Effort Needed to Improve the Capability of School Facility Maintenance Services

A report by the District Performance Auditor March 2008

PORTLAND PUBLIC SCHOOLS PORTLAND, OREGON

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SUMMARY

ffective and efficient building maintenance is a critical function for all public school districts. The mission of building maintenance is to provide a safe and clean environment for students and teachers, to protect the value of the building

- Increasing the amount of work performed by less-costly generalist labor while focusing specialist journeymen trades on tasks that require a license
- Creating a labor-management committee to address long-standing conflicts and to build a more cooperative working relationship

In addition to these and other efforts, I believe that FAM should consider additional actions that might help improve productivity, lower costs, and increase financial support. These actions include developing performance standards for routine maintenance tasks, developing a systematic process for comparing the cost of in-house and contracted maintenance services, and establishing mechanisms for more permanent, ongoing financial support for maintenance efforts.

INTRODUCTION

ffective facility maintenance protects taxpayer investments in capital assets, ensures that students and teachers are safe and healthy, and contributes to improved teaching and learning. This report reviews the importance of school facilities maintenance, traces the history of school building maintenance at Portland Public Schools over the past decade, and evaluates the current capability of the PPS building maintenance function to address its mission. The report discusses recent initiatives to improve maintenance management and identifies additional opportunities to improve the operation of the maintenance program. A more detailed description of the report's objectives, scope, and methodology is presented on page 11.

day building operations, and the long-range fiscal health of the entire educational organization.

According to the guide:

"School facilities maintenance affects the physical, educational, and financial foundation of the school organization and should, therefore, be a focus of both its day-to-day operations and long-range management priorities."

The *physical* benefits of effective school maintenance help districts provide clean, orderly, and safe school buildings that are healthy and attractive environments to work and learn. Maintenance activities both help prevent problems from happening and provide fast response to routine repairs and emergencies that may impact school operations. Good maintenance can also contribute to more efficient use of energy and foster sound environmental practices in operating buildings.

In addition to the physical benefits to be derived from effective facilities maintenance, substantial *financial* enhancements can be realized through maximizing the life of new facilities and extending the life of old facilities. Organizations can avoid, reduce, and mitigate major capital expenditures by appropriately caring for buildings. The professional literature is replete with examples of squandered capital investments, deteriorated equipment, and invalidated warranties resulting from poorly managed maintenance programs. Moreover, the inability to take care of physical assets provided by tax resources can discourage future public investments.

Ultimately, good facility maintenance can significantly contribute to the *instructional* effectiveness of school districts. A number of research studies suggest a strong link between the condition of buildings and community support and involvement.² One report concluded that old and obsolete buildings have negative consequences for the learning process while safe, modern, and controlled environments enhance the learning

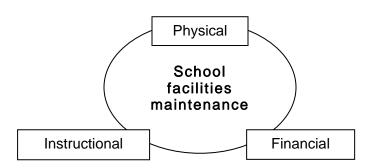
March 2008

Do School Facilities Really Impact a Child's Education? J. Lyons Council of Educational Facility Planners International, November 2001

process.³ Four recent studies have found higher test scores for students learning in better buildings and lower scores for students learning in substandard buildings.⁴

As illustrated in the diagram below, effective facility maintenance can have a positive affect on the physical, financial, and educational goals of school districts. While school maintenance programs strive to operate safe, clean, and healthy schools while optimizing the efficient use of financial resources, a physical setting that is appropriate and adequate for learning may be the most important outcome.

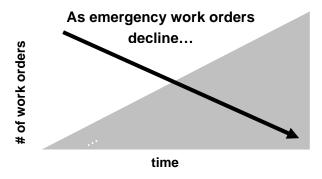
Benefits of effective school facility maintenance



that proactive maintenance is highly desirable both financially and educationally, and preventive maintenance hours should exceed hours spent on emergency repairs. ⁵

The chart below demonstrates the desired relationship and goals for preventive versus emergency work orders.

