preventive maintenance program as opposed to following a "worst first" scenario. The overall program is dynamic in that each strategy consists of a cyclic series of actions that simulates the pavement's anticipated life cycle. A typical pavement section will deteriorate approximately 40% in the first 75% of its lifespan. However, that same pavement section, if untreated, will experience another 40% reduction in overall quality in only the next 12% of lifespan, effectively deteriorating an equivalent amount in only one-sixth (1/6) the time. As a result of this continued deterioration, the quantity and cost of the maintenance activities needed to rehabilitate the pavement will increase in both scope and costs. In other words, it is not simply "pay today or pay tomorrow," but rather "pay today or pay more tomorrow."



Resources

The following table shows the historical budgets for streets:

Streets	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05
Measure B Pass-Through	2,600,000	2,600,000	2,600,000	7,500,000		243,000	100,000	200,000	540,000
State Gas Tax	200,000								
Municipal Improvement Capital	1,000,000			1,000,000	1,500,000	1,000,000	1,000,000	400,000	
One-time grants and allocations		400,000	400,000			2,112,000	870,000	5,278,000	
Totals	**3,800,000**	**3,000,000**	**3,000,000**	**8,500,000**	**1,500,000**	**3,355,000**	**1,970,000**	**5,878,000**	**540,000**

The total amount for streets in the CIP for the FY 2003-2005 budget is $6.4 million. This figure includes a one-time $5.3 million allocation from the Alameda County Transportation Improvement Authority (ACTIA) – Measure B. Without the ACTIA – Measure B allocation, which was a stand-alone project approved by voters when they reauthorized Measure B in November 2000, the street rehabilitation capital

improvement budget is approximately $1.14 million. The $1.14 million will allow 122,553 square yards (approximately 5.8 centerline miles) to be resurfaced.

The following table shows the status of the current and near future projects for street rehabilitation.

Active Street Rehabilitation Projects

Description	Contract Amount	Centerline Mileage	Status	Estimated Completion Date
RABA Street Resurfacing (G235910)	$1,029,002	2.5	In Construction	June 2004
CIP Street Resurfacing for FY 2003-2004 (C17180)	1,241,832	8	In Construction	November 2004
ACTIA Project 16 (C234930)	3,992,389	15	Awaiting Award	June 2005
CIP Slurry Seal for FY 2003-2005 (C234910)	1,140,000		Preparing the PS&E	June 2005
Street Condition Survey (C235010)	300,000	Citywide	Preparing the RFP	May 2005
Total	**$7,703,223**			

Next Steps

- Update street inspection data.
- Secure funding source. Establish paving cycle goal and work towards it. $26.6 million per year is required for the next 25 years to improve the paving cycle from 85 years to 25 years.

SIDEWALKS

General Facts
The city sidewalk network consists of approximately 30 million square feet of sidewalks (1,100 miles).

The City is responsible for sidewalk repairs damaged by official city trees. Property owners are responsible for repairing all other damaged sidewalks.

Liability / Claims: The total claims paid last calendar year for trip and fall injuries related to damaged sidewalks was $619,849. Staff estimates that this figure will be over $2.5 million by 2007 if sidewalk conditions remain unchanged.

ADA Requirements (Barden v. City of Sacramento): The Americans with Disabilities Act (ADA), Title II, Section 35.133, provides that a public entity shall maintain, in operable working condition, those features that are required to be readily accessible to and usable by persons with disabilities.

In Barden et. al. v. City of Sacramento, the United States Court of Appeals for the Ninth Circuit issued a ruling that broadened the scope of ADA program access requirements for public sidewalks, essentially requiring public entities to invest significant resources to repair public sidewalks and maintain them free of barriers, physical defects and other conditions that may deny access to pedestrians with disabilities. In this report, the discussion of the impact of the Barden decision on the City's sidewalk repair program is limited to tree removal criteria.

It is important to note that, while the Barden decision places a higher burden on public entities to remove barriers in the pedestrian right of way, it is not certain at this time what the specific impacts on City's sidewalk repair program will be.

