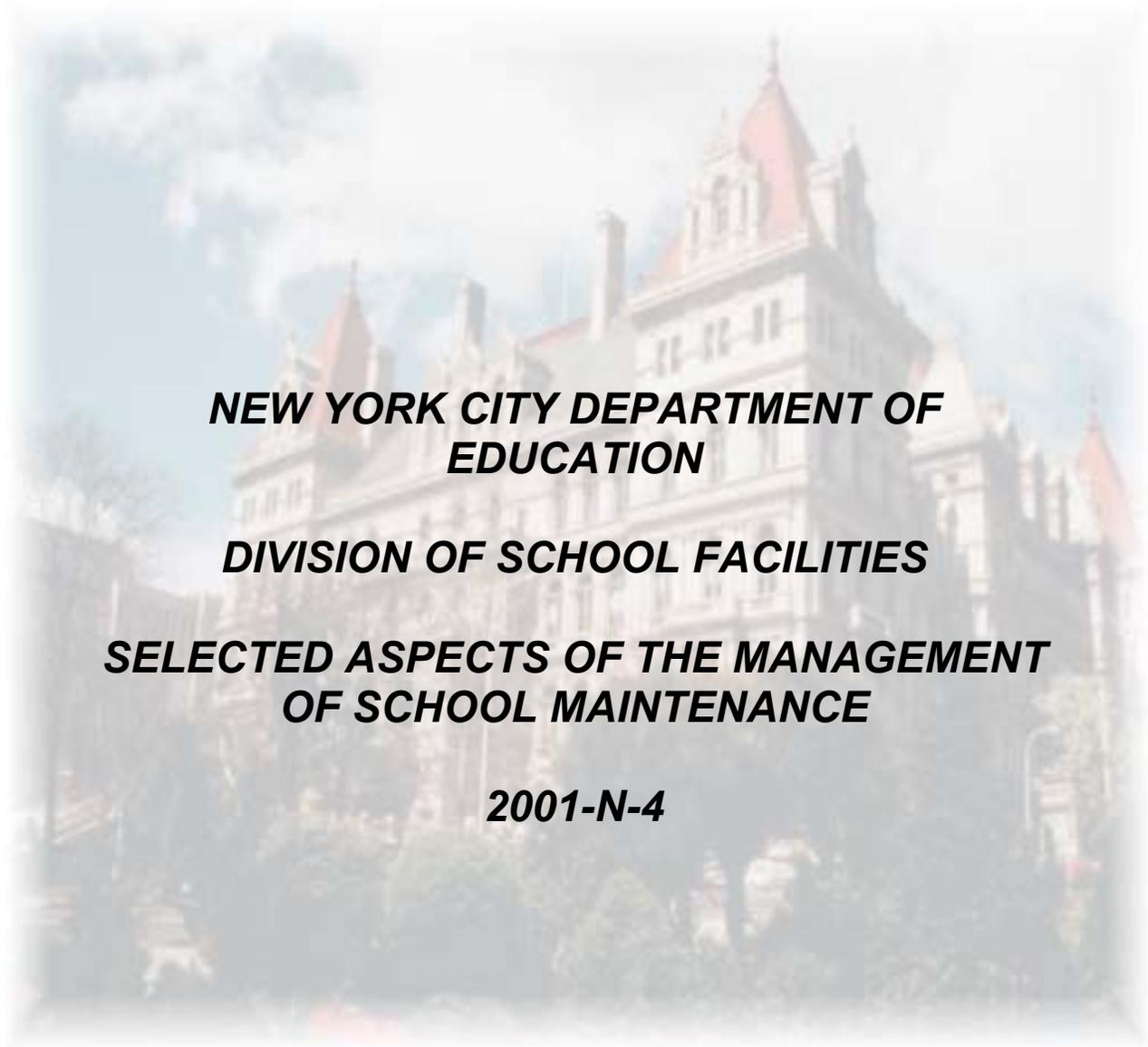


NEW YORK STATE OFFICE OF THE STATE COMPTROLLER

**H. Carl McCall
STATE COMPTROLLER**



**NEW YORK CITY DEPARTMENT OF
EDUCATION**

DIVISION OF SCHOOL FACILITIES

**SELECTED ASPECTS OF THE MANAGEMENT
OF SCHOOL MAINTENANCE**

2001-N-4

**DIVISION OF MANAGEMENT AUDIT AND
STATE FINANCIAL SERVICES**

OSC Management Audit reports can be accessed via the OSC Web Page:

<http://www.osc.state.ny.us>

If you wish your name to be deleted from our mailing list or if your address has

changed,

contact the Management Audit Group at (518) 474-3271

or at the

Office of the State Comptroller

110 State Street

11th Floor

Albany, NY 12236



H. Carl McCall
STATE COMPTROLLER

Report 2001-N-4

Mr. Joel I. Klein
Chancellor
New York City Department of Education
110 Livingston Street
Brooklyn, NY 11201

Dear Chancellor Klein:

The following is our report that addresses selected aspects of the management of school maintenance by the New York City Department (formerly the Board) of Education's Division of School Facilities.

This audit was performed under the State Comptroller's authority as set forth in Article V, Section 1, of the State Constitution; and Article III, Section 33, of the General Municipal Law. Major contributors to this report are listed in Appendix A.

Office of the State Comptroller
Division of Management Audit
and State Financial Services

December 5, 2002

Division of Management Audit and State Financial Services

110 STATE STREET ♦ ALBANY, NEW YORK 12236
123 WILLIAM STREET ♦ NEW YORK, NEW YORK 10038

EXECUTIVE SUMMARY

NEW YORK CITY DEPARTMENT OF EDUCATION DIVISION OF SCHOOL FACILITIES SELECTED ASPECTS OF THE MANAGEMENT OF SCHOOL MAINTENANCE

SCOPE OF AUDIT

The Division of School Facilities (DSF) of the New York City Department of Education (Board) is responsible for the maintenance of the Department's buildings, including approximately 1,100 schools. The DSF operates with about 100 supervisors and 900 skilled tradesmen. The New York State Education Department (SED) Regulations provide broad guidelines for these maintenance activities, requiring the establishment of a comprehensive maintenance plan for all major building systems to ensure the building is maintained in a state of good repair. In addition, Department requirements specify that school custodians must submit an annual report of the maintenance needs of each school. The school custodial staff is responsible for keeping the facilities clean and for performing minor maintenance.