Reactive versus proactive maintenance

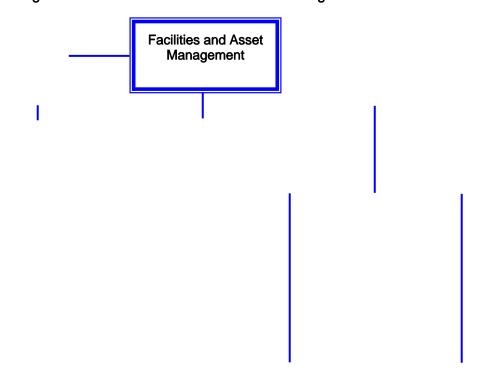


Facility maintenance at Portland Public Schools

he Maintenance Services Department of the Facilities and Asset Management Division (FAM) conducts facilities maintenance at the Portland Public Schools. The FAM Division is one of several major central operating divisions reporting to PPS's Chief Operating Officer. In addition to maintenance responsibilities, FAM is also responsible for custodial services at schools and facilities, environmental management, building safety and regulatory compliance, property management and project management, and capital planning and development. The organizational chart below shows the current organizational structure of FAM and the Maintenance Department.

The Maintenance Services Department has a FY07-08 budget of \$6.76 million and staffing of 75 full-time employees. Maintenance employees consist of one manager, 15 foremen, and 59 building trades employees. Maintenance staff are located centrally at the BESC facility and operate 15 trades shops located at the facility including electrical, steamfitting, plumbing, electronics, and carpentry. As discussed on pages 18-19, maintenance shops are composed of over 60,000 square feet of shop space and workers use 102 vehicles and equipment of various sorts to conduct maintenance activities.

Organization Chart: Facilities and Asset Management Division



The primary factors contributing to decline in maintenance services budget and staffing were two statewide property tax limitation measures in 1990 and 1996 and lower State funding due to declining student enrollment. An additional factor contributing to the decline in maintenance funding was the desire by the district to reduce the level of overall Operations and Maintenance spending in comparison to other school districts.

As a result of these budget reductions, the maintenance services program discontinued a number of activities traditionally performed by the program and reduced standard service levels in a variety of areas. For example, the maintenance program discontinued the repair of athletic equipment, game floor and running track striping, and the inspection and repair of most kitchen equipment and cafeteria tables. In addition, the

Audit objectives, scope, and methods

his audit had four primary objectives as follows:

- To identify the value and importance of effective and efficient school building maintenance and repair
- To identify and evaluate the budgetary and operational changes in the PPS building maintenance program over the past fifteen years
- To evaluate the current capacity of the PPS maintenance program to address maintenance needs and to meet goals and objectives
- To identify opportunities to improve the performance of PPS building maintenance and repair services

To address these objectives I reviewed professional literature and research on school facilities management and maintenance, interviewed PPS management and employees in the Facilities and Asset Management Division (FAM), collected internal data on FAM maintenance program operations, budget, and finances, and toured schools to observe maintenance conditions. I compared FAM maintenance practices to a set of national best practices for school building maintenance. In addition, I surveyed five other similar school districts to obtain comparable information on their maintenance programs and obtained national benchmark data from the American School and University Magazine and the Council for Great City Schools. I also obtained historical data on maintenance program staffing and budgeting from FY87-88 through FY07-08.

I limited my review to the operations of the building maintenance program of the Facilities and Asset Management Division. The scope of my review did not include several important functions that are critical to operation of PPS schools and facilities including custodial services, environmental and business support services, capital and project management services, and property management.

This audit was conducted in accordance with my 2007 Audit Plan approved by the Finance, Audit, and Operations Committee of the Portland School Board. It was performed during the months of September, October, November, and December of 2007. I conducted this audit in accordance with generally accepted government auditing standards. Those standards require that I plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for my findings and conclusions based on my audit objectives. I believe that the evidence obtained provides a reasonable basis for my findings and conclusions based on my audit objectives.