Prioritization Method
Sidewalk repairs are currently performed on a complaint-driven basis. The City maintains a database of all the reported sidewalk damage locations. The complaints logged in the database are repaired based on severity (worst first) or on a "first come, first served" basis. The City also tries to use a holistic approach to street and sidewalk maintenance. The City coordinates sidewalk repair work with the street repaving schedule so that once the street is repaved all other repair work along that segment is also complete.

Because the current database of damaged sidewalks is based on resident complaints, it is far from comprehensive or complete. Staff has issued a Request For Proposals (RFP) to survey the entire City for sidewalk damage. After the survey is complete, all of the repair locations will be assigned a Sidewalk Condition Index (SCI) based on the severity, and pedestrian usage. The new sidewalk database will be linked to GIS and Sidewalk Management System (SMS). The survey will be completed by Spring of 2005.

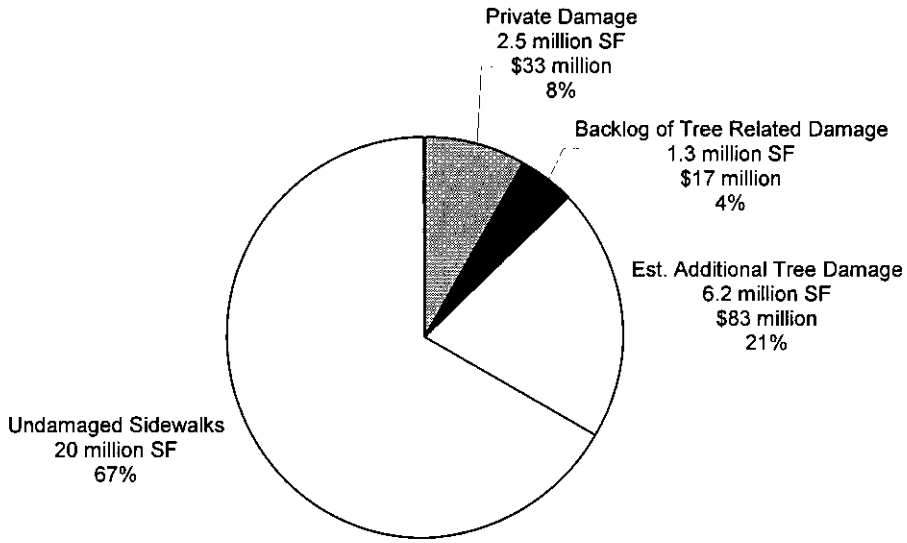
The Sidewalk Management System will use a combination of factors including distress type and severity and pedestrian usage (e.g., residential or business), and location (e.g., hospital, school, library, or commercial) to index the damage locations. Repairs will then be made to the damage locations that have the lowest ranking first.

Needs Assessment

The sidewalk program is currently at a 50-year repair cycle. However, tree related damage recurs every three to five years. To effectively manage the City's sidewalk damage, the repair cycle should be every five years.

At this time, it is estimated that there is $133 million of existing sidewalk damage. Of the $133 million, approximately $100 million (75%) is related to Official City Trees and is the City's responsibility. The remaining $33 million (25%) is related to general sidewalk deterioration and is the property owners' responsibility. Approximately $6 million of new sidewalk damage was reported last year. The chart below shows the condition of the City's sidewalk network.

Estimated Sidewalk Condition



Resources

The table below shows historical funding levels for sidewalk repair.

Sidewalk Repair	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05
Measure B Pass-Through						760,000	760,000	445,000	500,000
Measure B: Bike and Ped							225,000	225,000	225,000
Municipal Improvement Capital		500,000	500,000	1,000,000	1,000,000	1,000,000	1,000,000		
One-time grants and allocations	250,000	500,000		1,000,000	1,000,000	2,000,000	2,000,000		
Totals	**250,000**	**1,000,000**	**500,000**	**2,000,000**	**2,000,000**	**3,760,000**	**3,985,000**	**670,000**	**725,000**

The City's FY 2003-05 CIP budget for sidewalk repair is $1.4 million. At the current funding level, the City cannot repair all of the newly reported damage or begin to address the backlog. As a result, the City's sidewalk repair backlog grows a rate of over $4.5 million of "known" sidewalk damage per year.