If a maintenance job is beyond their abilities, the custodial staff uses a PO-18 form (work request) to refer it to one of three DSF repair shops. At the shops, a Plant Manager determines who should complete the requested work, and notes on the work request form the appropriate trade skill and priority codes. This data is entered into the Department's computerized management information system, known as PassPort, and is assigned for completion. Approximately 52,000 such requests are recorded annually into PassPort. PassPort tracks the status of the work request throughout various stages of its life, shows the relative priority of the request and identifies estimated and actual cost information pertaining to the work request.

Our audit addressed the following questions about the management of school maintenance for the period from July 1, 1999 through January 31, 2002:

- Does DSF adequately plan for maintaining Board facilities?
- Does DSF effectively monitor the progress of maintenance work requests?
- Is PassPort's data entry and reporting capability adequate?

AUDIT OBSERVATIONS AND CONCLUSIONS

We found that the Department has not established a maintenance plan for each school building as required by SED Regulations. Similarly, the Department is not enforcing its requirement for school custodians to submit an annual plan for the maintenance needs of each school building. Instead, the Department relies on a reactive process that is primarily intended to make sure that emergency maintenance needs are identified and completed as expeditiously as possible. Department officials explained that funding limitations and a need to focus on capital repairs and construction preclude a formal maintenance plan and program for Department facilities. However, we conclude that establishing and adhering to a formal maintenance plan is an investment in new and existing facilities that may defer the need for costly capital projects. Accordingly, we recommended that the Department establish a strategy and a time frame for school maintenance plans. (See pp. 4-5)

We found that long periods of time are passing from the time maintenance work is requested until it is completed. For example, of the 51,935 work requests created in PassPort in the July 1, 2000 to June 30, 2001 fiscal year, about 47 percent were still awaiting completion as of April 2002. Nevertheless, DSF had established neither standards for the completion of maintenance requests nor benchmark time frames for finishing individual stages in the life cycle of requests. Moreover, the DSF was not assessing the overall performance of maintenance, identifying best practices and determining improvement opportunities. Similarly, material excesses of actual costs over estimated costs for maintenance work requests were not identified and analyzed. We did observe, however, that emergency maintenance request work was being processed more expeditiously than other lesser priority maintenance requests. (See pp. 6-10)

We noted that improvements could be made in the PassPort system. For example custodians do not have the capability to data enter work requests on-line into PassPort. Instead, they must prepare hard copy requests that are submitted to DSF where the request information must be keyed into PassPort. Moreover, the custodians must await hard copy reports in order to track their maintenance requests. In the meantime, custodians may submit duplicate work requests in an attempt to make certain that their earlier requests are processed. We recommended that PassPort provide on-line data entry capability as well as on-line query capability for custodians. In addition, we recommended that PassPort be enhanced to detect duplicate work requests. (See pp. 11-12)

Comments of Department Officials

Department officials generally agree with our audit recommendations and indicate that actions have been or will be taken to implement them. Officials disagreed with certain analyses and information presented in our audit report.

CONTENTS

Introduction

Background	1
Audit Scope, Objectives and Methodology	1
Response of Department Officials to Audit	3

Maintenance Planning

Recommendations	5
-----------------	---

Management of Work Requests

Recommendations	10
-----------------	----

Management Information System

Recommendations	12
-----------------	----

Appendix A

Major Contributors to This Report

Appendix B

Comments of Department of Education Officials

Appendix C

State Comptroller's Note

INTRODUCTION

Background

The New York City Department of Education (Department), formerly known as the Board, operates approximately 1,100 school buildings, as well as central office facilities. These include both relatively new buildings and many that are aging. The Division of School Facilities (DSF) is responsible for the maintenance of these buildings. The DSF Skilled Trades Unit (Unit) includes 100 supervisors and about 900 skilled tradesmen including plumbers, carpenters and other staff who are available to perform school maintenance and who are located at three repair shops that operate in Queens, Brooklyn and Manhattan. In addition, school custodial staff complete minor maintenance and keep school buildings clean. Some schools contract out these custodial services.

When custodians conclude that a maintenance need is more than minor, they use a PO-18 form (work request) to refer it to one of the three repair shops. At the shops, a Plant Manager decides whether the custodial staff or the Skilled Trades Unit staff should do the work. For jobs to be undertaken by the Unit's skilled tradesmen, Plant Managers record the plumbing, electrical, or other appropriate trade skill and priority code on the work requests. Next, the data on the work request is entered into the Department's computerized management information system known as PassPort. Approximately 52,000 such work requests are entered each year in PassPort. PassPort tracks progress on the work request through multiple stages of processing including planning, approval, work in process, and completion of the maintenance task.

Audit Scope, Objectives and Methodology

We audited selected aspects of the management of school maintenance for the period July 1, 1999 through January 31, 2002. The objectives of our performance audit were to determine whether DSF properly plans for the maintenance of its facilities and effectively monitors the progress of maintenance work requests. We also assessed the adequacy

of PassPort's data entry and reporting capability. To accomplish these objectives, we interviewed Department officials and DSF staff and analyzed pertinent data. We also reviewed responses that we received for a questionnaire that we sent to 50 school custodians selected at random. In addition, we reviewed applicable New York State Education Laws, State Education Department (SED) Regulations, DSF procedures, controls over PassPort data, Rules and Regulations for the Custodial Force in the Public Schools of the City of New York (Manual), and rules established in agreements between the Department and the custodians' union. We did not evaluate the adequacy or completeness of the repairs or maintenance performed at the schools, either by the DSF staff or outside contractors.

We conducted our audit in accordance with generally accepted government auditing standards. Such standards require that we plan and perform our audit to adequately assess those operations of the Department which are included within our audit scope. These standards also require that we understand the Department's internal control structure and compliance with those laws, rules and regulations that are relevant to the Department's operation included in our audit scope. An audit includes examining, on a test basis, evidence supporting transactions recorded in the accounting and operating records and applying such other auditing procedures as we consider necessary in the circumstances. An audit also includes assessing the estimates, judgments and decisions made by management. We believe that our audit provides a reasonable basis for our findings, conclusions and recommendations.

We use a risk-based approach to select activities for audit. We therefore focus our audit efforts on those activities we have identified through a preliminary survey as having the greatest possibility of needing improvement. Consequently, by design, finite audit resources are used to identify where and how improvements can be made. Thus, little audit effort is devoted to reviewing operations that may be relatively efficient and effective. As a result, our audit reports are prepared on an "exception basis." This audit report, therefore, highlights those areas needing improvement and does not address those activities that may be functioning properly.

Response of Department Officials to Audit

A draft copy of this report was provided to Department Officials for their review and comment. Their comments were considered in preparing this report and are included as Appendix B.

Within 90 days after the final release of this report, we request that the Chancellor of the New York City Department of Education report to the State Comptroller, advising what steps were taken to implement the recommendations contained in this report and, where recommendations were not implemented, the reasons therefor.

