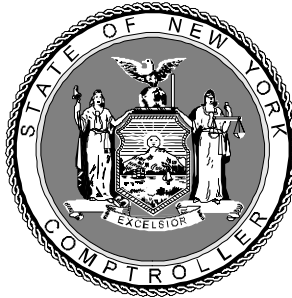


**STATE OF NEW YORK
OFFICE OF THE STATE COMPTROLLER
Office of the State Deputy Comptroller
for the City of New York**

**Rosemary Scanlon
Assistant Deputy Comptroller
for the City of New York**



**NEW YORK CITY
BOARD OF EDUCATION**

**DIVISION OF SCHOOL FACILITIES
REPAIRS AND MAINTENANCE PROGRAM
NEEDS TO BE ACCELERATED TO ALLEVIATE
THE DISREPAIR IN CITY SCHOOLS**

February 14, 1995

A-18-93



STATE OF NEW YORK
OFFICE OF THE STATE COMPTROLLER
270 BROADWAY
NEW YORK, NEW YORK 10007

ROSEMARY SCANLON
ASSISTANT DEPUTY COMPTROLLER
FOR THE CITY OF NEW YORK

February 14, 1995

The Honorable Ramon C. Cortines
Chancellor
New York City Board of Education
110 Livingston Street
Brooklyn, New York 11201

Re: Final Report - Repairs and Maintenance
Program Needs to be Accelerated to Alleviate
the Disrepair in City Schools,
No. A-18-93

Dear Chancellor Cortines:

Pursuant to the State Comptroller's audit authority as set forth in the State Constitution, the State Finance Law, and the General Municipal Law, we have examined the New York City Board of Education's Division of School Facilities (Facilities) Repair and Maintenance Program. The audit focused on the Facilities' efforts to make needed repairs in a timely manner, and its efforts to correct code Violations issued to the Board by the Fire Department and the Department of Buildings. Also, we determined whether the asbestos abatement work identified by the schools custodians had been completed.

This report was prepared under the direction of Allen M. Vann, Audit Director. Major contributors to the report are listed in Appendix D.

*Office of the State Comptroller
Office of the State Deputy Comptroller
for the City of New York*

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NEW YORK CITY BOARD OF EDUCATION
DIVISION OF SCHOOL FACILITIES
REPAIRS AND MAINTENANCE PROGRAM
NEEDS TO BE ACCELERATED TO ALLEVIATE
THE DISREPAIR IN CITY SCHOOLS

EXECUTIVE SUMMARY

PURPOSE

The objective of this audit was to determine whether the New York City Board of Education made needed repairs to its facilities in a timely manner. Also, we sought to determine if the Division of School Facilities (DSF) took action on code violations issued to it by the Fire Department and the Department of Buildings.

BACKGROUND

DSF is responsible for the repairs and maintenance of all public schools and other Board facilities. For 1993-94, the Board spent \$359 million for the maintenance of its schools and administrative offices, and plans on spending only \$336 million for 1994-95. Most work that DSF performs is done based on requests submitted by school custodians. The work is performed by DSF's skilled trades workers (plumbers, electricians, etc.), outside contractors or, if it is a major construction project, the New York City School Construction Authority.

Maintaining New York City schools in a state of good repair is critical to providing children with a safe environment conducive to learning. A February 1995 report issued by the General Accounting Office indicates that, nationwide, 14 million students attend schools that are in less than adequate condition, needing extensive repair or replacement. Regarding New York City schools, the report states that since the fiscal crises of the 1970s, maintenance and repair have been largely neglected, that this neglect has compounded problems that could have been corrected much more cheaply if corrected earlier. The report indicates that as the City seeks funds for repairing its schools, school enrollment is dramatically increasing.

RESULTS IN BRIEF

DSF's tardiness in completing work has contributed to the deterioration of physical conditions in New York City's schools. As of July 1993, there was a backlog of 51,000 outstanding work orders, including 28,508 (56 percent) which were over one year old. Some work orders assigned to DSF's skilled trades were outstanding for up to three years before the work was completed. Work that was contracted out took an average of 718 days to be completed from the time it was requested, with the actual work taking 99 days. We recommended that BE implement guidelines for the length of time allowed for acting upon repair requests.

Neglecting to make routine repairs in a timely manner results in the ever increasing need for capital expenditures. The Board estimates that in order to return the system to a state of good repair, it will need \$7.8 billion. Decreasing the amount of funds available for adequately maintaining schools only increases future costs.

Many schools still contain asbestos two to four years after the asbestos problems were first identified by the school custodians. In addition, the existence of this asbestos was not identified by Operation Clean House, a major effort of the School Construction Authority and the Board to test each school building for unhealthy levels of asbestos and to eliminate any health hazards found.

DSF did not take timely action to resolve Violations issued by the New York City Fire Department and Department of Buildings, with Violations remaining outstanding an average of 362 days. Also, we found that the records of the Fire Department and Department of Buildings regarding outstanding Violations issued to the Board did not match DSF's records.

