12. Maintenance Management

- **The Recreation and Park Department's Structural Maintenance Division lacks the basic management tools, such as performance measures and standards and work rules, to direct the Division's activities. Consequently, the various trade shops within the Division apply disparate work rules and standards, resulting in inconsistent standards of performance.**

- **The Structural Maintenance Division uses planning only for capital projects, and performs very little preventive maintenance. For FY 2005-2006, 170 of 3,593 completed work orders, or only 4.7 percent, are classified as preventive maintenance. Much of the Division's maintenance work is performed in reacting to emergencies and other corrective work requests.**

- **Because of the lack of planning for maintenance projects, the Structural Maintenance Division staff can travel up to 30 minutes to reach a work site and arrive without the necessary tools, resulting in lost productivity. The Department faces high opportunity costs in lost productivity due to poor planning. Implementation of the Total Managed Asset system in FY 2005-2006 and improved maintenance planning should result in increased Structural Maintenance Division productivity. The Budget Analyst estimates that a 1 percent increase in Structural Maintenance Division productivity would equal approximately 0.9 full time equivalent positions or approximately $87,500 annually in salaries.**

- **To increase planning and supervision within the Structural Maintenance Division, the Budget Analyst has recommended that the Recreation and Park Department (a) fill the Maintenance Manager position that was authorized in the FY 2005-2006 budget, and (b) fund two Maintenance Planner and one Supervisor position, with total FY 2005-2006 salary and fringe benefit costs of $316,199, by deleting four trades positions, which have been vacant for at least one year, with total FY 2005-2006 salary and fringe benefit cost of $311,243, resulting in total increased costs of $4,876.**

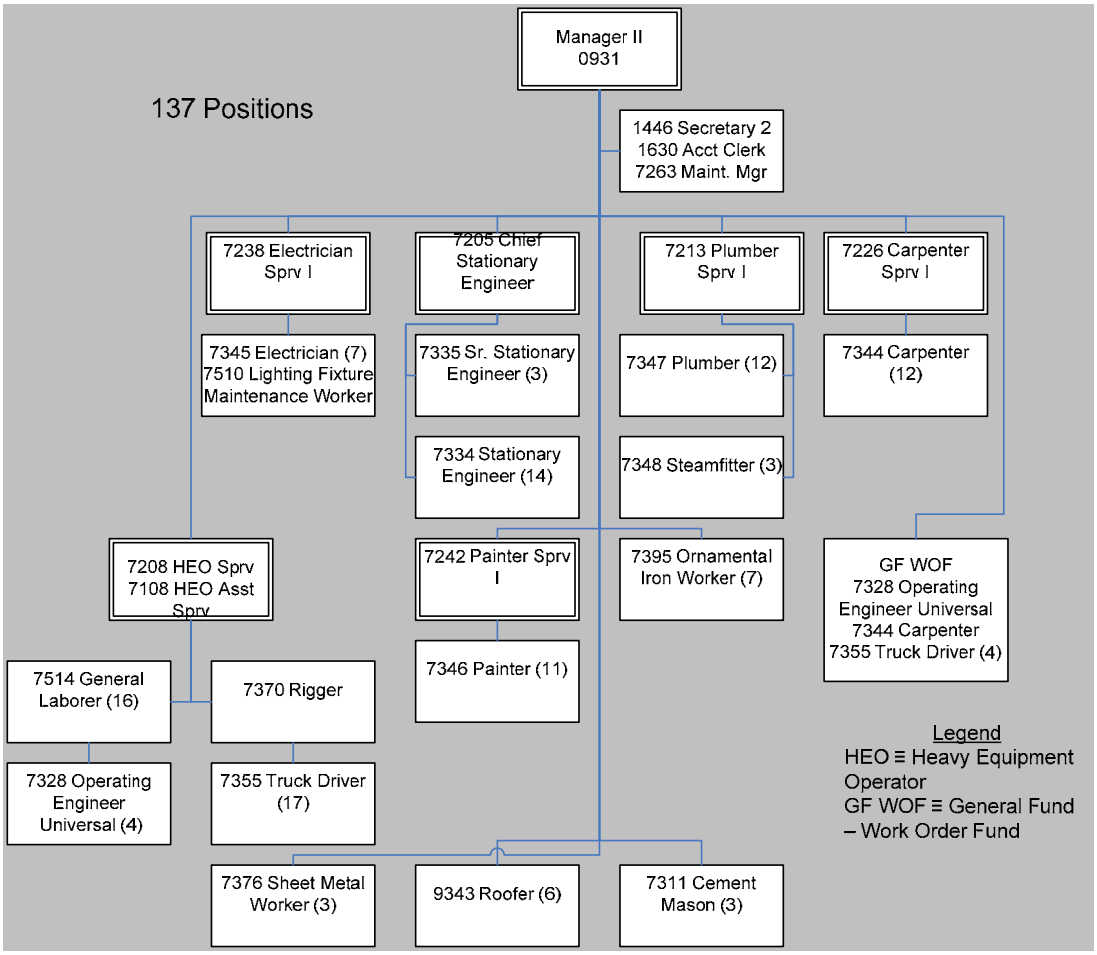
The Structural Maintenance Division maintains the buildings, facilities, and infrastructure at more than 250 parks, recreation center, swimming pools, museums, marinas, and landmarks under the jurisdiction of the Recreation and Park Department. Although the Structural Maintenance Division provides craft assistance for the maintenance of the Monster Park Stadium, the Citywide Services Division, under the direction of the Monster Park Stadium Manager, is responsible for that facility.

