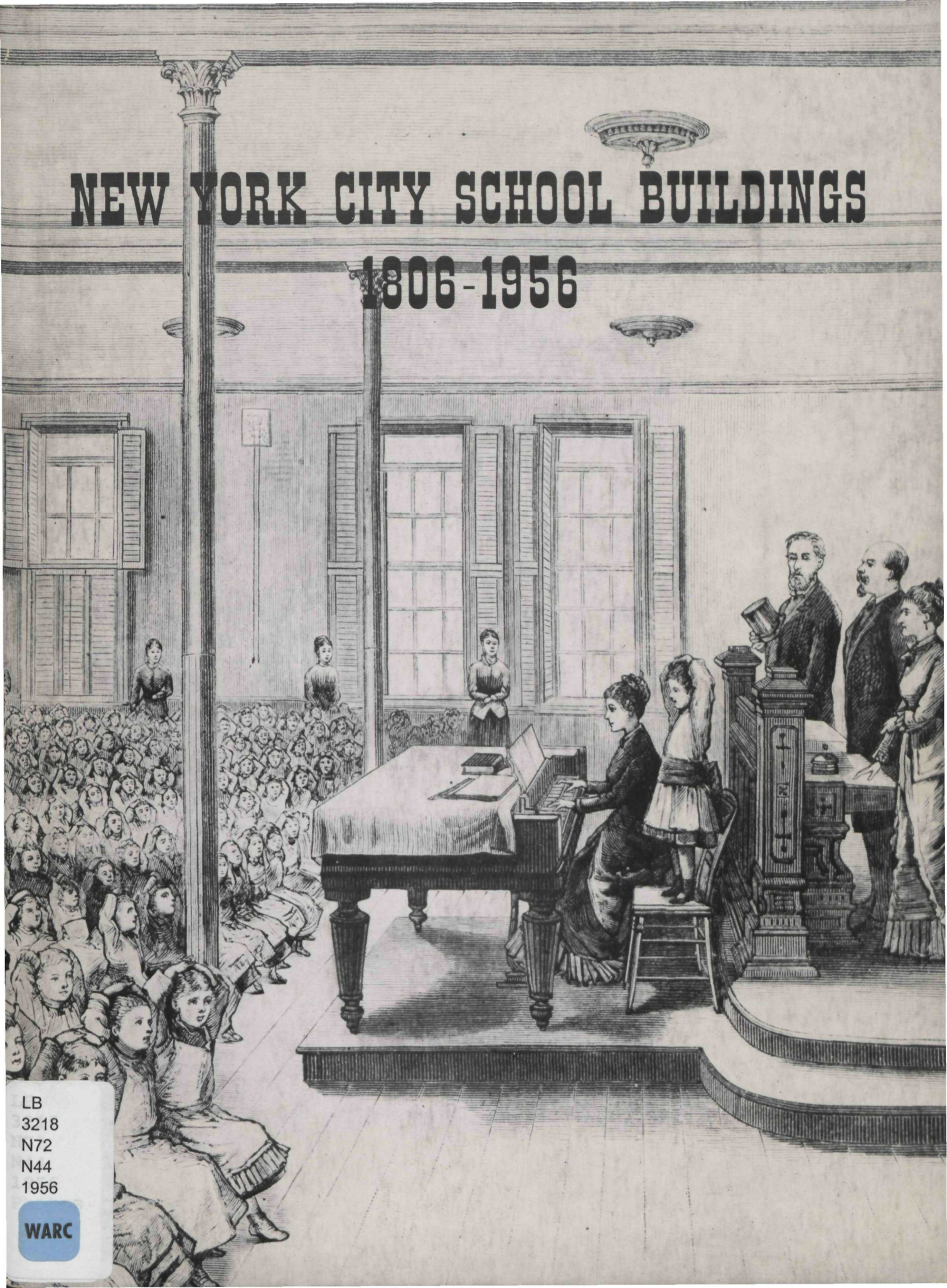
NEW YORK CITY SCHOOL BUILDINGS

1806-1956



THE METROPOLITAN
MUSEUM OF ART

THE IMAGE LIBRARY

NEW YORK CITY SCHOOL BUILDINGS 1806-1956

Prepared for the Sesquicentennial Exhibits

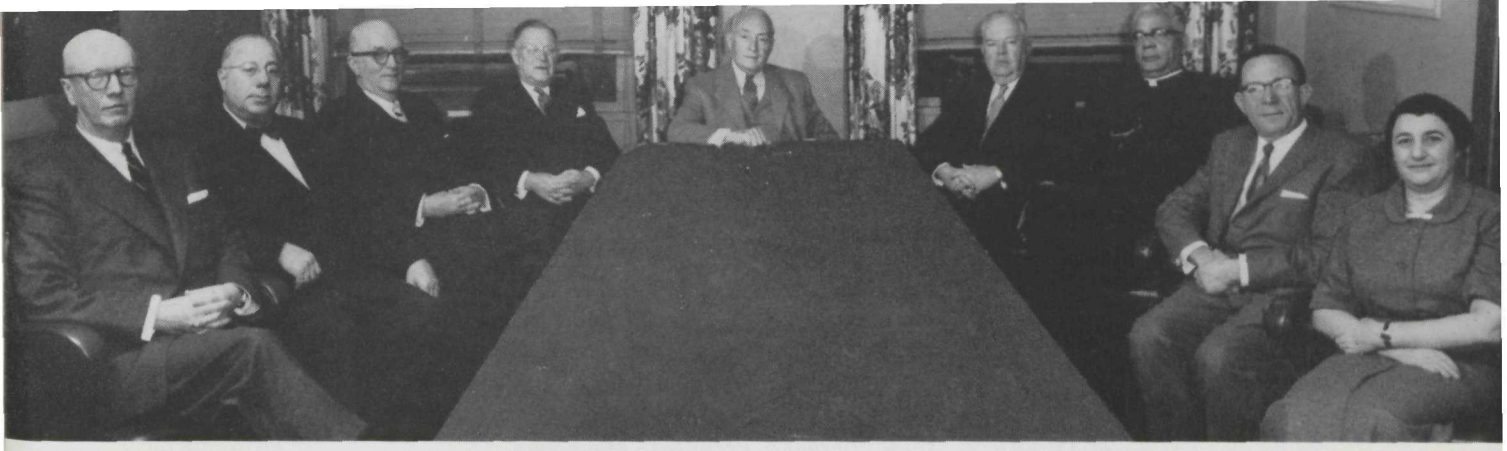
Opening at the Metropolitan Museum of Art

October 2, 1956

BOARD OF EDUCATION • CITY OF NEW YORK

NEW YORK FREE SCHOOL NO. 1.