**AGENCY RESPONSE
AND AUDITOR
COMMENTS**

We made 16 recommendations for improving the Board's ability to address its maintenance and repair needs. The Board, in response to our draft report, generally agreed with our recommendations. The Chancellor's response stated "I am pleased to note that the Division of School Facilities though constrained by budget cuts and reduced staff has already implemented or is in the process of implementing all of your agency's recommendations." DSF's response indicated that "the audit was helpful to us in pointing out some operational areas where improvements could be made." Its response also stated that "we are presently undergoing a major reorganization of our

maintenance operations incorporating a 50% reduction in administrative staff, a new senior management team and implementation of new procedures which will streamline operations. We are committed to changing the way maintenance services are being delivered." Other excerpts from BE's responses to our draft reports have been incorporated in the text of this final report.

We plan to determine the impact of budget reductions during our scheduled follow-up audit.

NEW YORK CITY BOARD OF EDUCATION
DIVISION OF SCHOOL FACILITIES
REPAIRS AND MAINTENANCE PROGRAM
NEEDS TO BE ACCELERATED TO ALLEVIATE
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CHAPTER I. INTRODUCTION

The New York City Board of Education's Division of School Facilities (DSF) is responsible for maintaining more than 1,000 schools and other facilities in a comfortable and safe condition so as to create an environment that fosters the education of children. For fiscal year 1993-94, the Board spent \$359 million for the maintenance of its schools and administrative offices, including \$236 million for custodial services. The Board plans on spending only \$336 million for 1994-95.

DSF performs repair work based on requests received from school custodians. Information from the request is required to be entered into DSF's computer information system by its Resource Planning Team which must prepare work orders and route them to the appropriate DSF unit. Most work orders are sent to the Skilled Trades Unit, which is made up of approximately 800 tradespeople such as plumbers and carpenters. Information regarding the completion of the work is required to be entered into DSF's computer system. Where outside contractors are needed, a work order is generally sent to DSF's Maintenance Engineering Unit which prepares the job specifications needed to bid the work out. Requests for major construction work are forwarded to the New York City School Construction Authority (SCA). DSF is also responsible for testing sites for the existence of asbestos, and requesting that SCA perform the necessary work.

New York City regulations require that certain safety standards be met by BE for the safety of school children and personnel, such as having fully charged fire extinguishers and working emergency lights. Agencies such as the Fire and Buildings Departments inspect the schools for compliance with such regulations, and issue Notices of Violation (Violation), each of which may contain multiple infractions. DSF's Violation Unit is responsible for monitoring the status of all Violations issued to the Board. It is responsible for notifying the enforcement agencies when the needed repair work has been completed, and requesting that the Violations be dismissed. Violations can be dismissed after the enforcement agency confirms the repair.

Maintaining New York City schools in a state of good repair is critical to providing children with a safe environment conducive to learning. A February 1995 report issued by the General Accounting Office¹ indicates that nationwide 14 million students attend schools that are in less than adequate condition, needing extensive repair or replacement. Regarding New York City Schools, the report states that since the fiscal crisis of the 1970s, maintenance and repair have been largely neglected, that this neglect

¹ GAO Report No. HEHS 95-61 "SCHOOL FACILITIES, Condition of America's Schools", February 1, 1995.

has compounded problems that could have been corrected much more cheaply if corrected earlier. The report indicates that as the City seeks funds for repairing its schools, school enrollment is dramatically increasing.

Objectives, Scope and Methodology

The objective of this audit was to determine if the Board made needed repairs to its facilities in a timely manner. This report addresses the timeliness of repairs performed by DSF as well as those performed by outside contractors. We analyzed information regarding outstanding work orders as of July 1993 and visited 12 schools (which are listed in Appendix A) that had significant backlogs of work orders to evaluate the adequacy of the work performed by DSF tradespeople and outside contractors. The 12 sampled schools were located in four of the five boroughs. We determined if needed asbestos abatement work that had been identified by school custodians in a separate sample of schools, and submitted to SCA for action, had been completed.

Also, we sought to determine if DSF took action on code violations issued to it by the Fire Department and the Department of Buildings. We reviewed the Violations cited for our 12 sampled schools from January 1, 1992 through June 30, 1993, and evaluated the adequacy of the Board's system for tracking outstanding Violations.

The State Comptroller served as President of the New York City Board of Education from July 1, 1991 through May 5, 1993. Upon assuming the responsibilities of Comptroller in May 1993, he issued an Executive Order recusing himself from having any role in the examinations (including the planning of examinations), reports or other work of the Office of the State Comptroller relating to the affairs of the New York City Board of Education during his tenure as President. Therefore, his name has been removed from the cover of this report and all applicable documents to which the report applies. This disclosure is being made to allow readers of this report to make their own judgment on any perceived impairments affecting their ability to rely on the contents of this report.

With due consideration to the matter described in the preceding paragraph, we conducted our audit in accordance with generally accepted government auditing standards. Fieldwork started in March 1993 and was concluded during July 1994.