In FY 2005-2006, the Structural Maintenance Division is authorized 137 full-time equivalent positions, including four administrative staff positions, as shown in Exhibit 12.1 below. However, the FY 2005-2006 budget funds only 108.23 positions, does not fund 12.27 positions, and has assigned estimated project funding to 16.5 positions. The Division will be able to fill the

16.5 estimated project-funded positions to the extent that such funding from grants and other sources becomes available.

Exhibit 12.1

Structural Maintenance Division Organizational Chart



The Structural Maintenance Divisions FY 2005-2006 appropriation is $11,506,680, including:

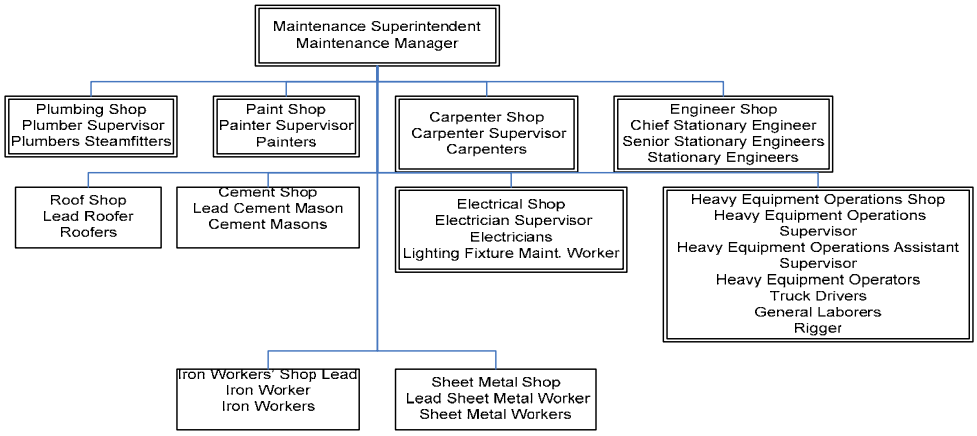
- $7,950,380, or 66.3 percent, allocated to salaries and fringe benefits.
- $3,165,925, or 26.4 percent, allocated to overhead.
- $868,866, or 7.25 percent, allocated to materials and supplies, equipment purchases, and other expenses.

Exhibit 12.2, below, shows how the Structural Maintenance Division is organized to perform its work. The trades and work classifications are organized into ten craft shops, each led by a

supervisor or a lead worker who reports directly to the Maintenance Superintendent. The shop supervisor (foreman) or lead worker receives work orders, plans and schedules work orders, and supervises the work (in some instances supervisors assist in performing the work, while the lead workers all assist in performing work). As shown in Exhibit 12.2, the Maintenance Superintendent has a very wide span of control. The Maintenance Manager position shown in the organizational box with the Maintenance Superintendent is a new position approved in the FY 2005-2006 budget, and has not been filled as of the writing of this report.