THE NEW BUILDING OPENED IN 1809 IN TRYON ROW.



BOARD OF EDUCATION

President, CHARLES H. SILVER

Vice President, DR. CHARLES F. RANK

CHARLES J. BENSLEY,
Chairman, Committee on Buildings and Sites

ANDREW G. CLAUSON, JR.
REV. JOHN M. COLEMAN
VITO F. LANZA
WILLIAM J. O'SHEA
MRS. CECILE RUTH SANDS
CORNELIUS J. WALSH

MORRIS WARSCHAUER
Secretary

BOARD OF SUPERINTENDENTS

DR. WILLIAM JANSEN
Superintendent of Schools

JACOB GREENBERG
Deputy Superintendent of Schools

FLORENCE S. BEAUMONT
EDWARD J. BERNATH
JOHN F. CONROY
EDMUND J. GANNON
ETHEL F. HUGGARD
DAVID H. MOSKOWITZ
C. FREDERICK PERTSCH
WILLIAM A. HAMM

ADMINISTRATOR OF BUSINESS AFFAIRS

CHARLES GILMAN

SUPERINTENDENT OF SCHOOL SUPPLIES

LOUIS J. COOK

SUPERINTENDENT OF PLANT OPERATION AND MAINTENANCE

DIEDRICH F. LEHNERT

DIRECTOR, BUREAU OF CONSTRUCTION

WILLIAM H. CORREALE

CHIEF ARCHITECT

MICHAEL L. RADOSLOVICH

BOARD OF ESTIMATE

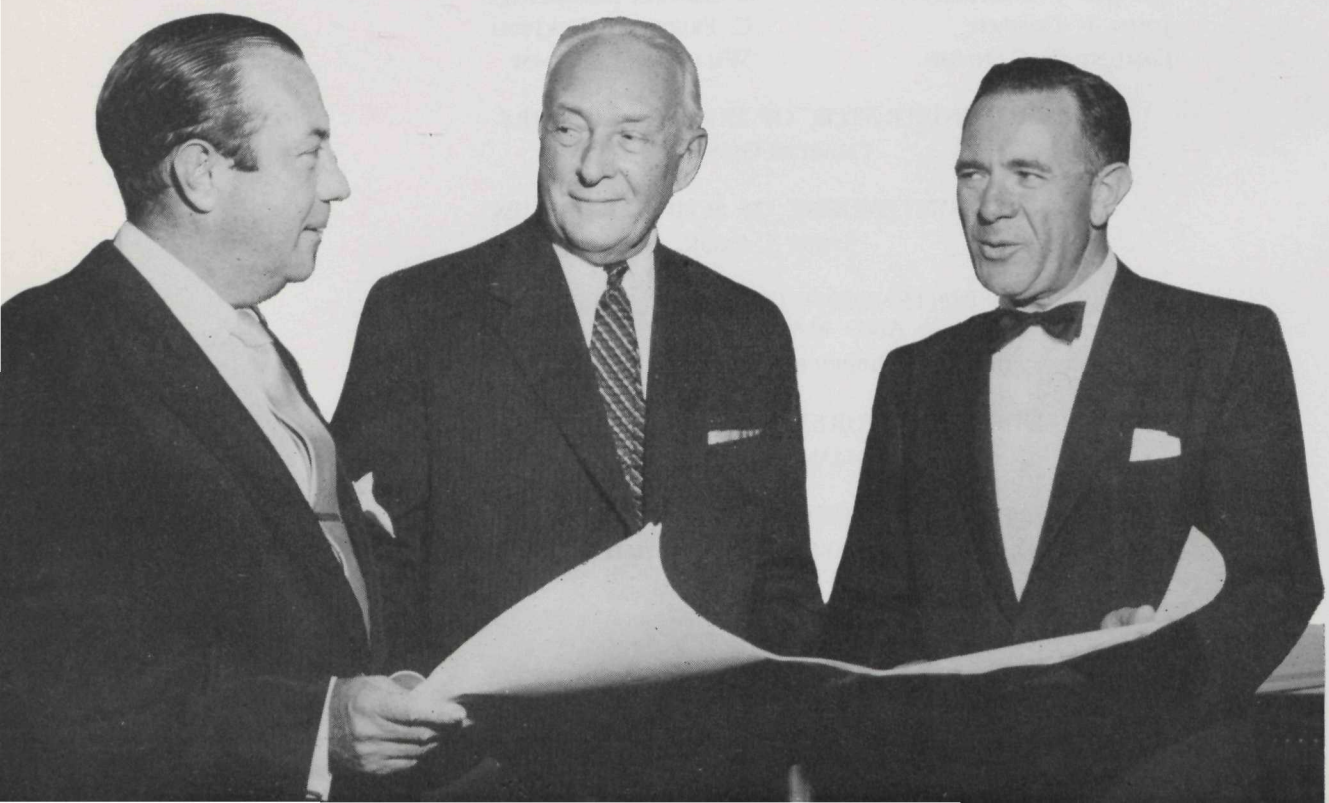
ROBERT F. WAGNER, MAYOR, *Chairman*
JOHN J. THEOBALD, *Deputy Mayor*
ABE STARK, *President of the Council*
LAWRENCE E. GEROSA, *Comptroller*
HULAN E. JACK, *Borough President, Manhattan*
JAMES J. LYONS, *Borough President, Bronx*
JOHN CASHMORE, *Borough President, Brooklyn*
JAMES A. LUNDY, *Borough President, Queens*
ALBERT V. MANISCALCO, *Borough President, Richmond*

