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Reports

An Analysis of Deferred Exterior Modernization Projects

Executive Summary of "An Analysis of Deferred Exterior Modernization Projects"

In its plans for the upcoming 2003-2004 school year, the Department of Education (DOE) has focused on opening new schools, as well as converting district offices into new classrooms. It is just as important, however, for the DOE to pay attention to conditions in existing school buildings, where most of New York City's children and teachers spend a considerable part of their day. Yet the DOE has deferred funding for 53 schools in need of extensive exterior repairs.

In 1998, based on school building surveys conducted that year, the former Board of Education (BOE) found that over 200 schools had multiple exterior elements—such as masonry walls, windows, and roofs—in need of repair. The following year, the BOE, in its Five Year Capital Plan Fiscal Years 2000-2004, committed to the exterior modernization of the more than 200 schools identified in 1998

In 2003, however, when the DOE issued its proposed Capital Plan Amendment, many of the schools originally scheduled for exterior modernization were placed on a list of deferred projects. The Public Advocate's office used 2002 School Construction Authority (SCA) surveys of those schools to determine the type and severity of the problems left unaddressed as a consequence of the deferrals.

The resulting report examines 53 schools that are listed in the 2000-2004 Capital Plan for exterior modernizations and are now on the deferred list of projects. Of these 53 schools:

Five have deficiencies that the surveyor identified as life safety issues.

Three of the 53 deferred schools have hazardous conditions.

One school has cracks in the concrete girders supporting the qym roof.

Nine of the 53 deferred schools have many key elements—such as walls, windows, chimneys, and roofs—in poor condition.

Many of the 53 schools have deficiencies that will continue to deteriorate over time and will raise concerns in the future if work does not occur.

In order to prevent further deterioration of school buildings and to ensure public safety, the Public Advocate recommends the immediate investigation and repair of life safety issues, hazardous conditions, and conditions requiring a structural engineer, as well as regular monitoring by the DOE and SCA of buildings in need of repair. Further, schools for which exterior modernization projects were deferred should be a top priority in the new five-year Capital Plan.

Overview

In its plans for the upcoming 2003-2004 school year, the Department of Education (DOE) has focused on opening new schools, as well as converting District offices into new classrooms. It is just as important, however, for the DOE to pay attention to conditions in existing school buildings, where most of New York City's children and teachers still spend a considerable part of their day. At present, conditions in existing school buildings do not receive as much scrutiny as they demand.

As of 2003, 53 schools in need of extensive exterior repairs are on a list of projects for which the DOE has deferred funding. At least one of these schools needs further investigation by a structural engineer. Many others have hazardous deficiencies, several of them have life safety issues.

Background

In 1998, the former Board of Education (BOE) conducted building condition surveys, in preparation for the 2000-2004 Capital Plan. It found that over 200 schools had multiple exterior elements – such as masonry walls, windows, and roofs-that rated "below fair" or "poor." The BOE determined that these schools were in need of exterior modernization.

The following year, the BOE issued its Five-Year Capital Plan Fiscal Years 2000-2004, which stated that "Our first priority must be to continue to rebuild our existing facilities." The key to this rebuilding effort was to be the exterior modernization of the more than 200 schools identified in 1998.

In 2003, however, when the DOE issued its proposed Capital Plan Amendment, funding for an extensive list of projects was deferred due to budgetary constraints. The Public Advocate's office examined the list of deferred projects at existing schools and found many of the schools that had originally been scheduled for exterior modernization. The Public Advocate's office then examined 2002 Building Condition Surveys of those schools to determine the type and severity of the problems left unaddressed as a result of the deferrals.

Methodology

The resulting report examines 53 schools that are listed in the 2000-2004 Capital Plan for exterior modernizations and are now on the deferred list of projects. A number of additional schools requiring exterior work are also on the deferred list, but these schools do not appear to have as many deficiencies and therefore are not addressed in this report.

The building condition surveys include sections on architectural, mechanical, electrical, and building data. It analyzes the condition of each building component separately and ranks it on a scale of 1 to 5: 1 – Good, 2 – Between Good and Fair, 3 – Fair, 4 – Between Fair and Poor, and 5 – Poor. Each deficiency is described, including its location and measurement. The action recommended to fix the deficiency is also listed, for example, replacement or rebuilding.