Exhibit 12.2

Structural Maintenance Division
Maintenance Work Reporting Relationships



Although the six shops, not including the Maintenance Superintendent, with the heavy border have a supervisor, the four other shops (the roof, cement mason, ironworkers, and sheet metal shops) do not have a supervisor authorized to them. In lieu of a supervisor, those four shops use a permanent lead worker who is paid $10 per day for assuming the extra responsibility.

Mission, Performance Measures, Standards, and Objectives

The Structural Maintenance Division has not developed the necessary management tools for effective oversight of the Division's performance, such as mission statements; performance measures, standards, and objectives; and work rules. Consequently, the Recreation and Park Department cannot effectively measure the Structural Maintenance Division's performance and productivity, nor ensure that facilities maintenance is performed cost-effectively.

Mission Statement

The mission of the Structural Maintenance Division is as follows:

> To provide superior, professional maintenance services in a way that enables Recreation and Park facilities to enlighten the senses, foster a sense of community pride and well-being, and meet the high expectations and needs of patrons.

> Quality maintenance offers significant opportunities that contribute to the diversity of cultural, natural, and recreational resources made available to the users of our parks and facilities.

The Structural Maintenance Division's mission statement describes in general terms the positive experiences that the Recreation and Park Commission desires for patrons of recreation and park facilities, but does not state specifically the nature and scope of the work to be performed or the organization's reason for existence. The mission statement should be simplified and revised to reflect clearly the contribution that Structural Maintenance Division can make to the Recreation and Park Department's mission.

Performance Measures, Standards, and Objectives

A primary task of a manager is to convert the organization's mission statement into operational specifics by developing performance measures, standards, and objectives.

Performance Measures

The Structural Maintenance Division's single performance measure is specified in the Recreation and Park Department's SFStat report. The Structural Maintenance Unit measures the "number of open structural maintenance work orders at the end of the fiscal year", which includes (a) the Total Managed Assets System's maintenance management work orders data that are generated monthly, and (b) the number of work orders received, completed and pending. The use of this single performance measure is inadequate due to the fact that at least one performance measure should be developed for each of the Structural Maintenance Division's key results areas. Further, the information contained in the SFStat performance measure is of limited value because although the number and percentage of work orders received, completed, and opened as of a certain date are reported for emergency, health and safety, and routine work orders, the hours required to complete those work orders, which are much more significant than the number of work orders, is not reported by the Structural Maintenance Division.[1]

The Structural Maintenance Division needs to develop performance measures which will be stable over an extended period such as:

- Preventive maintenance compliance (the percentage of preventive maintenance work orders completed on schedule).
- Recordable incidence and lost workday rates.

Performance Standards

A performance standard is a measure of excellence and specifies how many, how much, or how well the management expects the organization to perform in completing its performance measures. Using the performance measures cited above, the related performance standards could be:

[1] As discussed later in this report section, the Structural Maintenance Division is currently unable to collect and report on the number of hours associated with work order categories.

- To achieve preventive maintenance compliance of 90 percent.

- To achieve recordable incidence and a lost workday rates of 5.5 and 75.0, respectively.

Managers revise performance standards periodically as the performance expectations change.

Performance Objectives

The Structural Maintenance Division needs to develop performance objectives that define the benefits to be achieved and are measurable and verifiable, including (a) stating a single key result to be accomplished as specifically and quantitatively as possible, (b) specifying a target date for accomplishment, and (c) specifying a maximum cost factor. The objective statement should (a) relate directly to the manager's mission and to higher-level missions and objectives, (b) be attainable, while representing a significant challenge, and (c) be understandable by those who will be contributing to its attainment. Using these guidelines, two objectives might be developed from the performance measures listed above, as follows:

- To achieve preventive maintenance compliance of 90 percent by June 30, 2006, using existing authorized resources.