CHAPTER II. REPAIRS NOT COMPLETED IN A TIMELY MANNER

DSF's inability to perform repairs in a timely manner has contributed to the deterioration of conditions in the schools. Our sample of work orders completed by DSF revealed it took an average of 325 days for the work to be completed from the date of the custodian's initial request. Work that was contracted out took an average of 718 days to be completed; the actual work took an average of 99 days. Some asbestos abatement work requested by school custodians had not been performed years after being identified.

Neglecting to make routine repairs in a timely manner results in the ever increasing need for capital expenditures. The Board estimates that in order to return the system to a state of good repair, it will need \$7.8 billion. Decreasing the amount of funds available for adequately maintaining schools only increases future costs.

Pursuant to their contractual agreement with the Board, school custodians are responsible for performing minor repairs. DSF is responsible for performing major repairs. However, the custodian's rules and regulations do not provide specific guidelines as to what constitutes a minor repair. The lack of such guidelines may allow custodians to refer work to DSF that they themselves could perform. DSF disagreed that custodians did not know what they were responsible for, pointing out that it is defined in their contract, and they will submit work order requests for those repairs which they believe are too big for them to handle. If DSF believes the work is within the custodian's jurisdiction, the request will be returned to the custodian. DSF's response to the draft report indicates that the new custodial contract better defines the repairs which are the custodians' responsibility.

Division of School Facilities Work Orders Outstanding for Extended Periods

DSF tradespeople took almost one year to complete work requested by custodians.

We reviewed 51 work orders for the 12 schools that were shown by DSF as completed by the tradespeople during the period July 1992 through April 1993. Our objective was to determine how long it took DSF to make the requested repairs. We found that it took an average of 325 days for DSF to complete the work orders from the date the custodian requested the work. However, in some cases it took up to three years. DSF had not developed standards which define how long it should take for a custodian's work request to be acted upon. As of July 1993, DSF had 50,957 work orders outstanding, including 28,508 (56 percent) over one year old. Appendix B shows the type of work orders comprising this backlog and how long they have been outstanding.

For example, the custodian from John Bowne High School submitted a request on September 5, 1990, for the repair of the auditorium roof. DSF prepared the work order 20 days later, but the work was not completed until August 31, 1992, almost two years later. Similarly, on June 14, 1989, the custodian of P.S. 188 requested that the doors outside the boiler room be repaired. DSF prepared the work order

about two weeks later, but the work was not completed until July 20, 1992, more than three years after the request.

For two of our sampled work orders, the custodians advised us that they performed the requested repairs themselves because they were frustrated that DSF took so long to respond. In one case, the custodian did minor plumbing work after waiting six months, to prevent "neighborhood entrepreneurs" from tapping into the school's water supply to operate a makeshift car washing business.

DSF officials stated that the continuing lack of adequate resources was a major cause of the large backlog of work orders. They described new procedures put in place to process work requests from the custodians, indicating that only high priority work will be done by DSF. While we recognize that the level of funding for DSF has been an ongoing issue, we believe that if DSF takes the actions outlined in this report, a significant reduction in the backlog of work orders can be attained.

DSF agreed, in response to our preliminary findings, that many low priority work orders were not completed in a timely manner, and that due to insufficient resources work orders that would be potentially hazardous to health if left unattended or would exacerbate dangerous conditions were targeted first. DSF indicated that it is following the Chancellor's February 1994 guidelines which make clear that repair efforts should be focused only on critical building systems. All work orders which cannot be addressed in three months are being returned to the custodians.

Process for Hiring Outside Contractors Must be Streamlined

We found that the work of outside contractors took an extraordinary amount of time to be accomplished, averaging 718 days from the time it was requested.

Work that cannot be handled by skilled trades, either because DSF does not have the technical expertise to adequately perform the work or because the job requires many work hours, is performed by outside contractors. We reviewed a total of nine jobs completed by outside contractors. We selected jobs where the notice to begin work was issued to the contractor in fiscal years 1992 or 1993. A breakdown of the average 719 days expended on each job revealed that the actual construction time took only 14 percent of the overall time:

<u>Stage of Job Process</u>	<u>Number of Days</u>
from date of custodian's request for repair to assignment of job to DSF's Specification Unit	79
writing of specifications	278
from completion of specification writing to beginning of construction	263
actual construction time	99

It should be noted that 278 days were needed just for the specifications to be prepared. DSF had not established guidelines on how long it should take to prepare job specifications and how long the contract award process should take to complete.