Maintenance workload demands: Other districts and Portland

_	Sq ft per worker	Buildings per worker	Work orders per worker
Minneapolis	63,235	.7	153
Denver	112,008	1.19	208
Beaverton	76,556	.96	292
San Francisco	102,272	1.83	266
Seattle	78,907	1.18	237
AVERAGE	86,596	1.17	231
AS&U survey	86,194	-	-
PORTLAND	125,574 sq ft	1.37 buildings	274 work orders

Source: Auditor survey of school districts; FAM operational and budget statistics; AS&U Magazine "2006-07 Annual Maintenance and Operations Cost Study"

The age of facilities also affects the amount of maintenance work required because as building systems and components age they fail more frequently. PPS schools are considerably older than other districts around the country. A recent survey of 33 districts by the Council of Great City Schools found that 35% of the schools maintained by these districts were over 50 years old. In the PPS district about 82% of all schools are over 50 years old. A 1999 study from the National Center for Education Statistics (NCES) found that the average age of the main instructional buildings in public schools in 1999 was 40 years. This compares to an average of 67 years in Portland. As shown in the table below, the average age of schools for the five districts I surveyed was 45.5 years.

Average age of schools: Other districts and Portland

Average building age

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Source: Auditor survey; National Center for Educational Statistics

PPS buildings are not only older than average but they are also in poor condition. In a recent study performed for the district, Magellan Consulting found that nearly all of the 103 schools campuses and facilities need some level of renovation or replacement. The

PPS facility renovation needs

Renovation category

TOTAL	\$1,131 million
New construction	\$25 million
Educational adequacy	\$104 million
Functional deficiency	\$111 million
Capital renewal	\$547 million
Hazardous material	\$56 million
ADA compliance	\$59 million
Code compliance	\$76 million
Deferred maintenance	\$153 million

Source: Magellan Consulting, February 2008

The number of building components needing repair and replacement has a significant impact on the type and amount of maintenance work conducted by FAM maintenance staff. According to maintenance managers, workers must spend more time on emergency and routine repairs and less time on preventive maintenance due to the age and condition of PPS buildings. While some preventive maintenance is still conducted in order to comply with safety regulations, significant time is spent repairing broken and failed components. The table below shows that the number of Emergency and Priority work orders has increased steadily over the past six years while the number of preventive work orders declined.

Number of work orders by priority

	2001	2002	2003	2004	2005	2006	2007 *
Emergency	4,696	4,968	5,618	5,646	5,750	5,440	4,288
Priority	2,756	2,883	4,076	4,766	4,541	5,055	5,227
Requested	5,918	4,485	5,600	5,472	5,392	6,252	5,814
Compliance	384	523	423	408	451	321	244
Preventive	3,396	2,887	2,725	2,451	2,312	2,325	25 *
Capital request	1,908	1,572	1,019	837	989	925	883

Preventive and other work orders declined in 2007 due to changes in methods and practices for creating, categorizing, and closing work orders.

Source: FAM analyst

Resource challenges: physical, financial, and human

he capability of the PPS facilities maintenance program to perform well is also dependent on the physical, financial, and human resources available to provide maintenance services. My analysis indicates that while FAM's overall operating costs appear similar to other districts surveyed, FAM's maintenance program faces significant challenges in the form of old equipment and vehicles, inadequate ongoing capital and major maintenance funding, and a dissatisfied, demoralized maintenance workforce. The sections that follow provide a brief description of these conditions.

Operations and Maintenance costs appear average. Compared to surveys by the American School and University Magazine and the Council of Great City Schools, and my survey of similar districts, the Operations and Maintenance (O&M) expenditures at PPS appear close to average. The table below shows that the O&M cost per square foot in PPS is generally lower than other districts surveyed. O&M cost per student at PPS is higher than other Oregon districts but lower than other surveyed districts. O&M spending as a percent of the General Fund appears about average.

Operations and Maintenance expenditure comparisons * 2006-2007

	Expenditure per sq ft	Expenditure per student	O&M budget as % of General Fund
Minneapolis	\$8.37	\$1,946	-
Denver	\$3.82	\$741	-
Beaverton	\$5.80	\$666	-
San Francisco	\$4.05	\$686	-
Seattle	\$4.78	\$850	-
AVERAGE	<i>\$5.36</i>	<i>\$978</i>	-
ACES average	\$3.22	-	10.4%
AS&U average	\$5.09	\$824	9.2%
Oregon district average**	\$5.15	\$640	8.9%
PORTLAND	\$4.03	\$820	9.4%

Operations and Maintenance expenditures include maintenance, utilities, custodians, and supplies and services. O & M excludes capital and debt-related spending.