DIRECTOR OF THE BUDGET
ABRAHAM A. BEAME

CITY ADMINISTRATOR
CHARLES PREUSSE

CITY PLANNING COMMISSION
JAMES FELT, *Chairman*
FRANCIS J. BLOUSTEIN, *Vice Chairman*
LAWRENCE M. ORTON
CHARLES J. STURLA
GOODHUE LIVINGSTON
ROBERT MOSES
ROBERT G. MCCULLOUGH

BUREAU OF REAL ESTATE
PERCY GALE, JR., DIRECTOR



SESQUICENTENNIAL EXHIBITS COMMITTEE

SPONSORS

CHARLES H. SILVER, *President of the Board of Education*

CHARLES J. BENSLEY, *Chairman, Committee on Buildings and Sites*

Exhibitions Committee under the direction of
WILLIAM JANSEN, *Superintendent of Schools*

DAVID H. MOSKOWITZ, *Associate Superintendent of Schools, Chairman*

MORTIMER CASSILETH and DAVID J. SWARTZ, *Organization and Coordination*

WILLIAM H. CORREALE and MICHAEL L. RADOSLOVICH, *Construction Data, Renderings and Models*

DIEDRICH F. LEHNERT, *Maintenance and Operation Data*

FRANCIS MANOPOLI, *Exhibition Designer*

AMBROSE J. HICKEY, *Photographer*

MARK PRICE, *Publicity*

FOREWORD

THIS brief historical report covers one hundred and fifty years of school construction in New York. As the title indicates, it tells a story of changing school designs and materials, dating back to the days of Thomas Jefferson. It may be interesting to note here that Mr. Jefferson fought unsuccessfully for many years for the enactment of laws that would bring about a system of state education which "shall reach every description of our citizens, from the richest to the poorest"; however it was not until 1818 that a grant was made for the purchase of a site and the construction of buildings that were to become the University of Virginia.

Professor Herbert B. Adams described Jefferson as the one who "evolved the entire system of education there introduced and actually devised every feature of construction and administration. He drew plans, made estimates and contracts, busied himself about bricks and mortar, and superintended the whole process of building." I quote this not only to reveal Jefferson's astonishing virtuosity, but to emphasize the debt that we present-day builders of schools owe to the past.

For instance, if you turn quickly from the illustrations in the front of this book to those in the back, the transition may be startling. However, if you thumb through the pages slowly and in their proper order, you will see demonstrated one of the basic tenets of education—growth is an orderly affair. We build upon that which has gone before.

The point is that although we are proud of recent accomplishments, we are very much aware of our long-term debt to the dreamers and builders of an earlier America. We are especially indebted to the former members of the Board of Education and to the Superintendents of Schools of the past for their contributions to the evolving program down through the years.

Our current program for school building is the finest possible tribute to the present Members of the Board of Education and to the staff of our Division of Housing.

William Jansen

Superintendent of Schools

The Superintendent of Schools and his Associates discuss a new school plan.

Seated: Miss Ethel F. Huggard and Dr. William Jansen. Standing, left to right: John F. Conroy, William A. Hamm, Dr. Edmund J. Gannon, Dr. Edward J. Bernath, Miss Florence S. Beaumont, Dr. Jacob Greenberg, Dr. C. Frederick Pertsch, and Dr. David H. Moskowitz.

GREETINGS

THERE is something about the building of schools that approaches the sacred. It is like the planting of a tree where none grew before; the sowing of a seed in soil that never yielded so rich a harvest.

In welcoming you to this exhibit, we are happy to share with you the pride we feel in this 150-year record of progress in building better schools. It has culminated in a new standard of functional beauty in structures that offer so much more than walls, windows, classrooms and desks. The schools of today and tomorrow are worthy of housing the generations we seek to prepare for better citizenship.

Our new schools emphasize comfort, safety and health to produce an environment in which the student will find zest and inspiration for learning. It is not difficult to erect a building. Mankind has known the art for centuries. Our aim is to give each structure a living, breathing spirit of its own—a proper climate for the education of the young, a citadel of knowledge soaring in stone and steel and glass to become a center of community activity and interest.

In the last few years, the unprecedented school construction budgets have been made possible, in a large measure, by the intense interest and cooperation of Mayor Wagner and the Board of Estimate. Mr. Charles Bensley, Chairman of the Committee on Buildings and Sites of the Board of Education has been a driving force in advancing our school plant to its present high estate.

Here, in miniature models, in plans, renderings and photographs, we present the tapestry of school construction for your inspection. Your support, your awareness of the educational needs of our city, have encouraged us to build our schools, with their bright, cheerful rooms, colorful corridors, spacious assembly areas and playgrounds, as fitting tributes to the hopes and dreams of youth.

These are the fortresses of democracy.

CHARLES H. SILVER, *President*

THE pages of this brochure which supplements the exhibition of 150 years of school construction in this city set forth in pictures, renderings and architectural plans, the impressive evolution of school design.

School buildings are designed to serve the needs of students, teachers, and the community. You will observe how buildings, from the earlier forms of ornate, multi-story structures, on restricted sites, providing classrooms almost exclusively, which served the narrow curriculum of the 3-R's, have changed into structures of functional design, on ample sites adapted to the purposes of an enriched, modern curriculum. The modern school provides special facilities for art, music, science, home economics; laboratories, shops, and equipment for a variety of vocations. It ministers to health and recreation through gymnasiums, lunch rooms, playgrounds and medical suites and through the use of most up-to-date heating and lighting systems. It provides offices for school administration, and guidance services.