The following table shows the status of the current and near future projects for sidewalk repair work. Because the cost to repair the reported damage is much larger than the sidewalk repair budget, the City has been using asphalt concrete as a preliminary repair. City staff places asphalt wherever dangerous conditions exist. But due to the many locations being reported, there is a now a growing backlog for preliminary repairs as well.

Description	**Contract Cost**	**Sq. Feet of Sidewalk Repaired**	**Status**	**Estimated Completion Date**
FAU Sidewalk Repair (G212710)	$1,954,525	253,000	In Construction	November 2004
Sidewalk Repair (C78020)	1,879,610	115,600	In Construction	November 2004
FAU 2 Sidewalk Repair (G212730)	2,000,000	255,000	Preparing PS&E	June 2005
On-Call Sidewalk Repair (C78060)	345,639	29,500	Executing Contract	June 2005
Sidewalk Repair (C78040)	700,000		Not Started	November 2005
Sidewalk Survey (C250110)	300,000	Citywide	RFP is out	November 2004
Rubber Sidewalk Pilot	150,000		Preparing PS&E	September 2004
Total	**$7,329,774**			

Next Steps

- Complete survey and assign Sidewalk Condition Index
- Secure funding.
  $20 million per year is required to maintain a 5-year sidewalk repair cycle.

TRAFFIC IMPROVEMENTS

General Facts

Traffic improvements include traffic signals, the Neighborhood Traffic Safety Program, and Bicycle Program.

Traffic signal system currently consists of 550 signalized locations.

Neighborhood Traffic Safety Program consists of:

- Sign installation
- Pavement markings
- Islands
- Traffic circles
- Speed bumps

Bicycle program consists of:

- 18 miles of bicycle lanes and signed bicycle routes, and
- 500 City installed bicycle racks at parks, commercial districts, and recreation centers, libraries, and other facilities.

Prioritization Method

Traffic Signals

Traffic signals are added upon identified need generally in the areas of traffic flow and safety, and pedestrian safety and access. The programming of traffic signal installation locations is prioritized based on the following factors:

1. Traffic Signals (primarily for vehicular safety with consideration for pedestrian and bicycle safety): Projects are prioritized based on the following criteria, in accordance with established standards published by the State of California, Department of Transportation (Caltrans), Traffic Manual, and Public Works standard practice:

    - Vehicular volumes (10 points maximum)
    - Interruption of continuous traffic (5 points maximum)
    - Pedestrian volumes (5 points maximum)
    - Accident Data (7 points maximum)
    - Other, site specific special conditions to be evaluated (no points)

2. Pedestrian Priority Intersections (primarily for pedestrian and bicycle safety): Public Works establishes guidelines for pedestrian priority intersections. Improvements to pedestrian safety may include features such as striping and signage, bulbouts and sidewalk improvements, medians and islands, as well as traffic signals. The programming of pedestrian signal installation locations is prioritized based on the following factors:

    - Intersection pedestrian accident historical data
    - Other, site specific conditions

Neighborhood Traffic Safety Program
Improvements are currently identified and prioritized through input from the community, City Council offices, and an engineering assessment. Currently, requests are prioritized informally using criteria such as documented accident history, field evaluation and assessment of non-standard or changed conditions, citizen complaints, and other factors.