MAINTENANCE PLANNING

SED Regulations (Part 155.4, Section 1) require school districts to establish a long-range comprehensive maintenance plan and a process for monitoring the condition of occupied public school buildings to assure that they are safe and maintained in a state of good repair. Under these Regulations, the plan is to include a least toxic approach to integrated pest management and establish maintenance procedures and guidelines which will contribute to acceptable indoor air quality. These plans, which must be available for public inspection, are necessary for the establishment of maintenance procedures and guidelines, and must include maintenance requirements listed in priority of need. In addition, the Manual serves as the primary guideline for maintenance and repair responsibilities in the New York City schools. Section 3.73 of the Manual requires the school custodian to submit a yearly report to DSF regarding maintenance needs at the school.

However, we found that the Department has neither established the maintenance plan required by SED Regulations, nor required the yearly maintenance reports specified by the Manual. Thus, DSF does not readily have the information it needs to anticipate and to monitor the maintenance activities that should be included in the work scheduled at the schools. Instead, DSF follows a reactive system to work requests received from custodians.

The Department has taken the position that the SED Regulations apply only to capital plans, not to partial systems repairs or replacement work done as a maintenance assignment. Department officials stated that, given a lack of sufficient funding resources, no extensive maintenance program is conceivable at this time. They stated that the Department's focus must be on bringing schools up to a state of good repair before any such program can be implemented. They also pointed out that not one school had been closed because of maintenance issues during the audit period. Department officials also stated that they have chosen not to enforce Section 3.73 of the Manual and thus do not expect custodians to

submit a yearly report to DSF regarding maintenance needs at the schools.

We acknowledge the positions of the Department with regard to funding limitations and the emphasis on capital construction and repair projects. However, it is also important to note that well planned maintenance constitutes an investment in new and existing school facilities that may extend their useful life and defer costly capital projects into the future. Therefore, the Department must formulate a strategy and a time frame for establishing formal school maintenance plans as required by SED Regulations.

(In response to our draft audit report, Department officials state their present short-term goal is to bring schools to a state of good repair and, upon reaching that goal, institute a system-wide preventative maintenance program commensurate with available resources.)

Recommendations

1. Formulate a strategy and a time frame for establishing formal school maintenance plans as required by SED Regulations.

(Department officials agree with recommendation number 1 and point out that several components forming the nucleus for a formal plan are already in place.)

2. Enforce the Department requirement that each school submit an annual report of its maintenance needs.

(Department officials disagree with recommendation number 2 and maintain that the establishment of an automated data base of maintenance requests make the need for an annual report obsolete.)

Auditors' Comments: If the Department's policy is that the automated data base eliminates the need for an annual report, the Department should update the Manual, accordingly.

MANAGEMENT OF WORK REQUESTS

DSF had established seven levels of priorities for the performance of maintenance with Priority One maintenance to be processed the most promptly because this maintenance is considered to be an emergency. DSF reduced the number of priorities to six for the 2001-2002 fiscal year. PassPort reflects priority level information as well as the estimated and the actual cost of maintenance work requests. PassPort also reflects the status of each work request from inception to completion.

However, DSF had neither established standards for the amount of time it should take to complete maintenance work requests nor set benchmarks for finishing key stages in the life of a maintenance request, such as the time required for planning, obtaining approval(s), and performing work. With such standards and benchmarks, DSF personnel could more readily focus attention on reviewing and managing maintenance requests that have been inordinately delayed at any particular stage in their completion. Moreover, such standards and benchmarks would facilitate overall performance analysis of maintenance activity over selected time periods for various buildings, geographic locations, etc. Over time, such performance analysis may help DSF improve maintenance services for all of the schools. We also found that PassPort's estimated and actual cost information for maintenance requests is not being utilized to monitor the overall cost of maintenance, to identify cost effective practices to be replicated and to identify improvement opportunities. The following paragraphs illustrate the types of performance analysis that DSF should consider to better manage work requests and the maintenance function. (In response to our draft audit report, Department officials indicated that DSF has now compiled over 50 performance measures into a monthly Executive scorecard report for maintenance activities.)

We reviewed all work requests that were on hand at the three area shops awaiting the initial stage of processing. Altogether, we reviewed a total of 469 request forms including 274 from the Brooklyn shop, 159 from the Manhattan shop, and 36 from the Queens shop. We found that the review of requests took significantly more time in the Brooklyn shop than in the other

two shops. On average 61 days passed in the Brooklyn shop from the time the work requests were received until the Plant Manager approved them. One of the requests in our sample took 102 days to process. In contrast, at the Manhattan and Queens shops, the same process took an average of 14 and 13 days, respectively, although one took 127 days. Performance standards for this aspect of the maintenance process, along with required monitoring of results and follow up on exception conditions may have enabled timely improvement of processing times at the Brooklyn shop.

(In response to our draft audit report, Department officials stated that the Brooklyn office has subsequently updated its repair request processing procedures and improved the processing time.)

The date that a work request is entered into PassPort is referred to as the created date. Subsequent dates are recorded in PassPort each time the request progresses from one status to the next. Of the 51,935 work requests established in PassPort for the 2000-2001 fiscal year, 20,920 were identified in Passport as having financial postings and as having progress beyond the created date and preliminary planning stages as of October 2, 2001 (the date we obtained PassPort data). As shown below, considerable delay often resulted in the activity to complete these requests.

<u>Status of Work Requests</u>	<u>Number of Work Range in Days from</u>		<u>Average Days</u>
	<u>Requests</u>	<u>Created Date</u>	<u>to Reach Status</u>
Planning	54	0-299	13
Held for Approval	2	0-4	2
Approved	111	0-330	70
Ready To Begin Work	669	0-373	61
Work in Progress	2,323	0-449	102
Individual Task Finished	16,199	0-453	118
All Work Request Tasks Completed	<u>1,562</u>	<u>0-449</u>	<u>95</u>
Totals	<u>20,920</u>	-----	-----

After accounting for the 20,920 requests with financial data posted in Passport, there remained 30,962 of the original 51,935 requests (53 were cancelled). These requests had no financial data posted and we did not establish the specific completions status and related delay for each of these requests.

(In response to our draft audit report, Department officials indicate that the 16,199 work requests categorized as "Individual Task Finished" in our analysis are only lacking posting of certain financial data in order to be categorized as "Tasks Completed." Consequently, the Department maintains that 17,761 of work requests [16,199 + 1,562] in our analysis were essentially done, accounting for 34 percent of the 51,935 requests in Passport as of October 2, 2001 for fiscal year 2000-2001. In addition, the Department refers to its fiscal year 2001 follow-up report that shows that 5,828 of the 30,962 requests we did not analyze were essentially done as of April 2002, while another 3,930 had been cancelled as of this date.)