It provides conference rooms, auditoriums, libraries, audio-visual equipment, public address systems. All are designed to enrich the educational program and to minister to the social and citizenship objectives of the school.

School facilities are designed to serve the needs of the community for education, recreation, and participation with school authorities in the service of children. All of these purposes are revealed in the pages which follow.

Naturally, in this period of school development, costs of construction and of land have materially increased. This fact compels us to seek actively and constantly for economy. The use of modern materials of construction—steel, concrete, aluminum and glass—the lowering of ceiling heights, and reduction of stairways, use of elevators or escalators, are all designed to effect economies in long-term maintenance requirements.

This statement would not be complete without my acknowledgement and thanks, as chairman of the Committee on Buildings and Sites, of the helpful support of President Charles H. Silver and the other Members of the Board of Education; of thanks to all the city agencies which participated in this achievement; and especially to His Honor, Mayor Wagner, and to each member of the Board of Estimate, for their public service in providing the largest construction budgets in our whole history.

CHARLES J. BENSLEY, *Chairman*
Committee on Buildings and Sites

CONTENTS

INTRODUCTION

1806 - 1956 One hundred fifty years! Turn pages and see decades turn with them—fifteen of them—fifteen decades of school building progress. Turn pages and see "Jerry-built" shelters for children give way to curriculum designed buildings within which to educate children.

Turn more pages and decades and trace the evolution of a unified educational building philosophy and of a consolidated Board of Education with a single Superintendent of Schools.

Observe how the ruggedly individualistic local boards of education of the "Federalist" period, with their complete local autonomy and completely independent ideas of what school buildings should be, gave way to a single Board of Education with its specialized Committee on Buildings and Sites, its Division of Housing and Bureaus of Construction, of Operation and Maintenance, equipment, plan review, and specialized research services. These organizations accept the time tested features of the past while eternally experimenting with the newest concepts to produce the finest and most efficient school structures within which to educate the children of the World's metropolis.

School planning and construction today is the resultant of many forces; economic, social, political and pedogogical. Each new building incorporates all the worth-while and tried features of all preceding architectural school plans. In addition it also contains all that may have developed in educational planning since the last school building was designed. It is the yearly model idea that is so typically American. You see it in our production of automobiles, of refrigerators, washing machines, radios, TV sets, numerous household items and now schools. Each new structure is intended to be an improvement over the preceding one. Both educational philosophy and educational planning are vital, living sciences, and living things change constantly.

As you continue to read the pages and view the pictures that follow, you will see that this has not always been true. Originally, our school system, like Topsy just grew. It consisted of numerous autonomous neighborhood units. Each had its own board of education, developed its own educational philosophy and planned its school or schools accordingly. You will see how schools in one part of the city may have been designed with a Great Hall to accommodate the Lancastrian or the monotorial system. Concurrently, in an adjacent ward not far away, a school building may have been designed with many small individual classrooms, for an entirely different system of education. A unified educational philosophy seemed nowhere apparent.

As the decades continue to pass with your turning of the pages, you will notice a gradual change. The wards and their schools begin to draw together under more centralized administration. Unification continues until it reaches its climax with "consolidation" and the establishment of a single Board of Educa-

tion and a single Superintendent of Schools. Educational philosophy begins to become more diffused with the establishment of educational journals and the merger of ideas stemming from the close contact of neighborhoods and localities.

In time, school planning is delegated to a single superintendent of School Buildings. The city continues to grow and expand and the school system expands and grows with it. Along with both grows the accumulation of human knowledge. Soon, education becomes compartmentalized. Specialists appear. Many of the subjects formerly taught in the colleges are pushed downward into the common schools. (Incidentally, this process is still continuing.) No longer can any individual hope to encompass all human knowledge. Even the Superintendent of School Buildings can no longer keep abreast with evolving methodology, the physical requirements for its accommodation and at the same time, keep up with the new materials, methods and concepts in structural planning, engineering, and construction. Soon it becomes necessary to introduce a new type of professional service: Educational Engineering. The job has become too big for either the architect or the educator. The new profession must bridge the gap that is too big for any individual. There is a new pedagogy and an expanded curriculum that needs to be related and detailed for planning and layout. There is pedogogic need in relation to efficiency, to adequacy, to maintenance, equipment and supplies; to ageing structures; to finance, population trends, educational and vocational objectives, social and economic trends. Yet, all must work toward a common end. This end requirement is the correct location and timely provision of educationally adequate and acceptable facilities at all school levels.

It was these social changes with their resultant requirements for the specialized knowledge of many fields focused on a single objective—the school building—that led to the creation of the unifying organizations of the Board of Education of the City of New York, known as the Committee on Buildings and Sites and the Division of Housing. These, with the whole of human knowledge and experience made available to them through a well organized consultative service are truly bridging the gap. The end results you can see here in models and pictures of new school buildings and along the highways of the city in the reality of masonry, steel and glass.

Now resume turning the pages. See how you, our citizens and our city responded to the educational needs of the times. Note particularly, and take pride in our own pages and our own times. Glory in the facts of "our" achievements. You helped us accomplish this and made the fuller realization of our plans possible. Look and read! This is what we together, have done, and "the best is yet to be".

David H. Moskowitz,

Associate Superintendent of Schools,
Division of Housing

October, 1956

ACKNOWLEDGEMENTS

Because this booklet is small and merely touches the highlights of a turbulent century and a half of New York City school history it may seem inadequate for its title. However, despite its small size, the number of agencies and individuals who contributed to its content is quite large. Consequently, it is indeed difficult to give adequate expression of our appreciation of the many contributions, by so many persons and agencies, both to this story and to the items on display in these exhibits, and still keep this booklet small enough to remain within its covers.

There is the text. There are photographs and models. There are engravings of old school buildings. There are renderings and miniature-scale plans of new ones. These have never previously been assembled. There was no one source that could have supplied all the information and all the materials which are on view in the exhibits or appear on the pages of this publication.