A schedule showing the nature of and time spent on each of our sampled jobs is shown below:

<u>School</u>	<u>Date Requested</u>	<u>Date Completed</u>	<u>Days to Complete</u>	<u>Nature of Work</u>	<u>Cost</u>
P.S. 205	10/23/89	6/18/92	969	roof repairs	\$7,000
J.H.S. 194	5/25/89	1/26/92	976	tree removal	3,900
P.S. 206	11/12/91	11/04/92	358	replacement of metal basement doors	3,400
I.S. 187	5/09/90	9/10/92	855	replacement of concrete steps	5,500
P.S. 11	7/12/90	12/14/92	886	replacement of playground equipment	6,250
Humanities	11/20/91	7/27/93	615	grating repairs	8,644
Bowne	3/31/89	4/08/92	1,104	fence repairs	47,900
P.S. 188	12/12/90	6/17/92	553	replacement of boiler grate	28,700
P.S. 1	1/02/92	6/04/92	154	re-securing of brick masonry	32,888
Average Days to Complete			719		

As shown, it took 1,104 days (more than three years) to complete the fence repair at John Bowne High School. There was a significant amount of time (349 days) between the date the work was first requested (3/31/89) and the time the specifications were written (3/15/90). More than half of the total time (652 days) occurred between the completion of the specifications (3/15/90) and the initiation of the work by the contractor (12/27/91). During this time, DSF initiated requests for bids from contractors and arranged for the formal bid opening.

DSF's response to our draft report indicated that, to reduce specification preparation time for contracted work, it is exploring computerized specification writing. It also will consider using contractor prequalification lists. Such lists reduce the amount of time needed to award individual contracts because bidding is restricted to vendors who have been preapproved. Responsibility determinations would not have to be made for each bid letting.

Six of nine sampled contracts were under \$10,000 and therefore could have been awarded through a telephone bid process. However, DSF used a formal bidding process for these contracts. Had DSF followed the telephone bid procedure it could have significantly reduced the time needed to complete the contract process.

Asbestos Abatement Work Still Outstanding in Many Schools

We found that many schools still contain asbestos two to four years after the problems were first identified by the school custodians.

DSF records indicated, as of July 1993, there were 712 work orders, covering the entire school system, outstanding for asbestos work. We sampled 146 of these to determine their status as of October 1993 and found that the work orders were outstanding an average of 774 days. Due to the nature of the work involved, DSF had assigned all but 11 of these 146 work orders to SCA, but took an average of 250 days to make the assignment.

In order to test the accuracy of DSF's records, we selected 55 of the 135 asbestos work requests that had been assigned to SCA to determine if the work was still outstanding. We found that:

- C 19 had been completed, taking an average of 446 days from the date the custodian had made the request;
- C 29 were never received at SCA, according to SCA; and
- C the work for the remaining 7 was in progress as of February 1994.

Operation Clean House was a major effort of SCA and BE prior to the start of the 1993-94 school year to test each school building for unhealthy levels of asbestos, and to eliminate any health hazards found. In fact, in announcing the establishment of Operation Clean House the Mayor promised that he "will not allow any New York City student to be endangered by asbestos exposure, and we will not permit any school to open unless it is determined to be safe for children, teachers and staff." To date, the cost of this work totals \$103 million.

At the conclusion of Operation Clean House (December 1993), SCA wrote a report which provided a listing of schools that needed asbestos abatement work; the report indicated the asbestos work completed, the work identified but not yet begun, and the areas of the school that had not yet been inspected. None of the areas identified in the above 29 work orders that had been sent to SCA were included in SCA's Operation Clean House report. For example: asbestos-insulation in the boiler room

and rooms 1034 and 1034A of P.S. 174, and radiator insulation in various classrooms throughout P.S. 152. These findings raise questions about the thoroughness of the Operation Clean House effort.

In June and July 1994, we were able to contact the custodians at 25 of 28 schools (one school had two requests) whose requests reportedly had not reached SCA, to find out if the adverse conditions still existed. Eighteen of the custodians indicated that the asbestos problem still existed.

We subsequently made site visits to two of the schools, Flushing High School and P.S. 192. The Flushing custodian had requested that asbestos be removed in a number of areas including the boiler room and student cafeteria. When we visited the school on June 30, 1994, we were shown instances of asbestos flaking from the ceiling in the students' cafeteria, and in the boiler room. The principal was concerned about the flaking asbestos in the cafeteria as it was directly above the students' lunch tables. The custodian pointed out that two of the school's three boilers were in need of repair, but workers refused to do it until the asbestos was removed. He told us that he would be unable to properly heat the school with the one operational boiler. (DSF subsequently informed us that the needed work in the cafeteria was performed during the summer of 1994).

In September 1994, we requested DSF to tell us the current status of the 29 work requests. In response to our draft report, DSF informed us that 19 requests were completed or in the process of being completed.

In response to our draft report DSF stated that the objective of Operation Clean House was to repair educational spaces, not boiler rooms, machine rooms, etc. DSF further stated that the entire asbestos repair program was underfunded, and that only locations identified as having potentially flaking/airborne asbestos could be targeted for asbestos removal. In addition, DSF indicated that it has hired a manager to oversee asbestos activities and to work closely with SCA.