Auditors' Comments: The follow-up report was dated six months after our analysis. It accounts for the completion and cancellation of an additional 9,758 (19 percent) of the 51,935 requests. Combining this 19 percent result with the 34 percent result obtained from our analysis leaves 47 percent of the fiscal year 2000-2001 work requests still incomplete ten months after the end of that fiscal year.

During our analysis, we observed that requests with the higher priority tended to be in their current status for shorter periods than the lower-priority requests, indicating that they were being processed more quickly. Of the 20,920 work requests, 8,523 (41 percent) that were listed as Priority One had been in their current status for an average of 75 days. In contrast, work requests rated as Priority Six and Priority Seven were in their current status for an average of 210 and 131 days, respectively. No priority code at all had been assigned to 89 of the 20,920 work requests.

We also reviewed a file of 75,973 maintenance requests that had been both approved and finished between August 12, 1999 and January 2, 2002. For these, we found that the elapsed time it took to finish the approved tasks ranged from 0 to 859 days, averaging 128 days. This file did not include the elapsed time between the preparation of the work request until its submittal, creation, and approval. We also noted that 10 work orders showed that more than 840 days, or almost 2.5 years, had elapsed from the date the work requests were approved until they were reported as finished. The longest period was 859 days. These items included plumbing work and sidewalk and curb repairs. Of these ten, three were listed as Priority One or Priority Two.

Our analysis revealed large discrepancies between the estimated and actual costs of completed work requests. However, no support was provided to demonstrate that the estimated and actual costs had been compared; or that the reasons for the differences had been determined or reported to DSF management. When we compared total actual costs with total estimated costs for the categories listed on the work requests as Individual Tasks Finished and All Tasks Completed, we found the following for the 1999-2000 and 2000-2001 fiscal years:

1999-2000 Fiscal Year			
Item	Individual Tasks Finished*	All Tasks Completed*	Totals*
Work Requests	17,933	4,232	22,165
Estimated Cost	\$41.358	\$7.652	\$49.010
Actual Cost	\$57.619	\$10.577	\$68.196
Actual over Budget	\$16.261	\$2.925	\$19.186
Percentage over Estimate	39.3	38.2	39.1

2000-2001 Fiscal Year			
Item	Individual Tasks Finished*	All Tasks Completed*	Totals*
Work Requests	16,199	1,562	17,761
Estimated Cost	\$51.392	\$1.803	\$53.195
Actual Cost	\$64.542	\$2.870	\$67.412
Actual over Budget	\$13.150	\$1.067	\$14.217
Percentage over Estimate	25.6	59.2	26.7

*Note: Dollar amounts listed in millions.

(In response to our draft audit report, Department officials reported that funding levels are insufficient to meet the basic needs of the schools. As a result, DSF is compelled to address only Priority One repairs overall. They also stated that, as of September 2001, procedures have been revised for entering work requests into the PassPort system and these changes have greatly reduced the overall processing time for work requests. In addition, officials stated that they have begun monitoring the amount of time it takes to process work and are now receiving reports that show the average number of days it takes to plan and complete work. Department officials stated that DSF, as part of its ongoing implementation of PassPort, has developed several standard reports to be used for planning and

budgeting purposes. They also intend to upgrade PassPort to provide DSF with a benchmark that can be used to compare estimated and actual costs.)

Recommendations

3. Establish timeliness standards for each of the steps involved in the maintenance request process.
4. Monitor adherence to timeliness standards as a measure of performance and a basis for corrective action.
5. Ensure that priority codes are being assigned and recorded for each maintenance work request.
6. Monitor estimated to actual cost comparisons for work requests and use this as a measure of performance and a basis for corrective action.

(Department officials agree with recommendation numbers 3 through number 6. They indicate that these recommendations have been implemented.)

MANAGEMENT INFORMATION SYSTEM

Controls over transactions input into computerized management information systems should promote data accuracy and timeliness. Under the current process, input of maintenance work request transactions into PassPort happens only after a request form for maintenance is forwarded to DSF from custodians. This slows the process and requires keying of hard copy documents in PassPort. A much more efficient and timely process could be achieved by modifying PassPort to permit on-line data entry of maintenance requests directly into PassPort by custodians.

In addition, effective management information systems provide users with flexible access to the information that they must have to do their jobs. However, the effectiveness of PassPort for the information needs of custodians is limited. For example, presently custodians can only determine the progress of the work requests by reading PassPort hard copy reports they obtain from DSF. Therefore, their ability to identify the status of their work request at any particular point in time is limited. Flexible access afforded through on-line query capability would create greater efficiency and effectiveness. In addition, if custodians could readily determine work request status, it may minimize the tendency to resubmit work requests that create duplicate records in PassPort.

In April 2001, we sent a total of 50 questionnaires to primary, intermediate and high schools selected at random and supervised by custodians. Appropriate DSF officials reviewed both the sampling methodology and the questionnaire content before the questionnaires were sent to the custodians. The questionnaire's intent was to determine the custodian's perception of the tasks they are responsible for and their opinion of the school maintenance program. Concerning duplicate work requests, 23 of the 30 custodians who responded to our question regarding work requests, reported that they had resubmitted identical work requests and 18 stated that they resubmitted rejected work requests. To address this problem, PassPort should include a capability for identifying and resolving duplicate work requests.

(In response to our draft audit report, Department officials told us that data entry procedures have been revised since the fieldwork of our audit and that work requests are now entered into PassPort timely. They also stated that steps have been taken to minimize duplicate work requests. Department officials said they recognize that it would be more efficient if custodians could enter work requests on-line, but stated that a lack of funding prevents them from implementing such a capability at this time.)

Recommendations

7. Enhance PassPort to enable custodians to enter work request data on-line.

8. Enhance Passport to permit custodians to have on-line query access to determine the status of outstanding work requests for their buildings.

(Department officials agree with and plan to implement recommendation number 7 and recommendation number 8.)

9. Establish a Passport control to identify and remove duplicate work requests.

(Department officials cited alternative ways to identify and remove Passport duplicates without modifying Passport.)