Wherever possible, original reports are quoted and original productions presented for your viewing. The models and plans of our newer school buildings represent the work of private architects, architectural organizations, and our own Board of Education's architectural staff. Historical photographs and engravings have been garnered from historical and educational institutions and business organizations.

Considering all these factors it becomes apparent that, in order to maintain balance, in a booklet of this size the space within which to express our indebtedness must be limited. We therefore, merely say "thank you", though meaning much more,

to those architects who voluntarily, at their own expense, produced miniature plans and descriptions of a number of our most recently constructed schools;

to Mr. Gilbert Cam, Executive Assistant, to Miss Helen Jan Waite, Librarian III and

to Mr. Gunther Pohl, Librarian II of the New York Public Library;

to Prof. James Grote Van Derpool, Librarian of Avery Architectural Library of Columbia University;

to Mr. Hubbard Ballou, Head of Photographic Services of Columbia University;

to Miss Clara Esther Derring, Reference Librarian of Teachers' College;

to Mrs. Catherine P. Storie, Supervising Librarian, Social Science Reading Room of Teachers' College;

to Mr. Arthur B. Carlson, Curator of Maps and Prints of the New York Historical Society;

to James J. Rorimer, Director and the staff of the Metropolitan Museum of Art.

Mortimer Cassileth
Harold W. McCormick

Brooklyn, October
1956.

HISTORICAL SKETCH OF THE PROGRAM OF PUBLIC EDUCATION IN THE CITY OF NEW YORK*

"The first school in this city was established in 1633, when New Amsterdam was founded by the Dutch. In the language of our own Historian, Brodhead, 'neither the perils of war nor the busy pursuit of gain, nor the excitement of political strife ever caused them to neglect the duty of educating their offspring. Schools were everywhere provided at the public expense, with good school masters to instruct the children of all classes in the usual branches of education.'

"Adam Roelandsen—let him not be forgotten—was the first schoolmaster. The school was established by the Colonial Government, dispensed education gratuitously, and the teachers received their appointment and remuneration from the constituted authorities up to the period when the colony passed to the English under Governor Nichols.

"This was a public school in the proper sense of the term, and our Dutch ancestors should be held in honorable remembrance for having seen in that twilight of popular government the great truth that providing for universal education was not only the clear right but the first duty of a free state.

"The system of Public Schools in the city, although in its present form of recent date, has resulted from efforts which date as far back as the year 1805. Previous to that time, charity free schools established by the various religious societies for the poor of their own faith, and private schools, were the only schools in the city. The city then contained a population of 76,000, a considerable portion of whom belonged to no religious denomination, and as has always been the case in large cities, a great number of children were without schools, and grew up in that ignorance which left them easy victims to those vices and crimes which are the most dangerous and expensive to the community, and by which the unprovided poor are specially tempted.

"These unprovided ones offered a most interesting field for benevolent labor, which was entered in that year by a band of patriotic pioneers, at the head of whom was the late DeWitt Clinton. They applied to the legislature in 1805, and were incorporated by the name of 'the Society for establishing a Free School in the city of New York, for the education of such poor children as do not belong to, or are not provided for by any Religious Society . . . '

"Under the restricted powers thus conferred to establish 'free schools for the education of such poor children as do not belong to, or are not provided for by any religious society,' the society organized its first school in May, 1806, with forty scholars . . . "

---

* Report of the Board of Education, 1854.

(" . . . The school was . . . in a small apartment (in the Old Mission House) in Bancker Street—now Madison Street—near Pearl. Its appearance was in every respect as humble as were the unhappy objects whose improvement in it was contemplated.

"The school was at once a success. The little room was soon overcrowded, its numbers reaching sixty-seven. A new enterprise, and in such energetic and benevolent hands, it wanted neither visitors nor friends. Contributions in money, cloth, stockings, shoes, and hats, were freely given for the physical comfort of the needy pupils, and Colonel Henry Rutgers, afterward the second President of the Society, donated a valuable lot of ground in Henry Street as a site for a school-house.

"Having, however, fully ascertained that an entire reliance on the benevolence of individuals for the support of the institution would not place the funds in a condition to meet the expenses which must necessarily arise, the trustees naturally turned their attention to those sources whence adequate assistance could alone be expected. The Corporation, as guardians of the city, and especially of that part of it which the views of this society particularly embrace, were early addressed with a memorial soliciting their assistance. In consequence of this representation, a committee from that body visited the school, who appeared fully convinced of the usefulness of the establishment; and the result was an appropriation of the workshop adjacent to the almshouse for the temporary accommodation of the school, and the sum of five hundred dollars toward putting it in repair; the Society agreeing to receive and educate fifty children from the almshouse.

"In April, 1807, the school was removed to the new quarters, its number soon increasing to one hundred and fifty, including the fifty pauper children, the limit of accommodation being about two hundred. Application for assistance was meanwhile made to the Legislature, resulting in a grant of four thousand dollars toward erecting a building and an additional thousand dollars each year, all from the excise funds of the city, 'until aid could be regularly afforded from the interest of the School Fund of the State.'