Recommendations

The Division of School Facilities should:

1. Implement guidelines for the length of time allowed for repair requests to be acted upon, and use adherence to these guidelines as a measure of performance.
2. Utilize the data developed from Recommendation No. 1 to re-evaluate the staffing needs of the individual skilled trades.
3. Define which minor repairs will be performed at the school level, and ensure that only repairs outside the scope of the custodians' abilities are submitted to DSF.
4. Review its contract award process to determine where it can be shortened, especially in the area of specification writing.

5. Use telephone bid procedures for work expected to cost less than \$10,000.
6. Examine the reliability of the information in its computer system regarding the status of all work orders.
7. Follow up with the School Construction Authority on requested asbestos-related work that has not been completed.
8. Ensure that current information is maintained on the status of all work submitted to the School Construction Authority.

Agency Response and Auditor Comments

DSF agreed with all of the above recommendations and indicated actions taken or planned to implement them.

Regarding Recommendation 6, DSF stated that it is developing a Request for Proposals for a new computerized maintenance management system. DSF is targeting an implementation date of October 1995. We support this initiative.

CHAPTER III. ADEQUACY OF REPAIR WORK

The custodians at the selected schools believed that the work done by the skilled trades was performed in an adequate manner, but they had reservations about the quality of the work performed by some outside contractors.

We reviewed 51 jobs performed by the skilled trades workers and 12 by outside contractors to determine if they had been completed satisfactorily.

Contractor Performance Assessments Not Adequately Utilized

The custodians considered 10 of the 12 jobs adequately performed. Problems were noted with work performed at I.S. 187 to replace concrete steps, and at P.S. 3 to plaster and paint various areas of the school.

While work was ongoing at I.S. 187, a DSF inspector continually noted, in his work progress report, dissatisfaction with the contractor's knowledge and ability to perform the required contracted work. For example, the inspector, based on his July 27, 1992 visit to the school, wrote that "GC [contractor] don't [sic] have a clue of what he is doing." The school's custodian stated that the contractor did not have the proper tools and was not adequately experienced to perform the job.

We found no indication that this contractor's poor performance was reported to DSF's Contractor Qualification Section (which is responsible for reviewing and evaluating the initial applications of contractors who want to work for BE) either by the Inspection unit or the custodian. DSF does not require its units to notify the Contractor Qualification Section of poor vendor performance. Therefore, the Contractor Qualification Section is rarely advised of poor contractor workmanship, thus preventing the unit from removing vendors from the prequalified list. The renewal of a contractor's status as a prequalified contractor (required annually) does not include a review of the quality of the contractor's previous work with DSF.

DSF informed us that it can exclude a vendor only if the vendor defaults on a contract or is on the City's list of debarred vendors. Otherwise, it cannot prevent the vendor from responding to public advertisements for bids, and cannot remove the vendor from the prequalified list. We were told that the one employee that DSF had to check on the references of contractors had been laid off. DSF indicated that it will review its information systems to determine how best to increase feedback on contractor performance.

As discussed in Chapter II, contracts under \$10,000 can be awarded through a telephone bid process. This process would enable DSF to avoid doing business with vendors that have a poor work performance history, in so far as this information is maintained.

Work Performed by Skilled Trades Workers Generally Adequate

The custodians we spoke with indicated that they were generally satisfied with the quality of the work performed by the skilled trades workers.

We did note that a skilled trades employee erroneously charged 33 hours of his time for the installation of two metal doors in room 118 at P.S. 188. Our visit to the school and DSF's subsequent follow-up of the matter found that the work had not been performed. DSF's information system indicated that the work had been performed. DSF officials informed us that BE's Office of Inspector General will be asked to investigate.

Recommendation

The Division of School Facilities should:

9. Ensure that the Contractor Qualification Section is provided with and utilizes information on poor contractor performance when awarding contracts, and when reviewing a vendor's status on the prequalified list.

Agency Response and Auditor Comments

DSF responded that it is planning to create a new contractor performance evaluation form to assess contractor ability and performance. It expects to use these evaluations to stop future awards to contractors who consistently turn in poor performances.

CHAPTER IV. CODE VIOLATIONS NOT ADDRESSED IN A TIMELY MANNER

The Division of School Facilities did not take timely action to resolve Violations issued by the New York City Fire Department and Department of Buildings, with Violations remaining outstanding an average of 362 days from the time of issuance. Also, we found that information regarding the number of outstanding Violations differed significantly between the issuing agency and DSF.

Local Law 41 of 1978 and Local Law 16 of 1984 of the City of New York call for certain conditions to be met by the Board for the safety of school children and Board personnel. These conditions include having fully charged fire extinguishers, working emergency lights, panic bars on all exit doors, and required elevator inspections. Enforcement agencies, such as the Fire and Buildings Departments, inspect the schools for compliance with such regulations. If Board-operated facilities are found to be out of compliance, the inspecting agency issues the Board a Violation, each of which may contain multiple infractions. Violations are not supposed to be dismissed by the issuing agency until all the related infractions listed on the Violation have been corrected.