MAJOR CONTRIBUTORS TO THIS REPORT

Jerry Barber
Michael Solomon
Tom Trypuc
Marc S. Geller
Carole Siegall
Keith Dickter
Abe Fish
Bebe Belkin
Hugh Zhang
Wayne Scully
Marticia Madory



THE NEW YORK CITY DEPARTMENT OF EDUCATION

JOEL I. KLEIN, *Chancellor*

OFFICE OF THE DEPUTY CHANCELLOR

Kathleen Grimm, Deputy Chancellor for Finance and Administration

52 Chambers Street – New York, NY 10007

(212) 374-0209 phone (212) 374-5588 facsimile

October 28, 2002

Mr. Jerry Barber, Audit Director
Office of the State Comptroller
110 State Street
Albany, New York 12236

Re: Draft Audit Report on Selected Aspects of
the Management of School Maintenance
by the Department of Education's Division
of School Facilities (2001-N-4)

Dear Mr. Barber:

Enclosed is the Department's response to the above report. We agree that developing an overall system-wide school maintenance plan is an important goal. Historically, the Division of School Facilities has maintained a policy of prioritizing and correcting infrastructure and emergency conditions which, if left untreated, will deteriorate and adversely impact other building systems. Going forward, we will reexamine this policy with the intent of reaching the goal of an overall maintenance plan.

We do have an issue with the way in which the auditors have presented or construed certain of the data (see pages 2 and 3 of the enclosed response). We ask again that you consider revising the draft report in light of these concerns, which we believe go to the accuracy of the findings.

We are pleased to inform you that many initiatives and enhancements are included as part of the ongoing implementation of the PassPort system. These enhancements and the upcoming system upgrade will address many of the issues raised in the report.

Sincerely,

Kathleen Grimm

KG:nf
Enclosures

C: Joel I. Klein
Jess Fardella
Marlene Malamy
Robert Meeker

Beverly Donohue
James Lonergan
Mark David
Nader Francis

Chad Vignola
Charles Niessner
Ling Tan

**Division of School Facilities' Response to New York State Office
of the Comptroller's Draft Audit Report Entitled New York City Board
of Education Division of School Facilities Selected Aspects of the
Management of School Maintenance (Report No. 2001-N-4)**

Maintenance Planning Section Pages 4-5 - In compliance with the Regulations of the State Education Department, the N.Y. City Department of Education (formerly the N.Y. City Board of Education) conducts five year building condition surveys as well as annual visual inspections of facilities to update building condition assessments. These surveys and inspections are conducted to identify building systems that need to be replaced in whole or in part as well as for critical maintenance activities. The building systems subsequently are ranked according to their condition which is then used as a basis to prioritize schools for corrective capital work. Years of limited maintenance resources have taken a toll on the school plant infrastructure thereby necessitating a policy of addressing immediate repair needs to prevent further infrastructure deterioration. In an attempt to bring facilities up to a state of good repair and to arrest deterioration of building infrastructure systems, the Department has emphasized the need to keep facilities water-tight via projects known as building envelopes. The scopes of work for these projects include windows, roofs, parapets, exterior masonry, etc. These capital projects are geared towards mitigating the future maintenance needs of schools as a result of water damage thus saving scarce resources for other maintenance requirements.

The school custodians and their plant managers are at the forefront of monitoring the school building conditions. Custodians are responsible for inspecting schools each day to ensure that they are in a safe and secure condition for the safety, comfort and health of students and teachers; and for performing minor preventive maintenance per their custodial responsibilities. Additionally, school custodians and principals, as required by their contract, are now establishing annual building plans that include maintenance and cleaning priorities to keep the school plant operating efficiently. The Department's Office of the Auditor General is currently reviewing school custodial performance, including compliance with the development of these annual building plans.

The Division of School Facilities no longer requires a yearly report from the school custodians concerning maintenance needs. The annual maintenance needs report cited by the auditors was a necessity in years past when there was no computerized maintenance data base to track building needs and repairs. As was explained to the auditors, the 3.73 section of the custodian rules concerning the annual maintenance needs is now obsolete. Currently, maintenance repair requests must be submitted to supervisors as soon as problems are discovered. The Division manages and tracks repair requests on a daily basis.

School Facilities agrees that developing an overall system-wide school maintenance plan is a vital goal. In addition to school custodians and principals developing annual building plans, School Facilities has introduced several initiatives towards furthering our goal of producing a formalized maintenance plan to be managed at the school level. We have established a policy of prioritizing and correcting emergencies and infrastructure conditions which, if left untreated, will quickly deteriorate and adversely impact other building systems. Also, as a

result of annual inspections by the Department of Buildings, the Division receives both hazardous and non-hazardous violations which must be addressed per a court decision. In the face of a shortage in resources to address all needs, the Division has also established procedures to monitor, correct and, where possible, prevent building deterioration in schools. Monitoring of building conditions include utilizing service contracts at over 500 schools for such infrastructure systems as elevators, escalators, HVAC systems and emergency generators. Our present short-term maintenance goal is to bring schools to a state of good repair and, upon reaching that goal, institute a system-wide preventative maintenance program commensurate with the amount of resources available.

Management of Work Requests Section Pages 6-7 - During the course of the audit, the Division of School Facilities has been performing a phased-in implementation of its computerized maintenance tracking system known as PassPort. School Facilities has developed average target time frames to process work repairs through key points of the life cycle of a work request / order. These measures are used to evaluate how quickly work requests are moving through the repair process. In addition, reports are being generated to compare estimates and actual cost information for management's use. The Division has compiled these and over 50 other performance measures into a monthly Executive Scorecard report which compares different offices' maintenance activities as well as work order priority processing statistics.

The auditors indicate that the Brooklyn office was taking longer to process work requests than the other borough offices. During the course of the audit, School Facilities was in the process of updating its repair request processing activities and standardized the work process in Brooklyn. This immediately improved processing times in the Brooklyn office prior to the auditors' release of their findings. We frequently advised the auditors that as we were phasing-in different aspects of PassPort, our procedures would be updated to improve our business practices and decision-making activities. The PassPort system during the course of the audit was, and continues to be, a phased work-in-progress as was originally envisioned.

Pages 7-8 - The auditors present work request activity statistics which reflect an inaccurate depiction of the reality. For both Fiscal Years 2000 and 2001, statistics are shown that suggest little repair work is being corrected in a timely manner. For example, for Fiscal Year 2001, the auditors report that 50,373 of 51,935 work requests created during FY '01 were still awaiting completion three months after the close of the Fiscal Year. However, the auditors inexplicably omit counting the 16,199 work tasks in the data base that were "finished". The only difference between the 1,562 work requests listed as completed and those listed as finished in the auditors' tables is that some financial data concerning material or labor costs may not have been posted to the work order task. In reality, over 17,700 work tasks were done or 34 percent of the work requests created in FY '01 compared to 3 percent claimed by the auditors.