"In a very short time the new quarters also became too strait for the expanding school, and sufficient funds for a new building of proper size not having yet been accumulated, the Society again applied to the Corporation for assistance, and received the liberal gift of the building known as the 'Old Arsenal,' conveniently situated on Chambers Street and Tryon Row. The property was valued at ten thousand dollars, and was accompanied by the sum of fifteen hundred dollars in money, to assist in preparing the building for a school. The condition attending this liberal grant was that the Society should educate *all* the children of the almshouse. Extensive changes were made in the building, costing about $13,000, and providing

* Boese, History of the Public Schools, 1869.

not only a school-room for five hundred pupils, but also apartments for the use of the Board and for the Teacher's family . . .)*

"In 1808, their charter was altered. The name of the Corporation was changed to the Free School Society of the City of New York, and they were also authorized to receive into their schools all children who were the proper objects of gratuitous education, and by the liberality of the city government they were provided with a spacious and convenient building sufficient for five hundred pupils, then considered a school of the largest class . . . Mr. Clinton, the president of the society, then already one of the conspicuous statesmen of the nation, delivered an address worthy of an occasion which may not inappropriately be described as sowing the seed-wheat of all the harvests of education which subsequent years have gathered into our garners. It gave new vigor to the society, and opened anew the generous purses of the people, and donations from individuals, from Trinity Church, and from the legislature, to the amount of about $20,000, greatly strengthened the finances of the society. The circumstances of their incorporation, the removal of the original restrictions, the different religious persuasions of the trustees, as well as their Catholic spirit, all combined to prevent the distinctive inculcation of the peculiar views of any religious denominations. When the system of Common Schools for the state sent into practical operation, many of the cities had already in successful operation, Corporate Schools, like those of the Free School Society of New York, conducted on the Lancasterian plan, and almost entirely confined to the education of the children of persons in humble circumstances. In those cities, the general common school law of the state had no operation, except so far as the raising and apportioning the school funds were concerned.

"The moneys were raised as in other towns, but in this city they were to be apportioned by Commissioners appointed by the Common Council. And the law provided that the said commissioners should on or before the first day of May in each year, distribute and pay the said moneys so received from the said chamberlain to the trustees of the Free School Society, in the said City of New York, and the trustees or treasurers of the Orphans' Asylum Society, the Society of the Economical School in the city of New York, the African Free School, and of such incorporated religious societies in said city as now support, or thereafter should establish charity schools within the said city, and should apply for the same in proportion to the average number of children taught therein, free of expense, to be applied to the payment of teachers' wages alone, and the trustees or treasurers of the societies were declared inspectors of their respective schools. In this manner, at that time, the functions of the government in the matter of common school education were intrusted to semi-public and official bodies whose character was deemed a sufficient guaranty of their faithfulness. Much the largest of these was the Free School Society, which received in 1815, $3,708.14, as its share of

the first apportionment of the public moneys—an allowance which could not fail to be constantly increasing, and to place the society on a footing of security which would enable them to move with a firmer and steadier step in extending the advantages of education. They were still further strengthened in 1817 by the act of the legislature authorizing them to increase the number of their trustees, and 'after an ample compensation to the teachers employed by them, to apply the surplus of the public moneys to the instruction of school-masters on the Lancasterian plan, to the erection of buildings for schools, and to all needful purposes of a common school education, and to no other purposes whatever' they were thus enabled to commence teaching their teachers, supplying their schools with libraries, and establishing new schools.

"In 1822, similar privileges were granted to one of the religious societies, and some alleged irregularities connected with some of the religious charity schools, attracting attention to possible perversions of the public funds, the Legislature was induced to provide by law in 1824, that the Common Council of the city should from time to time designate the schools and societies which should participate in the public moneys, still restricting the application of the moneys to the poor alone.

"When the Common Council came to consider the subject of apportionment, all parties were heard before them in a discussion which, while conducted as it was by some of the best talent in the city, could not fail to show old truths in a new light, and to lead to conclusions, which, if not entirely new, were presented in such aspects as to exhibit more clearly and forcibly than they had ever before been presented, the elemental truths of American public education, as connected with religious peculiarities. The result was the entire exclusion of the religious denominations as such from any participation in the public moneys, and this, by a unanimous vote of the Common Council, which directed the moneys to be apportioned to the Free School Society, the Mechanics' Society, the Orphan Asylum Society, and the Trustees of the African Schools. This was the first great battle of the schools, and the victory was as decisive as it was important.

"The Schools of the Free School Society were hitherto, by their charter, to be Free Schools, and open to none but the poor. The Society however, found, with all their efforts, a great part of the children, even of the poor, could not be induced to attend the schools, and the conviction was forced upon them that, to the American mind, charity was humiliating, and unacceptable, even to the poor, and with a view to make their schools more useful they procured an alteration of their charter, by which, in 1826, the name of the Society was changed to the Public School Society, and they were authorized and required to provide, so far as their means should extend, for the education of all children in the city not otherwise provided for, whether such children were or not the proper objects of gratuitous education, and without regard to the religious sect or denomination

to which such children or their parents might belong, and authorizing them to charge for tuition a moderate compensation adapted to the ability of the parents, not excluding any merely on the ground of inability to pay. The same act also provided for a large increase in the Board of Trustees, and made the Mayor and Recorder ex-officio members of the Board.

"The rate of compensation went through several variations to make it acceptable, but these means were hardly more successful than others. The privilege of dependence and poverty to pay only in proportion to their ability, was as little sought after as entirely gratuituous instruction. The schools were large and useful, but thousands still neglected to attend them. Finding that both the free system and the pay system, when kept up as a charity, were unpalatable to American feelings, the Society could not fail to see fore-shadowed to them a better system by which the property of the city should be compelled to educate the people, and public instruction, freed from every odor of charity—being the right of all—would be gladly acceptable to all, and through the agency of the trustees a large number of the tax-paying citizens were induced to petition the legislature to impose a tax to raise money for the support and extension of popular education. The legislature, accordingly, in 1829, imposed a tax on all the property in the city for the support of Common School Education. This law, together with that of 1826, making it their right and duty to provide for all classes of children, was the starting point of the present provision for universal education at the public expense. The churches submitted with but ill-disguised dissatisfaction to the appropriation of almost all the public funds to this one corporation, prosperous and useful as it was, and repeated efforts were made to secure for the parochial schools a participation in those funds, but without success, and the schools of the Society continued to extend rapidly.