As of July 16, 1993, DSF's computer records showed 4,775 outstanding Violations (with 10,377 infractions) issued to BE by agencies such as the New York City Fire Department and the Departments of Buildings and Health, as well as by the New York State Department of Labor. Our audit focused on the Violations issued by the Fire Department and the Department of Buildings, which accounted for 63 percent of the outstanding Violations.

Insufficient Information on Violation Status

Custodians did not properly notify the Violations Unit regarding 35 percent of the Violations in our sample.

Violations are supposed to be sent to the Violations Unit (Unit) by either the school's custodian or principal, or by the issuing agency. The Unit logs the Violation into its computer file and generally forwards a copy of it to the custodian for corrective action. The custodian is supposed to notify the Unit whether he can correct the Violation; if he cannot, he is supposed to submit a Request for Repairs form (PO-18) to DSF's Resource Planning Team (Team) which then becomes responsible for the correction of the Violation.

The Violations Unit does not have direct authority over the custodians. It can request the custodians to correct Violations, but the custodians are not accountable to the Unit for the actions they take or fail to take. This factor, coupled with inadequate feedback from custodians to the Unit regarding actions taken or planned, contributed to the delays in correcting Violations.

Once the Team receives a PO-18 from a custodian it is supposed to issue a work order to the appropriate skilled trades group. We found that as of July 16, 1993, there were only 196 outstanding work orders related to a total of 4,775 outstanding Violations. It is clear that the number of Violation-related work orders does not reflect the true effort needed to correct the backlog of outstanding Violations. DSF indicated that all work orders for Violations are properly recorded. However, this is clearly not the case based on the small number of work orders that had been coded as Violation related. Improperly coding these work orders does not provide an accurate picture of the outstanding work backlog. DSF responded that it will remind District Plan Managers that work requests for the correction of Violations be classified appropriately.

The Unit's ability to monitor the status of Violations is hampered by the fact that it does not routinely receive notification from the Team or the custodians on the status of Violations each is addressing. During the course of our audit, the Violations Unit took action to begin to remedy this problem. In October 1993, the Unit hired a new employee who visited schools to determine the status of outstanding Violations and determined that approximately 40 percent of the Violations listed as being outstanding had already been corrected. The Unit head explained that she does not have sufficient staff to follow-up on all Violations.

DSF responded to our preliminary report that it will start supplying custodians with quarterly reports listing all outstanding Violations. In response to our draft report, DSF stated that a control form will be attached to the Violation copy it sends to the custodian. The form requests the custodian to sign off on the date of the violation correction.

Violations Remain Outstanding for Extensive Time Periods

We found that the Board did not correct Violations issued by the Fire Department and the Department of Buildings in a timely manner.

During the period January 1, 1992 through June 30, 1993, there were 26 Violations issued to the 12 schools in our sample, 18 from the Fire Department and 8 from Buildings. As of August 4, 1993, only 5 of these Violations had been corrected, taking on average 126 days. The remaining 21 had been outstanding for an average of 362 days. (A list of these Violations is shown in Appendix C). Permitting such conditions to remain outstanding for such extended periods of time could pose a safety risk to students, staff and visitors. For example, the Fire Department issued a Violation for lack of standpipe maintenance to the High School of Humanities on January 27, 1993. This Violation was still outstanding on our audit cut-off date of August 4, 1993, 189 days later. The Violation indicated that the standpipe system had been out of service since 1988. Therefore, this crucial fire suppression system had not been available for five years. DSF stated in response into our preliminary report that, on August 16, 1993, it requested dismissal of this Violation because the standpipe had been repaired. The Violation was subsequently dismissed by the Fire Department.

DSF does not establish specific target dates for correction of a Violation. Consequently, there is no objective criteria which DSF can use to evaluate the timelines with which it is correcting Violations. Conditions that present safety and health risks can remain outstanding for excessive periods of time. For example, a Violation for failing to provide approved ventilation in the kitchen (approved filters not provided over the range) at P.S. 11 dated back to January 1992, and was outstanding 574 days as of August 4, 1993.

DSF indicated in its response to our draft report that "since critical field conditions are constantly changing and priorities being revised as a result of any number of contributing issues, it is virtually impossible to assign timeframes for repairs of every problem unless it is an obvious hazardous condition." Furthermore, DSF indicated that given the environment of scarce resources and overwhelming needs, work that is critical is handled first, with non-serious Violations remediated as resources permit. DSF further indicated that of the 21 Violations we cited, 10 were remediated and dismissed, 3 received partial dismissal, and 8 have been assigned for corrective action.

A factor contributing to Violations being outstanding for long periods of time was the delay in notifying custodians of the Violations. Our analysis showed it took an average of 46 days for the Violations Unit to assign the 26 Violations to custodians for correction, with some assignments taking significantly longer. While DSF maintains in its response to the draft report that there were no delays in notifying custodians, this assertion was not substantiated. It further stated that delays in correcting Violations are a direct result of the volume of work required to maintain over 1,000 buildings. DSF informed us that a timestamp clock was installed in the Violations Unit to record the date Violations are received, and that this information, as well as the date of the Violation, could be used to determine delays in receiving the Violations from the issuing agencies.