Each deficiency also receives a ranking in two additional categories: the urgency of the action and the purpose of the action. The Urgency of Action ranking indicates the time frame within which the deficiency must be fixed. 1 indicates no urgency; 5 indicates a recommendation of immediate action. The Purpose of Action ranking indicates the reason the deficiency needs to be removed:

Table 1.Purpose of Action Rankings and Corresponding Reasons for Removal

Ranking Reason for Removal

- 1 Life Safety
- 2 Structural
- 3 Regulation or Code
- 4 Security
- 5 Restoration
- 6 Operations/Maintenance Savings

A condition characterized as a life safety issue poses a potential danger to the lives of occupants or the general public. For example, if the courtyard door missing hardware at JK Onassis High School was a designated exit, occupants directed to it in the event of an emergency could find themselves unable to leave the building.

SCA surveys also ask whether a hazardous condition exists and whether a structural engineer is required. The SCA provides no definition for what constitutes a hazardous condition; however, internal analysis of the surveys suggests the following definition: A hazard is a current condition that could lead to a dangerous situation. For example, at IS 2 in Staten Island the surveyor noted that there were concrete pieces falling from the exterior walls in the rear.

A structural engineer is required when an existing condition may compromise the structural integrity of the building or a portion of the building. For example, the surveyor noted cracks in the concrete of the girders supporting the gym roof at IS 2 in Staten Island.

Findings

Five of the 53 deferred schools have deficiencies that the surveyor identified as life safety issues.

Five of the 53 deferred schools have deficiencies that the surveyor listed as requiring immediate remediation because of life safety issues. These schools are JK Onassis HS in Manhattan, PS 64 in Queens, PS 42 Annex in Staten Island, and PS 157 and PS 205B in the Bronx. Table 2 provides a summary of the conditions noted.

Three of the 53 deferred schools have hazardous conditions.

Three schools, PS 42 Annex, PS 52, and IS 2, all in Staten Island, have hazardous conditions. The hazardous conditions noted at PS 42 Annex and IS 2 are masonry deficiencies. There is no complete architectural survey for PS 52, but the surveyor observed a deficiency in the window lintels and classified it as a hazardous condition.

One school was identified as requiring a structural engineer.

One school, IS 2 in Staten Island, has a condition requiring a structural engineer. The surveyor noted cracks in the concrete girders supporting the gym roof that should be examined by a structural engineer.

Table 2.Schools with Life Safety Issues, Hazardous Conditions, or Requiring Structural Engineer School

Life Safety Issue

Hazardous Condition

Require Structural Engineer

J. Onassis HS

(Manhattan)

Missing hardware on metal door in yard.

None

None

PS 64

(Queens)

Cracks in pre-cast concrete cornice on 3 facades: 10 SF

None

None

PS 42 Annex

(Staten Island)

Cracks in cornice on all facades: 500 SF. Cracks in exterior walls on all facades: 1000 SF

Cracking of brick and cornice

None

PS 52

(Staten Island)

None Deficiency in window lintels None IS 2 (Staten Island) None Falling concrete pieces from exterior walls in rear. Cracks in concrete part of girders supporting gym roof. PS 157 (Bronx) Deficiency in metal cage/fence on parapet on high roof: 1000 None None PS 205B (Bronx) Deficiency in concrete stairs in rear school yard: 100 SF. None None Nine of the 53 deferred schools have many key elements in poor condition. Nine of the 53 deferred schools with multiple deficiencies have many key exterior elements—such as walls, windows, and roofs--in poor condition. The surveyor noted conditions such as bulging brick and major through cracks in walls and other masonry elements, and recommended elements in several schools for replacement or removal and rebuilding. These schools include:

- Ø PS 276K in Brooklyn, is listed in poor condition with 21 deficiencies noted on its exterior, the most of any school on the list. Three of these deficiencies received the lowest possible rating 5 or poor and the deficiencies noted were extensive. The surveyor noted that the "[e]xterior of building is in poor condition and needs serious attention."
- Ø IS 13 in Manhattan with 16 deficiencies has poor windows and fair-to-poor chimney and exterior walls.
- \varnothing PS 83 in Manhattan has 13 deficiencies. The surveyor

notes "bulging brick "and "major through cracks" on the exterior walls, and fair-to-poor key exterior elements such as the chimney, exterior walls, parapets and windows.