Bicycle Program
The 1999 Bicycle Master Plan prioritizes the construction of bicycle facilities. The Master Plan established short-term (seven years), mid-term (15 years), and long-term (30 years) bikeway priorities. The plan's criteria for designating priority bikeways are:

- Eliminate gaps in existing bikeways
- Overcome significant obstacles and barriers such as bridges, tunnels, and freeways
- Facilitate regional connections with bikeways in neighboring cities
- Target improvements in corridors with identified safety concerns
- Provide facilities in service districts that have no existing bikeways
- Provide direct connection to BART, ferry, or other transit station
- Provide direct connection to a major employment center

On a case-by-case basis, new bicycle lanes not in the City's Master Bike Plan are prioritized when requested by the community, and funding can be identified.

Needs Assessment
Traffic Signals
Staff maintains a Citywide Traffic Signal Priority List. The list is updated periodically to respond to community requests and based on periodic evaluations of intersections with high accident histories or with significant changes due to development since the intersection was last evaluated. These periodic re-evaluations of intersections can result in changes to the rankings on the Citywide Traffic Signal Priority list. While the Citywide Traffic Signal Priority List has over 300 intersections evaluated and rated, it is likely that only about the top 25 to 30 locations would warrant installation of a traffic signal.

Neighborhood Traffic Safety Program
Approximately 3,000 requests from residents, businesses, schools, Council offices, and other community groups/City agencies are made each year. Staff responses to each with a basic investigation, including site visit, record review, technical evaluation, and public correspondence. The cost estimates for the construction of permanent improvements and signage are developed at this time.

Bicycle Program
The 1999 Bicycle Master Plan identifies bikeway priorities totaling 188 miles. In addition, City Racks (the on-request bicycle program) continues to receive requests for bicycle parking throughout the City. There is a current log of requests totaling 100 sites.

Resources
Traffic Signals
In general, funding has been provided for approximately two traffic signals per year, and recently, one pedestrian signal per year (this does not include one-time grant funds for specific programs, such as the Safe Routes to School statewide program). The funds provided have been from Measure 'B' Sales Tax revenues, which also fund roadway maintenance activities, street resurfacing and other transportation

programs and projects. The level of funding has been minimal but adequate for traffic signal installations; however, demand for pedestrian signals has been growing over the last several years, outstripping the funding provided. Additional signals may be funded from federal or state grants, and traffic impact mitigation developments.

The current budget (FY 2003-05) includes funding in the amount of $2,090,000 for new traffic signals, pedestrian signals and pedestrian "countdown" signals. Most of the funding is from Measure 'B' Sales Tax revenues for transportation and pedestrian improvements. In the previous cycle (FY 2001-03), $1,779,000 was budgeted for traffic and pedestrian signals, again mostly from Measure 'B' funds, with the exception of a one-time allocation of $765,000 of Municipal Improvement Capital funds for pedestrian improvements.

On-Going Operations and Maintenance

The current budget (FY 2003-05) includes funding in the amount of $600,000 for traffic signal maintenance, which includes ongoing replacement of signals, controllers and detection loops.

Neighborhood Traffic Safety Program

The following table illustrates the historical funding that the City has approved for the Neighborhood Traffic Safety Program. It should be noted that in all years prior to FY 2003-05, the program funding included the Speed Bump Program.

Neighborhood Traffic	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05
Measure B (ACTIA)		456,000	350,000	350,000	500,000	450,000			195,000	260,000
State Gas Tax	850,000	394,000					550,000	550,000		
Totals	**850,000**	**850,000**	**350,000**	**350,000**	**500,000**	**450,000**	**550,000**	**550,000**	**195,000**	**260,000**

On-Going Operations and Maintenance

There is no dedicated funding source for the replacement costs of signs, pavements markings, etc.

Bicycle Program

The Bicycle Program is primarily grant funded, with additional support from dedicated pass-through Measure 'B' Sales Tax revenues. Staff aggressively secures grant funding for priority projects. Unfortunately, implementation is hampered by lack of engineering staff with expertise in bike lane design. Addition of a FTE engineer, at an estimated cost of $150,000, would provide the needed engineering support for the Bicycle Program. Local matching funds in the amount of 30% to cover overhead, public art, contract compliance, and required local matches would ensure City grant applications are more competitive.