- To achieve recordable incidence and lost workday rates of 8.5 and 150.0, respectively, by June 30, 2006, within the allotted time for safety training and meetings.

The Maintenance Superintendent initially advised the Budget Analyst that he did not have written objectives for FY 2005-2006. However, during the course of the management audit, the Maintenance Superintendent developed the following written objectives for FY 2005-2006.

- To keep all recreation and park facilities operational for safe public use.

- To complete $2.08 million deferred maintenance projects.

- To initiate development of the Structural Maintenance Division's preventative maintenance program.

- To complete implementation of the Total Managed Assets System.

- To implement Confined Space Safety Program and perform confined space work as required.

- To fill vacancies in construction manager, truck drivers, rigger, laborers, roofers, cement mason, and stationary engineers' positions.

In the professional opinion of the Budget Analyst, the Maintenance Superintendent has made a good start on developing sound objectives for the Structural Maintenance Division that should be revised to specify target or completion dates, and maximum cost factors, where applicable.

Work Rules

The Structural Maintenance Division has not developed specific work rules that set the Division's expectations for behavior in performing maintenance work, between employees, and between employees and the public, but rather relies on rules established by the Civil Service Commission and the Recreation and Park Department's Human Resources Division. A maintenance organization the size of the Structural Maintenance Division should have its own work rules to prescribe work standards and acceptable behaviors, which should cover (a) expectation of behavior and communication among employees and between employees and the public, and (b) work schedules, such as regular work hours and overtime, breaks, vacation, and sick leave.

Lack of a Maintenance Management Policies and Procedures Manual

The Structural Maintenance Division lacks formal, written policies and procedures to standardize its routine functions, such as setting maintenance priorities, controlling tools and equipment, recording maintenance time, providing an overview of the Total Managed Assets System, and providing means of increasing "wrench time."[2] Policies and procedures serve multiple functions, including (a) a self-regulating control standard for performing work, (b) an efficiency and effectiveness tool incorporating best practices or lessons learned, and (c) a training tool for newly assigned personnel. Operations of the Structural Maintenance Division include unique characteristics and require coordinating the activities of ten maintenance shops and 14 crafts. The institutional knowledge that has been gained over the many years of maintenance operations should be consolidated in a maintenance management policies and procedures manual.

The maintenance management policies and procedures manual should be a dynamic document, continually incorporating updated information. The Structural Maintenance Division can develop the maintenance management policies and procedures manual in-house on a part-time basis.

The Structural Maintenance Division can use appropriate sections of other departments' maintenance management policies and procedures manuals as starting points in the development of their own. However approached, a good maintenance management policies and procedures manual is a guidance, control, and training tool that Structural Maintenance Division needs to develop on a priority basis.

Work Order Planning and Scheduling

Effective July 1, 2005, the Structural Maintenance Division migrated from a paper-based, maintenance work-order system to a computer-based system named Total Managed Assets. The Total Managed Assets System is a combined Facility Asset Management System, used to record and manage the Recreation and Park Department's physical assets, and a Computerized Maintenance Management System, used to manage maintenance operations. According to the

[2] "Wrench time," which is defined as the amount or percentage of time that a craftsperson is actually using his or her tools, is a vitally important maintenance factor. Wrench time is a measure of the craftsperson's productivity, and is impacted by a variety of factors, such as the amount of time spent waiting for parts, traveling to and from the job site for tools or materials, or waiting for equipment to be made available for maintenance.

Department's Management Information Systems Manager, the Department procured the Total Managed Assets software package in May of 2003 at a cost of approximately $80,000. Annual maintenance of the software system is approximately $19,000. The functionality of Total Managed Assets includes initiating work requests, approving work requests, and designating the priority of the work order.