* Note 1

In addition, the auditors claim that in Fiscal '01, 30,962 work requests showed no activity beyond being created based on data reports three months after the close of the Fiscal Year. This statement by the auditors is a result of a total misunderstanding of the data reports that they were examining. For example, the statistics in the Table on Page 7 of the audit report only include individual work tasks which had actual funds charged to the work as of the day the report program was run. Any work tasks which were created in Fiscal Year '01 that had not yet had funds charged were omitted from the data provided to the auditors since they were interested in a report that only compared estimated and actual costs. The auditors subsequently compared the work tasks with cost data report to a total data base report listing of all Fiscal Year 2001 created work requests. The auditors incorrectly assumed that any work task not listed on the cost reports as of the date the Fiscal Year 2001 creation report was run had not proceeded any further along in the repair process beyond data entry. This mistaken interpretation was explained repeatedly to the auditors during the course of their audit report preparation period.

*
Note
1

In an effort to resolve the auditors' misinterpretation, School Facilities provided a follow-up Fiscal Year 2001 data report in April 2002. This report indicated substantial movement in the processing of the 30,962 work request tasks in question. For example, of the 30,962 tasks, the auditors found that 5,828 (18.9 percent) tasks were either in the "finished" (work done but not all data posted) or "complete" status. Another 3,930 (12.7 percent) tasks were "cancelled" or in "request to cancel" status.

*
Note
1

The auditors made the same comments when analyzing the fiscal year 2000 data (Page 8 Table) as with the 2001 data. Their claim that 20,326 work requests out of 44,092 created had not progressed between their creation date and the data report of November 27, 2001 is based on a faulty understanding of the data base reports which were provided to them. They compared work tasks that had actual dollar values inputted into the data base for Fiscal Year 2000 to all requests created in that year and assumed incorrectly that work tasks without funds associated with the request were not processed beyond initial data entry.

*
Note
1

As with the fiscal year 2001 data above, School Facilities also provided a follow-up report in April 2002 of the fiscal year 2000 data to the auditors in an attempt to clarify the data to them. The results of the April 2002 run also showed substantial work progress compared to the November 27, 2001 report which the auditors indicated showed no activity since initial data entry. For example, of the 20,326 work tasks, 5,316 (26.1 percent) tasks were finished or completed. Another 5,325 (26.2 percent) tasks were cancelled or in request to cancel status.

*
Note
1

Pages 9-10 - Because of limited resources, School Facilities cannot correct every repair request needed in a timely manner. Competing demands for work repairs will necessarily delay the completion of work that is of lower priority. Only the highest priority and most serious of repairs can be addressed immediately. *There is a finite limit on resources within each fiscal year and emergencies must be our first priority.*

School Facilities has begun monitoring elapsed times to process work through the use of executive reports. For example, DSF officials are now receiving monthly reports showing the average number of days it takes to estimate and complete work. Division management is also receiving aging reports showing the age of open work by priority and responsible office. These are all initiatives and enhancements included as part of the ongoing implementation of the PassPort system.

With the implementation of new performance reporting measures, School Facilities has been able to review the estimated and actual labor costs for work orders. In the initial two Fiscal Years of PassPort's implementation, especially for FY 2000, estimates and actual work order labor cost comparisons showed wide discrepancies because of the initial roll-out of PassPort. We are currently upgrading the PassPort program which will incorporate RS Means repair/construction work activity standards and estimates. This will provide DSF with a better benchmark with which to compare estimates to actual work order material and labor costs.

Management Information Systems Pages 11-12 - School Facilities has revised its procedures for data entry for incoming PO 18 work requests from custodians. Since September 2001, work requests are immediately entered into PassPort in the respective regional office. The appropriate Plant Manager now receives and reviews electronic PO 18 forms through PassPort. The requests are then electronically transmitted to the responsible trade units, including the Central Repair shops, where they are assembled into work orders and tasks.

Concerning duplicate PO 18s, School Facilities has instituted three processes to help to minimize this condition. These include: 1) Plant Managers can search for duplicate requests based on their knowledge of their individual school's needs. 2) Plant Managers can use the "Open Request" feature of PassPort which shows all open work for a given school which can be scrolled through to search for duplicates. 3) The PO 18 form directs the custodian to indicate if the work has been previously requested. In this instance, the condition of the requested work may have changed from the earlier request and the Plant Manager can review the data base to determine whether the follow-up request should be of a higher priority.

The PassPort system is still in the process of a roll-out of enhancements and an upcoming system upgrade is designed to address many of our current data base needs. It is School Facilities' goal to eventually provide for online data entry by school custodians for PO 18 work requests. However, at this time, on-line data entry by custodians is on hold because of budget constraints. We will continue to request that this funding be provided.

NEW YORK CITY DEPARTMENT OF EDUCATION
OFFICE OF AUDITOR GENERAL
External Audit Services

PAGE 1 OF 9

RESPONSE DATE: October 2002

AUDIT TITLE: NYC Board of Education Division of School Facilities
Selected Aspects of the Management of School Maintenance

AUDITING AGENCY: NYS Comptroller's OfficeDIVISION: School FacilitiesDRAFT REPORT DATE: August 2002AUDIT NUMBER: 2001-N-4

B. RECOMMENDATION WHICH THE AGENCY
HAS PARTIALLY IMPLEMENTED

1. Formulate a strategy and a time frame for establishing formal school maintenance plans as required by State Department of Education Regulations.

WHAT HAS BEEN IMPLEMENTED?

1. School Facilities has a maintenance plan on a system-wide basis and will continue to formalize its maintenance initiatives. Currently DSF:
 - Conducts annual visual inspections of all buildings to determine infrastructure needs for future corrective work.
 - Lets over \$13 million in Service contracts annually to monitor and repair certain critical building systems such as elevators, escalators, HVAC systems, fire alarm systems, gas detection devices and emergency generators.
 - Custodians and Principals have developed annual plans to keep the school buildings functioning in a safe and good condition per custodial contract requirements.
 - DSF's Violations Control Unit monitors and assigns violations for corrective work and reports its activities by school to the courts on a quarterly basis.
 - Custodians must walk and inspect their building daily, advise management of major repair needs and make minor repairs.
 - The Division has a system in place to track all work requests issued by field personnel including custodians and plant managers.

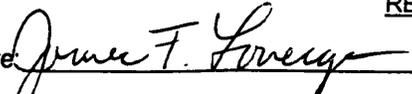
WHAT HAS TO BE IMPLEMENTED?

1. The above components form the nucleus of the development of a formal plan; therefore the Division believes it is in partial compliance with the recommendation. In the future, DSF will develop a school specific maintenance plan system-wide. Limited resources preclude a formal preventive maintenance plan for all buildings at this time.