- \emptyset PS 198 Manhattan has seven deficiencies, and the surveyor notes that the windows and entire curtain wall should be replaced.
- Ø IS 49 in Staten Island is listed in fair-to-poor condition with eight deficiencies. The exterior walls, chimney and windows are all rated 4.
- Ø PS 42 Annex in Staten Island is in fair-to-poor condition with 11 deficiencies, including a hazardous condition on the cornice and cupola. The surveyor noted that bricks are falling out of the façade.
- Ø PS 84 in the Bronx is in fair condition with nine deficiencies. The windows and parapets are poor and the exterior walls and coping are fair-to-poor.
- Ø PS 154 in the Bronx is in fair condition with poorly rated windows and fair-to- poor chimney and exterior walls.
- \emptyset PS 205A in the Bronx is in fair condition but has 13 deficiencies. There are serious roofing issues at this school and the windows, exterior walls, and chimney are in poor condition.

Even schools with overall fair conditions may be cause for concern.

Deteriorating conditions do not improve over time. Many of the 53 schools on the deferred list have deficiencies on many major elements, but because these deficiencies are mostly localized, the overall rating for many of these elements was fair. The condition of these building elements will deteriorate over time due to water penetration and freeze and thaw cycles. Every one of the 53 schools not previously specified falls into this category. Conditions at the following schools could raise concerns in the future if work does not occur: PS 127, PS 148, PS 165, PS 184, and Beach Channel High School in Queens; PS 18, PS 157, PS 182, and PS 205B in the Bronx.

Many of these schools were listed in fair or fair-to-good condition overall, but all of them, where surveys were available, have deficiencies. Only one school has no exterior deficiencies, PS 191Q.

Four of the 53 deferred schools have incomplete surveys or no surveys.

Four of the 53 deferred schools have incomplete surveys or no survey. There was no survey for PS 31 in the Bronx. Surveys for PS 48 and PS 145 in Queens, and PS 52 in Staten Island are all missing their architectural section.

Four of the 53 deferred schools already have sidewalk bridging.

In May 2003, the SCA issued a list of schools with sidewalk

bridges and subsequently promised a repair plan for all the schools listed. Three months later, no plan has been announced. Four of the 53 deferred schools are on the sidewalk bridging list. These schools are PS 208 in Manhattan, PS 64 in Queens, and PS 31 and PS 72 in the Bronx.

* The four deferred schools with sidewalk bridging have serious.

- * The four deferred schools with sidewalk bridging have serious building deficiencies.
- Ø PS 208 in Manhattan has parapets with the worst rating 5, or poor. In addition, the chimney, coping, and exterior walls are all rated 4, or fair-to-poor.
- Ø PS 64 in Queens has cracks in its cornice. The surveyor classified this deficiency as a life-safety issue.
- Ø PS 72 in the Bronx has a chimney with the worst rating 5, or poor, and deteriorated wood windows rated 4, or fair to poor.
- \emptyset There is no building condition survey available [3] for PS 31 in the Bronx.

Recommendations

In order to prevent further deterioration of school buildings and to ensure public safety, the Public Advocate recommends the following measures regarding the 53 schools surveyed, as well as any additional schools for which exterior work was deferred.

Schools for which Exterior Modernization Projects were Deferred should be a Top Priority in the New Five-Year Capital Plan

As the DOE prepares its new five-year capital plan for FY05-09, the work on these buildings must be a top priority. Though new schools are important, we must keep existing schools in top condition.

Regular Monitoring of Buildings in Need of Repairs by the DOE and SCA

Five years have passed since these school buildings were first identified as needing repairs. Only the regular monitoring of these 53 buildings by the DOE and SCA will provide assurance that students, staff, and the public are safe.

Release Plans to Remove Sidewalk Bridging

In May 2003, the SCA promised to release a plan in the near future for repairing schools that currently have costly sidewalk bridging. This plan must be released (if it has been developed) to improve all schools with sidewalk bridging, including the four we studied.

Immediate Investigation and Repair of Life Safety Issues, Hazardous Conditions, and Conditions Requiring a Structural Engineer

The 2002 School Buildings Survey identified hazardous

conditions and life safety issues at IS 2 in Staten Island. If they have not done so, the DOE and SCA must immediately investigate life safety issues and hazardous conditions, and send a structural engineer to IS 2 in Staten Island.

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