The current budget (FY 2003-2005) includes grant funding totaling $900,000 from various sources including , 1) State Transportation Development Act (TDA), Article 3 Bicycle Pedestrian Program; 2) regional Transportation Fund for Clean Air (TFCA); 3) state Bicycle Transportation Account (BTA), 4) state Hazard Elimination System (HES); and 5) Measure 'B' Bicycle Pedestrian Safety funds. Oakland also receives $90,000 annually of Measure 'B' Bike/Pedestrian funds as a direct subvention. In addition, $855,000 in FY 2002-03 grant funds are obligated for projects currently under development. These grant and Measure B funds cover the costs of feasibility studies, capital projects, the bicycle plan update, and maintenance. Staff coordinates priorities with the City's street resurfacing schedule to maximize cost savings and efficiency.

Current projects under development include four more miles of bike lanes to be constructed 2004, and another two miles to be designed during the next two years. At the Fruitvale Transit Village, Oakland's first attended bicycle parking facility will open in May 2004, providing secure, indoor parking for up to 236 bicycles.

On-Going Operations and Maintenance
No dedicated City funds exist for maintenance of bicycle facilities. Grant funds totaling $300,000 were secured during the FY 03-05 budget cycle for bicycle lane restriping, stenciling, and signage, to help address on-going maintenance issues.

Next Steps

- Secure funding for traffic improvement needs.

OAKLAND CITY COUNCIL

RESOLUTION NO. _____ **C.M.S.**

RESOLUTION ESTABLISHING PRIORITIZATION METHODS FOR THE CITY OF OAKLAND'S FACILITIES AND STRUCTURES, PARKS AND OPEN SPACE, SEWERS, STORM DRAINS, STREETS, SIDEWALKS, AND TRAFFIC IMPROVEMENT INFRASTRUCTURE NEEDS

WHEREAS, a policy for establishing priorities for the City of Oakland's various infrastructure needs does not currently exist; and

WHEREAS, a Public Improvement Project, also referred to as a Capital Improvement Project, is any defined location, specified public facility, building, utility, street, or any other City right-of-way improvement, capital improvement, park, recreational facility, trail, or environmental improvement that requires the City of Oakland's involvement in its design, site or building acquisition, site preparation, utilities emplacement, installation, construction, or reconstruction; and

WHEREAS, a Capital Maintenance Project is a minor project that does not significantly affect the level of service provided to the public, including the repair, renovation, or maintenance of existing public buildings or facilities such as roofing, HVAC improvements, carpeting, or other similar work; and

WHEREAS, On-Going Operations and Maintenance refers to the long-term, continuing costs associated with any location, specified public facility, building, utility, street, City right-of-way, park, recreational facility, trail, or leased space, including expenditures required to provide a specified level of service to the public (program functions, utilities, custodial) and expenditures required to support the scheduled maintenance needs of the infrastructure; and

WHEREAS, the City of Oakland has limited financial resources to fund its infrastructure needs, including capital and on-going operations and maintenance; and

WHEREAS, the City of Oakland's infrastructure, including facilities and structures, parks and open space, sewers, storm drains, streets, sidewalks, and traffic improvements, are considered significant assets to the City and impact the quality of life for those who live, work, and play in the City; and

WHEREAS, in 2002, the City of Oakland government initiative called "Moving Oakland Forward!" made several recommendations, including (1) that the City Council deliberate on the Capital Improvement Program budget prior to engaging in the operating budget to ensure that incremental operations and maintenance costs resulting from capital projects are incorporated into the operating budget, and (2) that all projects proposed to the City Council for consideration contain a comprehensive financial timeline for the first five years, including prospective incremental allocations for On-Going Operations and Maintenance and that approval of the project should be considered a City Council mandate to include the incremental operating and maintenance costs in the budget, now, therefore be it

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PUBLIC WORKS CMTE.
MAY 11 2004

RESOLVED: That the City Council establishes that the criteria used to prioritize the City of Oakland's Public Infrastructure Projects by type shall be as follows:

Infrastructure Type	Prioritization Method
Facilities and Structures (Capital Maintenance Projects)	Prioritize calls for service from high to low using the following factors: ***High*** o Life safety issues o Mandated service o Hazardous situations o Security breaches o Preventive maintenance of emergency response systems ***Medium*** o Scheduled preventive maintenance projects ***Low*** o Deferred maintenance projects
Parks (Park Facilities) and Open Space	Apply the Open Space Conservation and Recreation (OSCAR) Element of the Oakland General Plan. OSCAR states that in order to reduce deficiencies in parks and recreational facilities resulting from decline and deferred maintenance, outdated facilities, and factors such as vandalism and safety, the focus should be on maintenance, rehabilitation and safety improvements. This is cited as currently the highest priority since it protects public investment and maximizes the effective delivery of park services. (Objective REC-3.) Criteria to prioritize future infrastructure needs related to parks and open space are: o Projects that resolve existing health and safety issues. o Projects that replace existing deteriorated facilities, fields, tot lots, etc. o Projects that leverage existing improvements that are already funded, or in design or construction. o Projects that are partially funded and suitable for grant-funding opportunities. Projects that provide new or enhanced infrastructure, raising the level of service standards to meet community needs, and that would incur additional operations and maintenance costs would be a low priority.
Sanitary Sewers	Use the Infiltration and Inflow (I/I) Correction Program that has established a 25-year program to rehabilitate 30% of the sewer system sub-basins based on greatest to least infiltration and inflow of rainwater problems. The program includes a year-by-year prioritization of projects and is expected to be completed by 2013. Apply the same criteria to plan and prioritize the rehabilitation and replacement of the remaining 70% of the system.

Storm Drainage	Use the Storm Drain Master Plan that prioritizes projects using the following factors: o Type of problem (flooding, erosion, etc.) o Location of impact (commercial, public street, private property, etc.) o Type of system (City-owned culvert, open channel, etc.)
Streets	*Prioritize streets proposed for rehabilitation using the* Pavement Management System based on the Pavement Condition Index (PCI), visual inspection, and cost effectiveness. Streets are ranked on scale of 1 – 100 with 100 being best.
Sidewalks	Prioritize sidewalks using a Sidewalk Management System based on the Sidewalk Condition Index (SCI) and a completed survey of damaged sidewalks throughout the City. The Sidewalk Management System uses a combination of factors including distress type and severity and pedestrian usage and location to index the damage locations. Priorities are determined by those damaged locations having the lowest ranking first.
Traffic Improvements	Prioritize traffic signal needs based on criteria established by the State of California, Department of Transportation (Caltrans) as follows: o Vehicular volumes o *Interruption of continuous traffic* o Pedestrian volumes o Accident data o Other, site specific special condition Prioritize Neighborhood Traffic Safety Program needs through input from the community and City Council offices, and an engineering assessment. *Requests are prioritized using* criteria as follows: o Documented accident history o Field evaluation o Assessment of non-standard or changed conditions o Citizen complaints o Other, site specific factors Prioritize Bicycle Program needs using the 1999 Bicycle Master Plan. The plan's criteria for designating priority bikeways are: o Eliminate gaps in existing bikeways o Overcome significant obstacles and barriers such as bridges, tunnels, and freeways

- Facilitate regional connections with bikeways in neighboring cities
- Target improvements in corridors with identified safety concerns
- Provide facilities in service districts that have no existing bikeways
- Provide direct connection to BART, ferry, or other transit station
- Provide direct connection to a major employment center

IN COUNCIL, OAKLAND, CALIFORNIA, _____, 2004

PASSED BY THE FOLLOWING VOTE:

AYES---

NOES---

ABSENT---

ABSTENTION---

ATTEST:_____
CEDA FLOYD
City Clerk and Clerk of the Council
of the City of Oakland, California

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PUBLIC WORKS CMTE.
MAY 11 2004