"It was finally alleged that although the society belonged to no particular religious denomination, and although it did not teach directly the creed of any particular sect, that still its schools were practically sectarian, and that its books and instruction had so strong a bias in favor of Protestantism that Roman Catholics, who were a large class of our citizens, and by universal consent entitled to a perfect equality of rights, could not conscientiously send their children to the schools. The society offered to make their books acceptable to all, but an excitement of feeling had arisen which could not be thus allayed. The subject was brought before the Common Council again, in 1840, and discussed with extraordinary ability on all sides. It was thence transferred to the legislature of the State in 1841, and became so important a question of state policy that at the opening of the session of 1842, the Governor, in his Annual Message, after stating that under existing circumstances twenty thousand children in the city were practically unprovided with instruction, proceeded as follows:

" 'Happily in this, as in other instances, the evil is discovered to have had its origin no deeper than in a departure from the equality of general laws. In our

general system of Common Schools, trustees chosen by tax-paying citizens, levy taxes, build school-houses, pay teachers and govern schools, which are subject to visitation by similarly elected inspectors, who certify the qualification of teachers, and all schools thus constituted participate in just proportion in the public moneys, which are conveyed to them by commissioners also elected by the people.

" 'I submit, therefore, with entire willingness to approve whatever adequate remedy you may propose, the expediency of vesting to the people of the City of New York, what I am sure the people of no other part of the State would, upon any consideration, relinquish, the education of their children. For this purpose it is only necessary to vest the control of the Common Schools in a Board to be composed of Commissioners elected by the people, which Board shall apportion the school moneys among all the schools, including those now existing, which shall be organized and conducted in conformity to its general regulations and the laws of the State, in proportion to the number of pupils instructed. It is not left doubtful, that the restoration to the Common Schools of the city of this simple and equal feature of the Common Schools of the State would remove every complaint. . . .'

"This recommendation of the Governor was extremely unacceptable to a large portion of the people of the city, and had it not proposed to preserve the schools of the Public School Society which had, deservedly, the confidence and affection of so large a number of the citizens, it is doubtful whether the popular will would have allowed the recommendation of the Governor to go into useful effect. As it was, however, the Legislature adopted the views of the Executive and by law introduced into this city the Common School System (1842) which had prevailed for thirty years in the residue of the State, placing the management of the schools in the hands of Inspectors, Trustees, and Commissioners elected by the people—still allowing the Public School Society and other corporations to continue their existing schools and participate in the public funds according to the number of their scholars—but prohibiting such participation to any school 'in which any religious sectarian doctrine or tenet shall be taught, inculcated or practised. . . .'

"In the year 1851 many friends of education in this Board and in the Public School Society, believing that the best interests of education would be promoted by combining the two systems into one, thus securing the greatest unity, harmony, and efficiency—proposed simultaneously in this Board and in the Board of Trustees of the Society the appointment of a joint conference committee to suggest the means of accomplishing so desirable a result. . . .

"Through the recommendation of that Committee, the deliberations of the two Boards and the action of the Legislature, the union was accomplished by the Society, appointing fifteen members of this Board to hold till January 1, 1855, and three trustees in every ward where the Society had schools, to go out in succession with those elected by the people—by all their schools being made

Ward School—by their conveying all their property to the City Corporation, (in which body all school property is vested), and by voluntarily giving up their corporate existence. This was done on the first day of August, 1853. . . .

"Thus by voluntary surrender terminated the separate corporate existence of a Society that, during nearly half a century of unremitted and unrequited philanthropic labor in the noblest of causes, imposed upon this city a debt of gratitude that can never be fitly estimated, much less repaid. During that period it has conferred the blessing of instruction on 600,000 children, and more than twelve hundred teachers. So long as the influence of those children and their teachers shall be felt, —and when will it cease? —so long shall the usefulness of the Public School Society continue. Its inventories, vouchers, documents and reports, and records of its routine of business have been properly deposited with the New York Historical Society; but history can never tell how much those unostentatious details have contributed to the safety, prosperity and glory of this great metropolitan city.

"That the names of those who have thus labored in the cause of education may be preserved in the records of this Board, Schedule No. 13 is made part of this report, and contains a list of the trustees and officers of that Society from its incorporation.

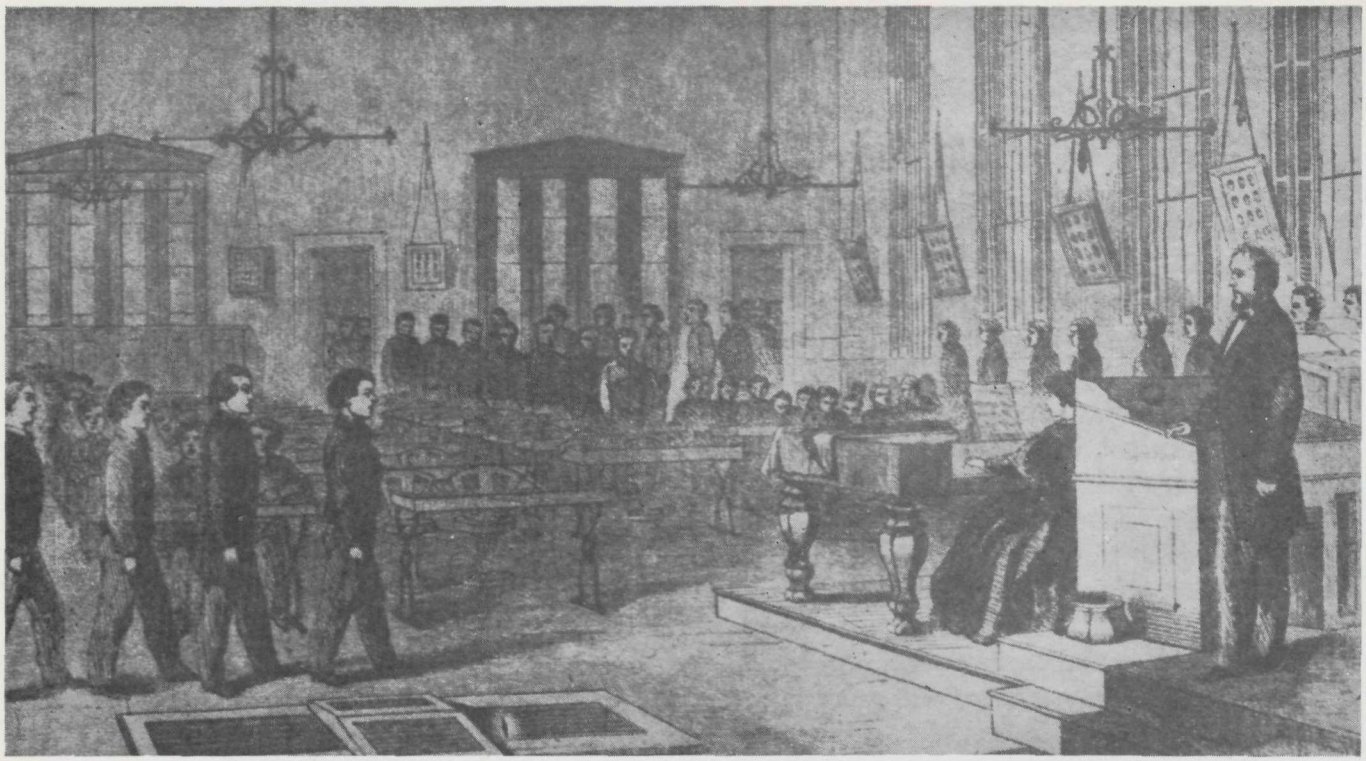
"The Board cannot more appropriately close this report than by expressing its satisfaction that during this year, and by its official agency, the great interests of public education are brought into one harmonious and homogeneous system, from this date to commence a career of greater efficiency, to dispense wider and wider the blessings of intelligence and virtue, and to commend still more warmth to the affections of the whole people the great trust which is committed to our care."