Planning and scheduling work orders assigns the proper amount of work to the crews and enables control for managing productivity. Work order planning entails specifying the job scope, craft and skill level, a time estimate, as well as specifying anticipated parts and tools needed for the job. Maintenance planners should be highly skilled and conscientious journeymen, and such maintenance planners should report to the Maintenance Superintendent, and not to a maintenance manager who is directly responsible for overseeing the maintenance work that trade journeymen perform. Maintenance planners' output is a set of work orders that cumulatively require the hours available for journeymen to perform maintenance work. Normally, maintenance planners perform a week's worth of planning for each selected trade. Trade supervisors (foremen) first develop a weekly schedule based on work orders planned by the maintenance planners, and then develop daily schedules to incorporate the inevitable changes that occur.

The Structural Maintenance Division:

- Has no assigned maintenance planners.

- Plans work orders only for capital projects. Supervisors, not maintenance planners, currently perform this planning outside of the Total Managed Assets System because the system's configuration does not have planning functionality.

- Distributes actual material usage only to capital.

- Tracks workloads or backlogs in number of work orders rather than estimated work hours, which is a more meaningful statistic.

- Does not set or track productivity measures such as wrench time.

Wrench time is a critical determinant of maintenance productivity and, therefore, of a maintenance organization's effectiveness. Maintenance industry literature cites productivity rates, as measured by wrench time, of approximately 25-35 percent as typical for maintenance organizations performing maintenance operations similar to those of the Structural Maintenance Division. Significant productivity improvement can be expected through implementation of a computerized maintenance management software system including adequate planning and scheduling processes. For example, given the travel times to some of the facilities requiring maintenance, one-way travel times of up to thirty minutes are required to reach the work sites. Under such conditions, failure to bring a critical tool or replacement part can drastically affect a day's productivity. Maintenance planning and scheduling can greatly reduce such occurrences.

In order to reduce the percentage of non-productive time in its maintenance activities and improve its overall maintenance performance, the Structural Maintenance Division should

thoroughly integrate planning and scheduling into its maintenance operations. The Budget Analyst estimates that a 1 percent increase in Structural Maintenance Division productivity would equal approximately 0.9 full time equivalent position or approximately $87,500 in salaries.

Lack of a Preventive Maintenance Program

The Recreation and Park Department does not have an effective preventive maintenance program. Preventive maintenance is maintenance performed on equipment or facilities at specified time or operating intervals, such as monthly or every 1,000 hours of operation. The purpose of preventive maintenance is to maintain equipment and facilities in continuous operating condition by performing maintenance tasks that prevent breakdowns and failures. In comparison, corrective maintenance as the name implies, is maintenance performed to correct a problem, including problems found during preventive maintenance.

The percentage of time devoted to preventive maintenance work-orders in the Structural Maintenance Division is limited primarily to essential preventive maintenance work performed by stationary engineers on pumps and valves. In addition, the Structural Maintenance Division classifies some of the work orders serviced by the paint and roof shops as preventive maintenance. For FY 2005-2006, only 170 of 3,593 completed work orders are classified as preventive maintenance, and 158 of those work orders were performed by the paint shop.

Although the Recreation and Park Department has included development of a preventive maintenance program as one of the Structural Maintenance Division's six objectives in FY 2005-2006, thereby demonstrating awareness of the need for preventive maintenance, the fact that a preventive maintenance program needs to be initiated at this stage of the Structural Maintenance Division's life cycle points to the reactive nature of the organization's method of operation. Currently, preventive maintenance is not a category of maintenance work for the Structural Maintenance Division.

A proper balance of preventive maintenance and corrective maintenance is the desired state for maintenance organizations. The Structural Maintenance Division lacks a preventive maintenance program because the Maintenance Superintendent allocates all of his resources to corrective maintenance, either emergency or routine. Without changes to (a) the rudimentary state of maintenance planning and scheduling, (b) higher management's exclusive emphasis on high visibility requirements, and (c) the existing high percentage of vacancies in the Structural Maintenance Division, allocation of most resources to corrective maintenance will continue. By allocating sufficient resources to maintenance, by emphasizing the importance of preventive maintenance, and by requiring proven, effective management practices, the Recreation and Park Department can significantly improve its maintenance program.

Compiling, Analyzing and Reporting Maintenance Data

The Structural Maintenance Division lacks data and analytical reports, documenting the maintenance work performed. Maintenance organizations should be able to collect, analyze, and report on comparisons of work planned to work accomplished at the crew level, and use that information for planning and controlling future maintenance operations.