Source: Auditor survey; *AS&U Magazine*; National Council of Great City Schools ODE DBI reports

^{**} Average is for the 6 largest Oregon districts

According to FAM management, the lower cost per square foot and the higher cost per student in Portland are due to several factors including older schools with more unusable space, declining enrollments, and fewer maintenance personnel. The higher than average O&M cost per student in Portland was a major concern several years ago and contributed to the belief that O&M costs should be reduced in order to free additional resources for the instructional program. While PPS O&M cost per student still appear to

As discussed in the Introduction, the size of the maintenance workforce and scope of their maintenance responsibilities has been significantly reduced over the past fifteen years. Consequently, there is significant unutilized space in the various maintenance trade shops in BESC building. While FAM has not performed a detailed space utilization study to analyze the amount of needed and under-used shop space, several managers estimate that up to 30% of the 60,800 square feet of shop area may not be currently needed by the various shop trades. Several foreman argue that this space is still needed to store needed supplies and to respond to potential increase in staffing levels. FAM management has recognized the need to use space better and to reduce surplus and unneeded equipment and has begun reducing the size of shops and discarding and selling old equipment.

Lack of capital maintenance funding. Over the past several years, the PPS facilities maintenance function has had limited funding for capital maintenance. Capital funding is used for replacement and major renovation of building components due to planned and unplanned obsolescence such as roofs, boilers, and electrical systems. As shown below, over the past four years approximately \$43.5 million in capital funding was available from the \$197 million 1995 school bond levy that is now completely expended.

However, in the past two years, only \$3 million in general fund resources was budgeted for capital maintenance projects. According to management, over half of this amount was dedicated to costs associated with the remodeling of schools for the K-8 reconfiguration.

Capital spending (in millions)

	FY03-04	FY04-05	FY05-06	FY06-07	FY07-08 **
Bond	\$22.0	\$12.6	\$ 6.6	\$2.3	-
General Fund	.9	1.4	2.8	3.0	3.0
Other*	.4	.7	.9	.8	.1
TOTAL	\$23.3	\$14.7	\$10.3	\$6.1	\$3.1

^{*} State energy funds, federal, state, and private grants, and other district funds.

This level of capital maintenance funding does not recognize the full cost of ownership of PPS facility assets and does not adequately support appropriate maintenance activities. In a 1996 report by the National Academy of Sciences entitled *Budgeting for Facilities Maintenance and Repair Activities*, the authors found that under-

^{**} Partial year

performed measured in work orders completed by each of the union trade shops has remained relatively constant over the past five years, increasing by 2% from 2001 to 2006. However, in calendar year 2007 the number of work orders completed dropped 22% from the prior year. FAM officials believe this decline is due to various changes in the methods and practices for creating and closing work orders rather than a drop in productivity. For example, preventive work orders are no longer created as they were in prior years and rover crews may be completing work that previously was documented and performed by work order. Certain shops such as steamfitters and electricians have increased work order production while other shops such as electronics have decreased work orders completion. Some shops have declined due to changes in staffing levels.

Number of work orders by trade each year

	2001	2002	2003	2004	2005	2006	2007
Carpenters	1,178	587	551	538	496	508	496
Electricians	2,700	2,632	2,832	2,902	3,073	3,214	2,850

- and maintenance services. On average, principals are generally satisfied with both maintenance and custodial services, rating facilities and maintenance services 3.7 on a 5 point scale. Satisfaction levels increased from 3.0 in 2005. (See Appendix C for results of survey.)
- + Basic set of performance measures to report to external users. At the request of the Chief Operating Officer, FAM has also developed a set of internal performance indicators that are recorded, monitored, and reported to upper management. The four performance indicators used to track FAM are percent of work orders completed, spending per square foot, lease revenue performance, and principal satisfaction. The reporting and use of these indicators is relatively new and PPS and FAM management will be studying the usefulness of these indicators over the next year to determine if new or revised measures are needed.
- + Use of standard purchase agreements for low cost and standardized equipment According to management staff, the maintenance program takes advantage of standardized purchase agreements available from the state and local governments to purchase commonly used items and equipment. However, FAM has not developed standing purchase orders with vendors to get volume discounts for common supplies used by maintenance work crews. Because work crews normally use purchasing cards or local purchase orders to buy goods as needed there may be opportunities for some savings.