Inadequate Reconciliation of Violations with Issuing Agencies

DSF's Violation records often did not agree with those of the issuing agency.

In order for DSF to correct the conditions that led to the issuance of Violations, it is necessary to have an accurate up-to-date list of all Violations issued to BE. Fire Department records indicated that as of July 16, 1993, 1,715 Violations (with 3,411 infractions) were still outstanding. The Board's records of the same date indicated that 2,220 Violations (with 4,426 infractions) were outstanding. While there may be timing differences, timing alone cannot explain such a large difference.

Fire Department records showed 42 violations compared to 52 on the DSF records for the 12 sampled schools as of July 16, 1993. Three Fire Department Violations were not on DSF's records. Department of Buildings' records showed 31 Violations for the same schools, DSF records listed 28 Violations. Seventeen of the Violations listed by Buildings did not appear on DSF's records.

DSF did not periodically reconcile its list of outstanding Violations with those listed by the issuing agencies. Unless DSF and the issuing agencies regularly reconcile their Violation lists, serious deficiencies may go unnoticed and may not be addressed in a timely manner.

In response to our preliminary report, DSF maintained that it does have "an accurate and up-to-date list of all violations as it is possible to obtain." It further responded that it currently reconciles its list of outstanding Violations with those it receives each month from the Fire Department. It attempts to reconcile with the Buildings Department on a quarterly basis, but is unable to do so due to problems with the information from Buildings.

Lack of Adequate Emergency Lighting

Our audit disclosed that there were outstanding Violations for the lack of emergency lighting.

Emergency lights are required² in schools to expedite the evacuation of a building in case an emergency occurs that causes electricity to be cut off. The DSF Technical Service Unit, established during 1990, has one inspector for each borough assigned to check all emergency lighting areas in every school at least once per year. The Unit is also supposed to check all emergency lighting Violations to determine if the lighting has been restored and is in working order. In addition, the Unit utilizes six electricians from DSF's maintenance division to repair minor emergency lighting problems. We examined the extent of compliance with emergency lighting regulations at the 12 selected schools.

Our sample schools had 14 outstanding emergency lighting Violations issued by the Fire Department. These Violations had been outstanding an average of 1,081 days as of August 4, 1993. One had been issued to John Bowne High School in April 1987.

Recommendations

The Division of School Facilities should:

10. Establish specific time frames for correcting Violations, and measure actual performance against such time frames.

² 1978 New York City Local Law 41 (Chapter 26-801.18) requires that "all assembly places shall be provided with emergency lighting facilities sufficient to provide at least 5 foot candles of illumination at the floor level. Such lighting shall be on circuits that are separate from the general lighting and power circuits, either taken off ahead of the main switch or connected to a separate emergency lighting power source, and be arranged to operate automatically in the event of failure of the normal lighting system."

11. Ensure that custodians periodically report to the Violations Unit on the status of the work assigned to them.
12. Ensure that the Violations Unit maintains adequate records regarding the status of each Violation.
13. Ensure that all work orders pertaining to Violations receive proper priority classification.
14. Periodically reconcile all outstanding Violations with the Violation-issuing agencies, and ensure that all new Violations and those that have been dismissed are properly recorded.
15. Correct the emergency lighting Violations cited in this report.
16. Ensure that required emergency lighting equipment is installed and working properly at all schools.

Agency Response and Auditor Comments

DSF agreed with Recommendations 11, 13, and 14 and indicated steps taken or planned to implement them.

Regarding Recommendation 10, DSF will determine if common types of Violations can be assigned time frames for corrective work via the use of requirement contracts. However, DSF indicated there were difficulties in setting specific time frames for correction due to scarce resources.

DSF agreed with Recommendation 12, but responded that due to extensive budget cuts fewer staff are available to monitor Violation records and conduct field inspections.

DSF did not directly address Recommendation 15, but in response to Recommendation 16 indicated steps being taken to first determine and then monitor the status of emergency lighting. DSF did not indicate actions being taken to ensure that there is adequate emergency lighting in all of the schools. DSF explained that it is preparing a reporting mechanism to have school custodians report at least annually on the status of emergency lighting equipment.

APPENDIX A

LIST OF SCHOOLS VISITED

<u>SCHOOL</u>	<u>STREET ADDRESS</u>	<u>BOROUGH</u>
P.S. 1	8 Henry Street	Manhattan
P.S. 3	490 Hudson Street	Manhattan
P.S. 11	320 West 21st Street	Manhattan
I.S. 187	349 Cabrini Boulevard	Manhattan
P.S. 188	442 East Houston Street	Manhattan
High School for the Humanities	351 West 18th Street	Manhattan
P.S. 205	2375 Southern Boulevard	Bronx
J.H.S. 194	154-60 17th Avenue	Queens
John Bowne High School	63-25 Main Street	Queens
P.S. 206	206 Neck Road	Brooklyn
Erasmus Hall High School	911 Flatbush Avenue	Brooklyn
Lafayette High School	2630 Benson Avenue	Brooklyn