The Structural Maintenance Division needs to maintain efficiency and effectiveness statistics and produce reports on the results of maintenance activities over a specific period of time in order to measure the effectiveness and efficiency of maintenance work. The Structural Maintenance Division has not previously developed manual methods to prepare work data for analysis. The implementation of the Total Managed Assets System allows the Division to develop an automated method to prepare and analyze work data. Table 12.1 lists some of the standard measurements and states their functions.

Table 12.1

Maintenance Performance Measures for Management Control of Maintenance Work

Name	Report Purpose
Scheduling Compliance Report	A comparison of work accomplished that had been planned to work accomplished that had not been planned. The higher the percentage of planned work accomplished the better, since unplanned work is generally disruptive and more costly.
Preventive Maintenance Compliance Report	A comparison of actual preventive maintenance work to planned preventive maintenance work. Preventive maintenance results in better equipment reliability, reduced emergency repairs, and longer equipment life.
Backlog Report	A report that provides the backlog of planned work, normally in weeks, by trade and by the Department as a whole. This report should be reviewed periodically and the work re-prioritized. The Backlog Report is also an important tool in managing the workload, staffing, and budgeting.
Personnel Report	A comparison of the hours recorded in the maintenance management system with those recorded in the payroll system, if they are separate systems. Paid hours should be identical in the systems.
Productivity Report	A comparison of the planned or estimated time or cost of a job compared to the actual time or cost in labor and materials to complete the work. A standard can be applied to common repairs and maintenance projects. Estimates should be reviewed for repetitive maintenance work to better reflect the actual time required to accomplish the work.

To be useful, the performance measures shown should be calculated for the Structural Maintenance Division as a whole to provide a measure for Division-wide actual performance compared to the planned performance and for time-series analysis of productivity, but should also be calculated for each of the trades in order to determine where problem areas are. Thus, for each of the performance measures shown above, there would be calculations for each of the crafts. However, the Structural Maintenance Division has very limited data. For example, the

Structural Maintenance Division previously tracked only the total work orders received, completed and pending but did not track the total maintenance time devoted to major maintenance categories. The implementation of the Total Managed Asset System allows the Division to collect data on the number of hours charged to maintenance projects in each work category.

Lack of Tool and Equipment Inventories

The Structural Maintenance Division does not maintain an inventory of its tools and equipment, nor, according to Division staff members, has the Division in recent years conducted an inventory of tools and equipment. In response to a Budget Analyst request for a copy of the Division's most recent inventory of tools and equipment, the Maintenance Superintendent presented a listing of tools purchased for the various shops since FY 2002-2003, without any indication of whether the tools still exist or the status of tools and equipment purchased prior to FY 2002-2003.

The Structural Maintenance Division does not have a tool room or a storeroom, as discussed in this section of the report concerned with material management. Tools, equipment, and material are all stored either within the trade shops, in shed bays that form part of the perimeter of the Maintenance Yard, or in the central, open area of the Maintenance Yard, wherein all manner of material, operational equipment, non-operational equipment, trash bins, and various other articles are stored.

The Maintenance Superintendent has stated that all shop supervisors and lead mechanics are responsible for controlling their shop's tools and equipment. However, that assignment of responsibility does not eliminate the need for an annual inventory of tools and equipment. Further, management has the responsibility of fostering a control environment that minimizes misappropriations of City property and temptations to do so. Minimizing asset losses through physical controls and inventories are methods of fulfilling that responsibility.

Management has not directed inventories of tools and equipment because it considers its maintenance workload overwhelming, with no time to devote to such an activity such as conducting an inventory. By not conducting annual inventories of tools and equipment, the Structural Maintenance Division is neglecting the responsibility of protecting and accounting for its assets and losses could easily go undetected by management.

The Structural Maintenance Division should inventory all tools and equipment of a specified value, formally track any dispositions made during the year, and re-inventory tools and equipment on an annual basis.