Best practices <u>not</u> in place. FAM has also not implemented, or only partially implemented, a number of other best maintenance practices. Some of the most significant practices not currently in place at PPS include:

No current master maintenance plan and preventive maintenance schedule for major building components. The FAM maintenance program lacks a current comprehensive preventive maintenance plan and schedule that identifies the proactive maintenance that will be performed at all PPS schools and buildings and the timelines for completing these tasks. Although the maintenance program developed a comprehensive list of preventive maintenance tasks in 2000, the list has not been updated to reflect current preventive maintenance work priorities and the frequency and timing of preventive maintenance work is not defined. Some preventive maintenance is performed each year by maintenance crews but managers and foremen believe it is inadequate and incomplete to keep pace with deteriorating building infrastructure. According to FAM officials, preventive maintenance

No formal methods for assessing workforce productivity and efficiency. To monitor the productivity and efficiency of maintenance workers, the manager of the maintenance program randomly reviews work orders to identify jobs requiring higher than normal hours or supplies. He questions unusually lengthy jobs with foremen and gets explanations for excessive times and costs. He also relies on foremen to monitor the efficiency and productivity of work crews. The maintenance program has not developed formal performance standards for commonly repeated maintenance tasks that would help provide the basis for assigning work, monitoring productivity, evaluating performance, and outsourcing work.

Facility Maintenance Best Practices at PPS: Strengths and Weaknesses

Best Practices in place	Best Practices absent or inadequate		
+ Automated building inventory	 No preventive maintenance plan 		
+ Work order tracking system	 Inadequate capital maintenance funding 		
+ Utility and energy cost controls	 No maintenance manual of policies & procedures 		
+ Customer feedback surveys	 Minimal professional development and training 		
+ Performance measures	 Lack of cost of service information 		
+ Standard purchase agreements	 Lack of maintenance performance standards 		

Generalist labor crews. Over the past several years, FAM has created a generalist

Additional actions to consider

y review of literature on public facility maintenance and on building maintenance approaches employed by other schools districts, revealed a number of practices that might also assist the Facilities and Asset Management Division in restructuring the facilities maintenance operation.

Performance and productivity standards. Facility maintenance managers often have difficulty determining the efficiency and productivity of maintenance workers. Workers are assigned to a variety of work locations and have a great deal of independence to perform work based on their own skills and abilities. Direct supervision is infrequent. Managers often have to rely on work backlogs, industry benchmarks, response times, and general familiarity with the work to assess productivity. While some national labor standards have been developed (e.g. R.S. Means, General Services Administration), these standards may not adequately represent local circumstances.

According to literature I reviewed, one approach to measuring maintenance worker productivity is to develop performance standards for common, repetitive tasks that are unique to the organization. These labor standards could be developed through direct observation of tasks, examining historical data, or from informed and knowledgeable estimates. Other sources could inform development of the standards including information from equipment manufacturers, private sector trades standards, and contractors and consultants.

Performance standards coupled with a manual of operating procedures can help management assess the productivity and efficiency of work crews, adjust staffing levels to meet work demand, and identify critical staffing deficiencies.

Locally developed performance standards could provide FAM maintenance managers with a more objective way to monitor worker productivity. Labor performance standards could also improve work order scheduling, annual work planning, employee morale, and customer service. While it may not be possible to develop performance standards for every work situation, continuing to rely on subjective assessments of worker performance provides management with no assurance that the maintenance program is completing tasks efficiently and effectively.