EXPECTED IMPLEMENTATION DATE

June 30, 2003

RESPONSIBILITY CENTER

Signature: 

Print Name: James F. Lonergan

10-10-02
Date

Print Title: Senior Director, Office of Building Services

NEW YORK CITY DEPARTMENT OF EDUCATION
OFFICE OF AUDITOR GENERAL
External Audit Services

RESPONSE DATE: October 2002

AUDIT TITLE: NYC Board of Education Division of School Facilities
Selected Aspects of the Management of School Maintenance

AUDITING AGENCY: NYS Comptroller's Office

DIVISION: School Facilities

DRAFT REPORT DATE: August 2002

AUDIT NUMBER: 2001-N-4

D. RECOMMENDATION WHICH THE AGENCY
AGREES OR DISAGREES WITH AND WILL NOT IMPLEMENT (circle one)

- 2. Enforce the Board requirement that each school should submit an annual report of its maintenance needs.

RESPONSE TO RECOMMENDATION
(ALTERNATIVE SOLUTIONS ON CURRENT SITUATION CITED IN AUDIT REPORT)

- 2. The requirement in the above recommendation is obsolete. The annual report by the custodian was necessary at the time when automated data bases did not exist. Currently, we require custodians to send in work requests as soon as conditions are determined to require repair. These requests are data entered as soon as they are received into our PassPort computerized maintenance tracking data base. Therefore, an annual report from the school custodians is no longer necessary.

RESPONSIBILITY CENTER

Signature: James F. Lonergan

Print Name: James F. Lonergan

10-10-02
Date

Print Title: Senior Director, Office of Building Services

NEW YORK CITY DEPARTMENT OF EDUCATION
OFFICE OF AUDITOR GENERAL
External Audit Services

RESPONSE DATE: October 2002

AUDIT TITLE: NYC Board of Education Division of School Facilities
Selected Aspects of the Management of School Maintenance

AUDITING AGENCY: NYS Comptroller's Office

DIVISION: School Facilities

DRAFT REPORT DATE: August 2002

AUDIT NUMBER: 2001-N-4

A. RECOMMENDATION WHICH THE AGENCY
HAS IMPLEMENTED

- 3. Establish timeliness standards for each of the steps involved in the maintenance request process.

RESPONSE TO RECOMMENDATION - IMPLEMENTATION PLAN

- 3. School Facilities has already established and implemented timeframe standards for key processing points for tracking purposes in the PassPort data base. Time processing standards have also been established for each type of task priority; e.g., emergencies, violations, urgent work, etc. See the attached table of Priority time standards.

IMPLEMENTATION DATE

Implemented in July 2002

RESPONSIBILITY CENTER

Signature: *James F. Loneran*

Print Name: James F. Loneran

Print Title: Senior Director, Office of Building Services

10-10-02
Date

NYC Board of Education - Division of School Facilities
Business Practice Integration Project

Priority Guidelines

Priority	Special Priority	Description	Expected Time to Complete
			Finishing Working Completion*
1	Emergency	Required Repair that Needs Immediate Attention (i.e., life, limb, or loss of educational space)	1 Day
1	Emergency	Required Repair that Needs Immediate Attention (i.e., life, limb, or loss of educational space)	3 Days
2	Violation	Required Repair Identified by Outside Agency (i.e., life, limb, or loss of educational space)	1 Day
2	Violation	Required Repair Identified by an Outside Agency	1 Day
2	Violation	Required Repair Identified by an Outside Agency	3 Days
3	Expedited	Needed Repair Requested by an Outside Agency	15 Days
3	Expedited	Needed Repair Requested by Management	20 Days
4	Urgent	Needed Repair that does not Require Immediate Attention	30 Days
6	Program Funded	Needed Repair that is Approved Under Special Funding (i.e., other than General Funding)	45 Days
7	Routine	Needed Repair due to Ordinary Wear and Tear (Default)	60 Days
			120 Days
			180 Days

* The work will be considered complete when the tasks are in 'Finished' status

Note: Time estimates are in the form of totals. For example, it should take 1 day from receipt of work (when the Work Request has been approved) to Estimate an Emergency WOT, 3 days from receipt of work to set the task to Working, and 10 days from receipt of work to Complete the WOT. It should not take 14 days to Complete the WOT.

Red Dot - View the UCR field on the Work Request and/or the Work Order Task:

- Work Request: Open M010; Work Request and enter Work Request number -> click on Tab 2 Details (M011; Work Request) opens

- Work Order Task: Open M100; Work Task Outline and enter Work Order number -> Click on Work Order Task (M101; Task Profile opens) -> Click on More Information button

Name: Priority Guidelines
 Date: 10/10/2002 4:31 PM

NEW YORK CITY DEPARTMENT OF EDUCATION
OFFICE OF AUDITOR GENERAL
External Audit Services

RESPONSE DATE: October 2002

AUDIT TITLE: NYC Board of Education Division of School Facilities
Selected Aspects of the Management of School Maintenance

AUDITING AGENCY: NYS Comptroller's Office

DIVISION: School Facilities

DRAFT REPORT DATE: August 2002

AUDIT NUMBER: 2001-N-4

A. RECOMMENDATION WHICH THE AGENCY
HAS IMPLEMENTED

- 4. Monitor adherence to timeliness standards as a measure of performance and a basis for corrective action.

RESPONSE TO RECOMMENDATION - IMPLEMENTATION PLAN

- 4. School Facilities developed timeframe standards for key points in the PassPort data base for maintenance tracking purposes. Reports are being generated monthly showing the current timeframe performance in comparison to the standards and also includes performance by different offices. Appropriate managers are being informed of the results of the offices' performance, advised to investigate adverse conditions and take corrective action where possible.

IMPLEMENTATION DATE

Previously Implemented

RESPONSIBILITY CENTER

Signature: *James F. Lonergan*

Print Name: James F. Lonergan

10-10-02
Date

Print Title: Senior Director, Office of Building Services

NEW YORK CITY DEPARTMENT OF EDUCATION
OFFICE OF AUDITOR GENERAL
External Audit Services

RESPONSE DATE: October 2002

AUDIT TITLE: NYC Board of Education Division of School Facilities
Selected Aspects of the Management of School Maintenance

AUDITING AGENCY: NYS Comptroller's Office

DIVISION: School Facilities

DRAFT REPORT DATE: August 2002

AUDIT NUMBER: 2001-N-4

A. RECOMMENDATION WHICH THE AGENCY
HAS IMPLEMENTED

- 5. Ensure that priority codes are being assigned and recorded for each maintenance work request.