Structural Maintenance Division Staffing

The Structural Maintenance Division does not currently have the staffing configuration that it needs to perform its functions effectively. Table 12.2 shows the Structural Maintenance Division craft position authorized in the FY 2005-2006 Annual Salary Ordinance compared to the actual positions.

Table 12.2

Structural Maintenance Division Authorized and Actual Craft Positions FY 2005-2006

Class	Title	FY 05-06 Annual Salary Ordinance	FY 05-06 Actual Positions
7344	Carpenter	13	12
7347	Plumber	12	11
7346	Painter	11	9
7345	Electrician	7	6
7514	General Laborer	16	9
7355	Truck Driver	21	15
7335	Senior Stationary Engineer	3	2
7334	Stationary Engineer	14	9
7328	Operating Engineer	5	5
7395	Ornamental Iron Worker	7	6
7311	Cement Mason	3	2
7376	Sheet Metal Worker	3	3
9343	Roofer	6	4
7348	Steamfitter	3	2
	Totals	**124**	**95**

Based on our observations, staff interviews, and visits to work sites of completed and ongoing projects, the Budget Analyst recommends that the priority for filling existing positions and for creating substitute positions for filling should be as follows:

- Fill the Classification 7263 Maintenance Manager position, newly authorized in the FY 2005-2006 to assist the Maintenance Superintendent in the management of the Division.

- Create two Classification 7262 Maintenance Planner positions, at an annual salary of approximately $81,040 each, and delete two vacant Classification 7346 Painter positions, at an annual salary of $60,265 each, and fill them as soon as possible. The two Classification 7262 Maintenance Planner positions would report to the Maintenance Manager.

- Create one Supervisor II position to oversee the sheet metal, cement mason, ornamental iron worker, and roofer shops and possibly the Classification 7328 Operating Engineer positions. This Supervisor II position could be classified as part of an existing craft classification series (for example, a Carpenter Supervisor II, or a Plumber Supervisor II) at an annual salary of approximately $90,815. The Recreation and Park Department should delete a vacant Carpenter position and a vacant Roofer position at annual salaries of approximately $66,424 and $62,040, respectively.

- Fill the vacant Classification 7311 Cement Mason position using project funds that may become available.

- Fill as many vacant Classification 7514 General Laborer and Classification 7355 Truck Driver positions as possible using project funds that may become available.

The Budget Analyst's recommendation would result in new salary costs, totaling $252,895, for the two proposed 7262 Maintenance Planner positions and the one proposed Supervisor II position, which would be offset by salary savings, totaling $248,994, to delete two vacant 7346 Painter positions, one vacant 7344 Carpenter position, and one vacant 9343 Roofer position, resulting in net costs of $3,901.

The Structural Maintenance Division is authorized three Classification 7311 Cement Mason positions. One position has been vacant since FY 2002-2003. Filling the Classification 7311 Cement Mason position is vital to providing effective support to the trades that the cement masons heavily support, particularly the plumbers and the carpenters, and to ensuring that the Recreation and Park Department's sidewalks and retaining walls are maintained. The Budget Analyst observed sidewalks and/or retaining walls at the following locations that are in deplorable condition.

- Alamo Square, Scott and Hayes Streets: Numerous uneven sidewalks.

- Kimball Playground, Pierce and Ellis Streets: Deteriorated and uneven sidewalk across from 1329 Ellis Street.

- Argonne Playground, 18th Avenue between Gerry Boulevard and Anza Street: Uneven and deteriorated sidewalks.

- Garfield Square, Treat Avenue and 25th Street: Uneven and deteriorated sidewalks.[3]

The Recreation and Park Department has been cited by the Department of Public Works for maintaining unsafe sidewalks.

In the professional opinion of the Budget Analyst, the Structural Maintenance Division, by obtaining the personnel resources noted above in a timely manner, would be able to accomplish its mission, including accomplishing the recommendations contained in this section of the audit report.

Conclusions

The Structural Maintenance Division's mission of maintaining the Department's facilities is vital to the Department's mission of providing enriching recreational activities, maintaining beautiful parks, and preserving the environment.