FAM is currently creating a sound framework for developing performance standards through the recent effort to identify work priorities for each labor shop in the district. Once these priorities are finalized, FAM can begin to track time and effort needed to address these priorities that can be used to establish performance standards for repetitive tasks.

Competitive contracting may hold some benefits for facilities maintenance at PPS. Maintenance and maintenance related tasks are often the most frequently contracted services in government due to the wide-market of providers, the relative low risk of failure, and the ability to define performance expectations. The recent effort by FAM to establish fully-loaded hourly cost of services for maintenance shops is a critical first step in comparing the cost of in-house maintenance services to outside providers. Without an accurate understanding of the full direct and indirect costs of FAM maintenance services, management lacks assurance that maintenance costs are reasonable and lacks information to improve the efficiency maintenance operations.

Planning and financing facility maintenance. The inability to provide sufficient, ongoing financial support for school facility maintenance is a problem faced by most school districts around the nation. Increasing financial demands and limited resources for the core instructional mission of schools has encouraged districts to defer facility maintenance in favor of instructional priorities. As a result, most districts must rely on periodic local bond measures to repair and replace outdated and deficient school buildings and components. While borrowing funds through the issuance of municipal bonds is a common and acceptable approach for spreading the cost of facilities over the usetri

PPS has also experimented with various mechanisms to reduce costs, increase revenues, and manage facilities more efficiently and effectively. The closure and sale of surplus schools and the creation of the Portland Schools Real Estate Trust are just two examples. In addition, PPS should consider studying other alternatives to funding a more permanent and ongoing financial support for school facility capital maintenance. Some of the most plausible approaches may include:

facility upgrades and replacements. This maintenance plan and capital budget can be developed in conjunction with the long-term facilities plan that is required with the implementation of the construction excise tax. The development of maintenance and capital plans, and the preparation of a long-term capital budget can be created independently from the identifying sources of funding to address the plans. Although the plans may not receive sufficient resources to address the identified needs, the district and the community should benefit from having a clearer understanding of the cost of facility ownership. Additionally, the district can more fully demonstrate to taxpayers that existing facilities are given appropriate attention and care.

RECOMMENDATIONS

n order to improve the capacity of Portland Public School's facility maintenance program to fulfill its mission, the Facility and Asset Management (FAM) Division should take a number of steps to enhance and support its current improvement initiatives. Some of these actions have a fiscal impact and may require additional investment to implement. Other recommendations should be feasible within FAM's current budget allocation.

Recommendations to enhance current maintenance practices

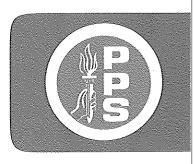
- 1. <u>Update or change the current maintenance management software</u> (Facilities Center) to add new features that:
 - a.) Capture all improvements and changes to the building inventory
 - b.) Restrict unauthorized edit and access to system data
 - c.) Offer automated scheduling and dispatch of work crews
 - d.) Provide for remote or web-based entry of work order activities
 - e.) Integrate work order costs more completely and accurately.
- 2. Review key performance measures to determine if current measures are useful to management and relevant for decision makers. FAM should consider adopting measures that are most relevant to the mission, goals, and objectives of the organization.
- Explore additional opportunities to develop standing purchase orders with vendors for commonly used supplies and equipment. FAM may wish to request assistance from PPS procurement officials to help identify types of supplies and equipment most frequently purchased that might provide opportunities for savings through standardized, volume purchasing.

- 8. Prepare master maintenance plan and preventive maintenance schedule. Management with the assistance of maintenance staff should develop an annual work plan to guide the efforts of the program. To help in preparation of this annual plan, FAM should finalize, implement, and communicate its current effort to prioritize maintenance priorities. In addition, the plan should identify critical preventive maintenance work to be performed by generalist labor and specialists trades during the year and other periodic maintenance activities to perform on a cyclical basis. Sufficient time should be available to perform unplanned emergency and routine maintenance requests. FAM should strive to reduce the percent of emergency work and increase the percent of preventive maintenance.
- 9. Develop a training and professional development plan for management, administrative, and labor work force. The plan should identify training classes and seminars that are most appropriate to the job classification and most needed to improve the efficiency and effectiveness of the program. FAM should search for opportunities to share, participate in, and utilize low cost or free training available through union halls, regional partners, regulatory authorities, and vendors.
- 10. <u>Establish performance standards for common and routine maintenance</u> tasks.