APPENDIX B

STATUS OF WORK ORDERS AS OF JULY 1993						
TRADE ASSIGNED TO WORK ORDER	(a) NUMBER OF DAYS OUTSTANDING				(b)	(a/b)
	0-90	91-180	181-360	361+	TOTAL	PERCENT OVER 360 DAYS
MANAGER/SUPERVISOR	0	0	0	1	1	100.0
ENGINEER/ELEVATOR	0	0	0	2	2	100.0
ASBESTOS SURVEILLANCE	11	22	38	691	762	90.7
SHEETMETAL	60	52	64	641	817	78.5
WELDING	93	67	127	923	1,210	76.3
THERMOSTATS	70	186	161	1,229	1,646	74.7
RADIO	3	4	3	27	37	73.0
ELEVATOR HOIST	26	18	43	222	309	71.8
OIL BURNER - ELECTRIC	84	125	132	809	1,150	70.3
PLASTERING	108	127	161	866	1,262	68.6
STAGE RIGGING	88	66	59	462	675	68.4
PAINTING	134	131	228	1,065	1,558	68.4
OIL BURNER	126	212	192	1,123	1,653	67.9
MASONRY	97	64	81	433	675	64.1
PUBLIC ADDRESS SYSTEM	145	135	149	754	1,183	63.7
MACHINE SHOP	220	319	297	1,456	2,292	63.5
LOCKSMITH	176	222	289	1,146	1,833	62.5
MAINTENANCE	548	480	514	2,529	4,071	62.1
STEAMFITTING	380	845	676	2,863	4,764	60.1
GENERAL STORES	3	1	1	7	12	58.3
CARPENTRY	1,137	1,167	1,362	5,016	8,682	57.8
GLAZING	184	161	132	594	1,071	55.5
ASBESTOS TASK FORCE	51	155	121	385	712	54.1
TRUCKING/LABORERS	55	27	63	163	308	52.9
CLOCKS	182	220	120	586	1,108	52.9
FURNITURE REPAIRS	151	168	119	452	890	50.8
DOORCHECKS	210	268	163	660	1,301	50.7
FURNITURE REFINISHING	2	2	1	5	10	50.0
ROOFING	86	174	203	375	838	44.7
BOILERS	69	36	27	95	227	41.9
ELECTRIC	1,107	893	800	1,758	4,558	38.6
PROGRAM SYSTEMS	6	11	4	12	33	36.4
VIOLATION CONTROL UNIT	6	8	11	11	36	30.6
SIGN PAINTING	12	12	4	10	38	26.3
PLUMBING	970	1,041	985	1,032	4,028	25.6
FACILITIES PLANNING	3	1	0	1	5	20.0
PUBLIC ASSEMBLY ELECTRIC	1	2	1	1	5	20.0
REFRIGERATION	86	29	30	36	181	19.9
AUTOMATE THE SCHOOLS	37	4	3	9	53	17.0
WINDOW SHADES	24	9	10	7	50	14.0
SPECIFICATION UNIT	18	5	2	3	28	10.7
MOTOR REPAIR	83	133	111	33	360	9.2
CENTRAL ELECTRICAL	7	5	1	1	14	7.1
TELEPHONES	70	99	52	7	228	3.1
FOOD SERVICE (OSFNS)	20	11	2	1	34	2.9
ENGRAVING	122	65	20	6	213	2.8
SERVICE CONTRACTS	8	12	0	0	20	0.0
INTRUSION ALARM UNIT	14	0	0	0	14	0.0
TOTALS	7,093	7,794	7,562	28,508	50,957	55.9%

**LIST OF OUTSTANDING VIOLATIONS AT SAMPLED SCHOOLS
(as of August 4, 1993)**

<u>School</u>	<u>Issuing Agency</u>	<u>Violation Number</u>	<u>Days Outstanding</u>
P.S. 11	Fire	10215283H	261
	Fire	10188881R	574
I.S. 187	Fire	10188881R	139
	Fire	10188951N	510
P.S. 205	Fire	10131636X	378
High School for The Humanities			
	Buildings	108100607	484
	Buildings	38026993X	356
	Buildings	10188881R	356
	Buildings	38026995H	356
	Buildings	38026996H	356
	Fire	10147442Y	189
Lafayette High School	Fire	10213358Y	110
	Fire	10186431K	538
P.S. 188	Fire	10219680J	260
John Bowne High School	Fire	10218996L	287
	Fire	10128784K	505
	Buildings	108104449	484
P.S. 3	Fire	10212888R	152
Erasmus High School	Fire	10218917Y	352
	Fire	10178971L	468
	Buildings	108104064	484

MAJOR CONTRIBUTORS TO THIS REPORT

Allen M. Vann, Director

Stanley Evans, Audit Manager

Stuart Dolgon
Charles Johnson
Karl Koller
Arthur Lebowitz
Michael Solomon