The Structural Maintenance Division has performed its mission in a reactive manner with little or no attention to efficiency of operations, safeguarding assets, reporting on work accomplished and backlogs, or compliance with good health and safety and environmental practices. The

[3] Garfield Square, with the exception of the new children's play area, is by far the worst looking playfield and area that the auditor observed.

Division's planning and scheduling of work orders, control of supplies and materials, control of tools and equipment, and use of maintenance management policies and procedures manuals for efficiently executing operations are rudimentary or non-existent.

Filling the positions indicated in the final part of this audit section is a necessary, but not sufficient, condition for correcting the severe deficiencies found in this audit. The overall objective should be to transition from a maintenance organization that reacts to emergency, health and welfare, and corrective work orders to a maintenance organization that plans and schedules its work effectively, performs a significant amount of preventive maintenance, accounts for and safeguards its assets, and employs effective management tools.

Recommendations

The Structural Maintenance Division Manager should:

12.1 Revise the existing Structural Maintenance Division mission statement to reflect clearly the contribution that the Division can make to the Recreation and Park Department mission.

12.2 Develop performance measures, standards, and objectives that will serve to provide direction, accountability, and control for the Structural Maintenance Division's operations.

12.3 Develop a set of work rules, including rules for allocating overtime, that specify behavioral expectations concerning the performance of maintenance work and expectations concerning behavior between employees and between employees and the public.

12.4 Establish a timeline for the development of a Maintenance Management Policies and Procedures Manual and report on the status of the manual's development to the Director of Operations prior to May 31, 2006.

12.5 Establish two Classification 7262 Maintenance Planner positions by substituting them for vacant trade positions to perform planning for selected trades. Ensure that the supervisors for the selected trades receive sufficient work to enable them to schedule fully their journeymen on a weekly schedule. Assign the Maintenance Manager, when the position is filled, with overseeing maintenance planning as a primary responsibility. Ensure that the maintenance planners work primarily on planning duties.

12.6 Implement an effective preventive maintenance program.

12.7 Ensure that the Structural Maintenance Division initiates maintenance reporting on a continuing, periodic basis. The *Management by Objectives Report* produced by the Public Utilities Commission's Water Pollution Control Division is a useful model.

12.8 Conduct an inventory of tools and equipment and update the inventory annually.

12.9 Use Total Managed Assets System reports when requesting maintenance resources.

12.10 Fill the vacant Classification 7263 Maintenance Manager position as soon as possible.

12.11 Implement a program to eliminate unsafe sidewalks on Recreation and Park Department property.

The Director of Operations should:

12.12 Assist the Structural Maintenance Division in obtaining the personnel resources cited in the Structural Maintenance Division Staffing part of this report section.

12.13 Ensure that the Maintenance Superintendent obtains the assistance needed to accomplish the recommendations cited above and ensure that the recommendations are accomplished.

Costs and Benefits

The Budget Analyst estimates that a 1 percent increase in Structural Maintenance Division productivity would equal approximately 0.9 full time equivalent positions or approximately $87,500 annually in salaries if the Structural Maintenance Division implements the Budget Analyst's recommendations to improve management and planning of its maintenance activities, resulting in improved productivity.

The Budget Analyst's recommendation would result in new salary costs, totaling $252,895, for the two proposed 7262 Maintenance Planner positions and the one proposed Supervisor II position, which would be offset by salary savings, totaling $248,994, to delete two vacant 7346 Painter positions, one vacant 7344 Carpenter position, and one vacant 9343 Roofer position, resulting in net costs of $3,901.

The planning and control recommendations, which include a new mission statement, performance measures, objectives, a Maintenance Management Policies and Procedures Manual, a set of work rules, and maintenance reporting, can be implemented with existing resources and the position exchanges that we recommend herein. These recommendations can enable the Director of Operations and the Maintenance Superintendent to measure the performance of the Structural Maintenance Division and to plan accordingly.

By conducting an inventory of tools and equipment and updating that inventory annually, the Structural Maintenance Division would establish a basis for accounting for any unusual asset losses, more effectively plan for procuring new tools and equipment, and efficiently share tools and equipment, where suitable.