In addition to the above, FAM should consider:

- 12. Establishing a formal competitive contracting program to help management make decisions on using maintenance employees or private contractors to perform various maintenance services. Program should be based on objective data on in-house and contractor costs, fair comparisons on the fullcost of comparative services, and periodic third-party review of comparison results.
- 13. Studying opportunities and alternatives for establishing a permanent, ongoing revenue stream to fund capital and major maintenance projects. Options to consider include construction excise tax proceeds, PPS property lease revenues, and internal charges for services. This revenue stream would be in addition to any one-time revenues from property tax levies to address deferred maintenance, renovation, and replacement needs.

MANAGEMENT RESPONSE



February 28, 20

Mr. Richard Tra District Perform Portland Public 501 N. Dixon St Portland, Oregon

Dear Mr. Tracey

Thank you for y Maintenance Ser fundamental fac our buildings.

As the property became increasing several years ago school year. Dur School Board wateaching staff.

While we were s maintaining our in construction t a skeleton crew t maintenance that question that the inadequate, but of

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Your audit could

Over the last few orders, creating 1 maintenance and Asset Manageme processes. Thank suggesting new i

T 9 a E fa

C: Cathy Mincberg
Bryan Winchester
Zeke Smith
Jollee Patterson

X:Sup.Sec/2007-2008/chrono/

APPENDICES

GLENCOE	825 SE 51ST AVE	97215	ELEMENTARY	1923
GRANT	2245 NE 36TH AVE	97212	HIGH	1923
GRAY	5505 SW 23RD AVE	97201	MIDDLE	1951
GREEN THUMB	6801 SE 60TH AVE	97206	SPECIAL ED	1975
GROUT	3119 SE HOLGATE BLVD	97202	ELEMENTARY	1927
HAYHURST	5037 SW IOWA	97221	ELEMENTARY	1954
HOLLADAY CENTER	2600 SE 71ST AVE	97227	SPECIAL ED	1972
HOLLYROOD	3560 NE HOLLYROOD CT	97212	ELEMENTARY	1959
HOSFORD	2303 SE 28TH PLACE	97214	MIDDLE	1925
HUMBOLDT	4915 N GANTENBEIN	97217	K-7	1959
IRVINGTON	1320 NE BRAZEE	97212	K-7	1932
JACKSON	10625 SW 35TH AVE	97219	MIDDLE	1964
JAMES JOHN	7439 N CHARLESTON	97203	ELEMENTARY	1929
JEFFERSON	5210 N KERBY	97217	HIGH	1909
KELLOGG	3330 SE 69TH AVE	97206	VACANT	1917
KELLY	9030 SE COOPER	97266	ELEMENTARY	1957
KENTON	7528 N FENWICK	97217	LEASED TO OTHERS	1913
KING	4906 NE 6TH AVE	97211	K-8	1925
LANE	7200 SE 60TH AVE	97206	MIDDLE	1926
LAURELHURST	840 NE 41ST AVE	97232	ELEMENTARY	1923
LEE	2222 NE 92ND AVE	97220	K-7	1952
LENT	5105 SE 97TH AVE	97266	K-7	1948
LEWIS	4401 SE EVERGREEN	97206	ELEMENTARY	1952
LINCOLN	1600 SW SALMON	97205	HIGH	1950
LLEWELLYN	6301 SE 14TH AVE	97202	ELEMENTARY	1928
MADISON	2735 NE 82ND AVE	97220	HIGH	1955
MALLORY	4231 NE MALLORY	9721(MA	LLO)5(RY	

)]TJ E

ROSE CITY PARK	2334 NE 57TH AVE	97213	VACANT	1911
ROSEWAY HEIGHTS	7334 NE SISKIYOU	97213	K-8	1923
SABIN	4013 NE 18TH AVE	98212	K-7	1927
SACAJAWEA	4800 NE 74TH AVE	97218	HEAD START	1952
SCOTT	6700 NE PRESCOTT			