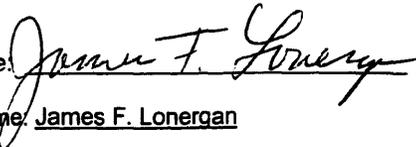
RESPONSE TO RECOMMENDATION - IMPLEMENTATION PLAN

- 5. Priority code data entry is now a system required field for the Plant Manager at the work request approval stage. There were some priority code omission problems during the start-up of the PassPort data base but this problem has since been corrected.

IMPLEMENTATION DATE

Previously Implemented

RESPONSIBILITY CENTER

Signature: 
Print Name: James F. Lonergan

10-10-02
Date

Print Title: Senior Director, Office of Building Services

NEW YORK CITY DEPARTMENT OF EDUCATION
OFFICE OF AUDITOR GENERAL
External Audit Services

RESPONSE DATE: October 2002

AUDIT TITLE: NYC Board of Education Division of School Facilities
Selected Aspects of the Management of School Maintenance

AUDITING AGENCY: NYS Comptroller's Office

DIVISION: School Facilities

DRAFT REPORT DATE: August 2002

AUDIT NUMBER: 2001-N-4

A. RECOMMENDATION WHICH THE AGENCY
HAS IMPLEMENTED

- 6. Monitor estimated to actual cost comparisons for work requests and use this as a measure of performance and a basis for corrective action.

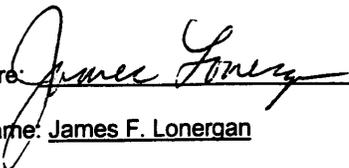
RESPONSE TO RECOMMENDATION - IMPLEMENTATION PLAN

- 6. School Facilities is now generating monthly reports for management showing comparisons between estimates and actual costs for work tasks overall and between different offices. Excessive disparities between the two cost figures are being reduced as better estimating techniques are now used. For example, in the past few months, the disparities between the estimates and actuals for labor hours and costs have been improving and show a 10 percent or less disparity overall. We also plan to incorporate RS Means repair/construction cost standards in a scheduled upgrade of Passport which will improve materials cost estimating.

IMPLEMENTATION DATE

Previously Implemented

RESPONSIBILITY CENTER

Signature: 
 Print Name: James F. Loneragan

10-10-02
Date

Print Title: Senior Director, Office of Building Services

NEW YORK CITY DEPARTMENT OF EDUCATION
OFFICE OF AUDITOR GENERAL
External Audit Services

PAGE 7 OF 9

RESPONSE DATE: October 2002

AUDIT TITLE: NYC Board of Education Division of School Facilities
Selected Aspects of the Management of School Maintenance

AUDITING AGENCY: NYS Comptroller's Office

DIVISION: School Facilities

DRAFT REPORT DATE: August 2002

AUDIT NUMBER: 2001-N-4

C. RECOMMENDATION WHICH THE AGENCY
AGREES WITH BUT IS PENDING IMPLEMENTATION

7. Enhance PassPort to enable custodians to enter work request data on-line.

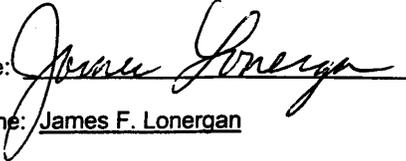
RESPONSE TO RECOMMENDATION

7. School Facilities agrees that it is important that custodians be able to access PassPort for data entry purposes. We have requested on-line capability since 1996 but budget constraints have precluded implementation of this initiative. We will continue to request that this initiative be funded.

IMPLEMENTATION DATE

To be determined - Contingent on funding availability

RESPONSIBILITY CENTER

Signature: 

Print Name: James F. Lonergan

Print Title: Senior Director, Office of Building Services

10-10-02
Date

NEW YORK CITY DEPARTMENT OF EDUCATION
OFFICE OF AUDITOR GENERAL
External Audit Services

RESPONSE DATE: October 2002

AUDIT TITLE: NYC Board of Education Division of School Facilities
Selected Aspects of the Management of School Maintenance

AUDITING AGENCY: NYS Comptroller's Office

DIVISION: School Facilities

DRAFT REPORT DATE: August 2002

AUDIT NUMBER: 2001-N-4

**C. RECOMMENDATION WHICH THE AGENCY
AGREES WITH BUT IS PENDING IMPLEMENTATION**

- 8. Enhance PassPort to permit custodians to have on-line query access to determine the status of outstanding work requests for their buildings.

RESPONSE TO RECOMMENDATION

- 8. School Facilities agrees that it is an important initiative to give custodians on-line query access to PassPort. Again, funding has been requested many times before but the Department's budgetary situation precluded funding for this critical initiative. We will continue to seek funding for it. In the interim, plant managers will provide custodians with periodic reports on the status of their work.

IMPLEMENTATION DATE

To be determined - Contingent on funding availability

RESPONSIBILITY CENTER

Signature: 

Print Name: James F. Loneragan

10/10/02
Date

Print Title: Senior Director, Office of Building Services

NEW YORK CITY DEPARTMENT OF EDUCATION
OFFICE OF AUDITOR GENERAL
External Audit Services

RESPONSE DATE: October 2002

AUDIT TITLE: NYC Board of Education Division of School Facilities
Selected Aspects of the Management of School Maintenance

AUDITING AGENCY: NYS Comptroller's Office

DIVISION: School Facilities

DRAFT REPORT DATE: August 2002

AUDIT NUMBER: 2001-N-4

**D. RECOMMENDATION WHICH THE AGENCY
AGREES OR DISAGREES WITH AND WILL NOT IMPLEMENT (circle one)**

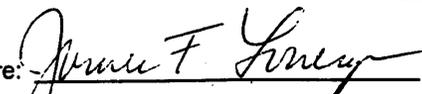
- 9. Establish a PassPort control to identify and remove duplicate work requests.

RESPONSE TO RECOMMENDATION
(ALTERNATIVE SOLUTIONS ON CURRENT SITUATION CITED IN AUDIT REPORT)

- 9. Both DSF technical personnel as well as its private consultants do not believe it is wise to modify the PassPort's software to prevent, automatically, possible duplicate workorders.

Alternatively, we have implemented procedures to have district plant managers review requests from custodians to weed out duplicates. We are also currently implementing through COGNOS (a report writing software application) an on-demand electronic report which can be accessed by plant managers to determine the status of all work requests in any school. These reports will then be provided to the custodians to update with corrections. When funding is available to bring the custodians on-line, they too will be able to access these reports.

RESPONSIBILITY CENTER

Signature: 

Print Name: James F. Lonergan

10-10-02
Date

Print Title: Senior Director, Office of Building Services