APPENDIX B

Facilities Maintenance – Best Practices

Sources: Florida State Department of Education; Minnesota Auditor General; Idaho Department of Education; Association of School Business Officers; Collaborative for High Performance Schools

Program Direction and Accountability

- a. <u>Written mission statement, goals, objectives</u> clearly defines purpose and expected outcomes of the department.
- b. <u>Procedures to measure, report, and improve performance.</u> Performance indicators are developed, reported, and used to manage and improve efficiency and effectiveness.
- c. <u>Customer feedback used to identify problems and improve performance.</u> Surveys are shared with management and staff.
- d. Written operating procedures to guide efforts Procedures include maintenance and repair standards, hiring and staffing policies, personnel policies, vehicle use, acquisition and use of equipment/supplies policies, work order policies, performance and ethical expectations, etc.
- e. <u>Annual maintenance plan</u> work that will be performed during the year. Preventive, routine, capital, emergencies. Locations.

Organizational Structure and Staffing

- f. Regular review organizational structure, administrative layers, and supervision and staffing levels. Organization chart is current and accurate. Supervisor and employee ratios are appropriate. Staffing levels compare to benchmarks.
- g. <u>Complete job descriptions are in place.</u> Positions and job descriptions match need. Roles and relationships between schools, custodians, maintenance, and management are clearly explained.
- h. <u>Appropriate training and staff development program in place.</u> Training programs keep staff current and competent on technical and safety requirements.

Resource Allocation and Utilization

- i. Annual budget is prepared that addresses both short and long- term maintenance goals. Budget addresses ongoing and recurring tasks, and allocates resources for deferred maintenance needs. Systems properly account for spending.
- j. Ongoing funding for capital and unexpected maintenance needs. Use maintenance reserve fund and/or capital improvement budget.
- k. <u>Good purchasing practices used.</u> Maintenance components are standardized and volume purchasing is used.
- I. <u>Staff have access to required tools and equipment.</u> Seldom used tools and equipment are available if needed. Staff can acquire parts and materials when needed. Procedures in place to dispose of surplus equipment and materials.
- m. Proactive maintenance practices are employed. Standardized preventive maintenance program is in place. Unique preventive maintenance plan for each building. PM plans identify major components needing preventive maintenance, tasks to be performed, frequency and schedule of pm, and pm procedures for each task.
- n. Cost of maintenance services understood and compared when appropriate to outside costs. Average full-loaded direct cost of maintenance hour is understood. Ability to compare the costs of in-house to contracted out maintenance projects.

Information Management

- o. <u>Complete inventory of buildings and building components</u>. Ongoing assessment of building conditions and deficiencies. Building inventories updated when components are replaced, renovated, or added.
- p. <u>Automated work order tracking and processing system in place</u>. System includes features for identifying requestor, assignment, priority, cost, and location. Work order system used to analyze performance and plan maintenance.
- q. <u>System for prioritizing maintenance needs by importance, severity, equity, and cost.</u> Methods for coordinating and synchronizing maintenance work.

Health and Safety

- r. <u>Policies and procedures clearly address health and safety features of facilities.</u> Identification of critical health and safety features that must be addressed by maintenance each year or on established milestones.
- s. <u>Federal and state health and safety mandates are complied with.</u> Primary code compliance requirements that must be met.

APPENDIX C

2007 Department Satisfaction - Facilities & Maintenance

Please rate how IMPORTANT you believe the following Department services are to the success of your school, program or department.

	Total	Total	School	School	BESC	BESC
	N	Mean	N	Mean	N	Mean
Custodial services	107	4.8	85	4.9	22	4.5
Emergency work orders	103	4.8	84	4.9	19	4.4
Rover work orders	99	4.5	84	4.6	15	4.0
Renovations/new builds	88	4.3	71	4.4	17	3.9
Environmental health & safety oversight	103	4.6	83	4.7	20	4.3
2007 mean score		4.6		4.7		4.2
2005 mean score		4.6		4.6		