By order of the Board,

BOARD OF EDUCATION
NEW-YORK.

E. C. BENEDICT,
President.

ALBERT GILBERT,
Clerk.



SCHOOL HOUSES*

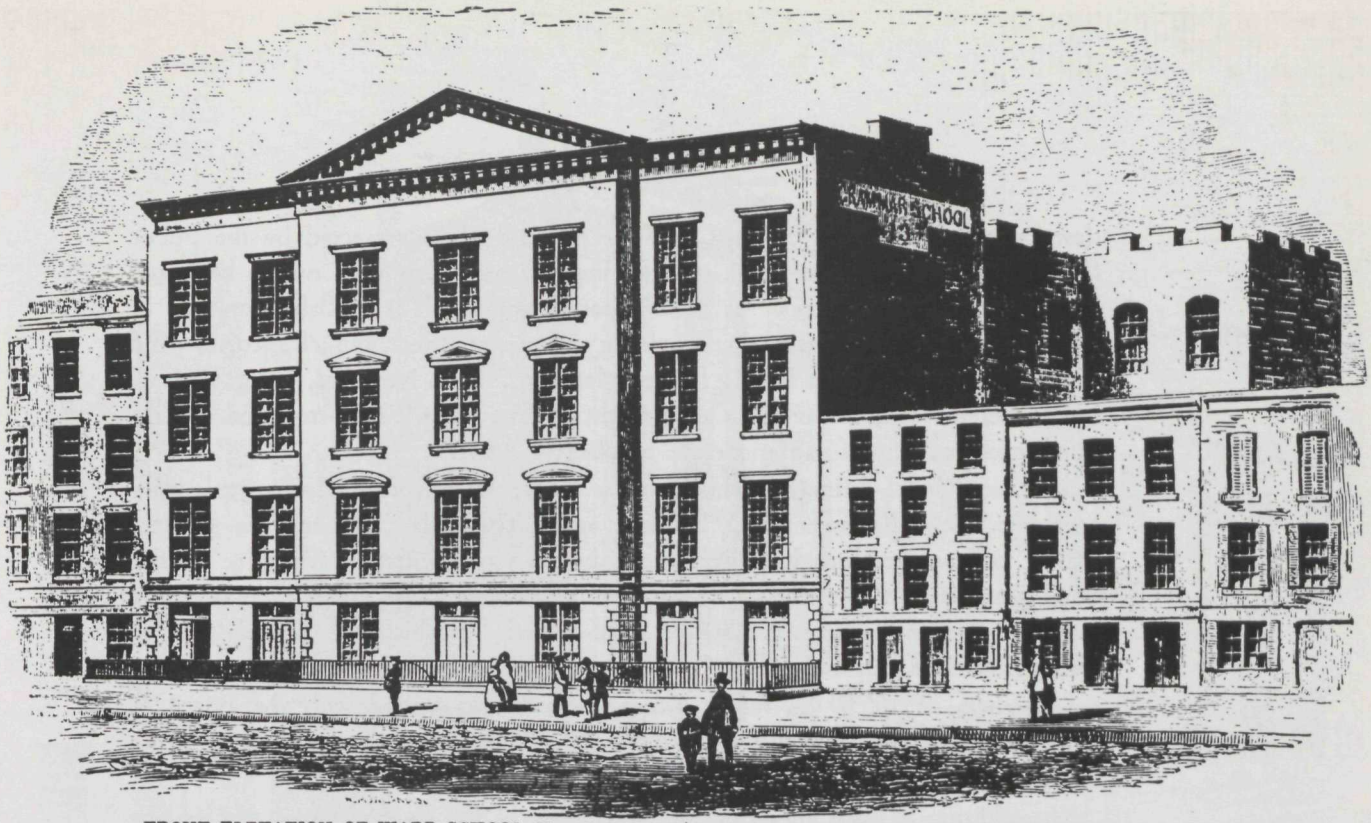
"The school buildings erected by the Public School Society were all built upon the same general plan, and that plan—owing no doubt to the limited funds of the Society—was a very economical one. Their 'Model Primary School-house' was built upon a single lot, covering the whole width—twenty-five feet—to a depth of sixty-two feet, and at that point was joined by a rear stairway wing some eleven feet wide by twenty-eight feet long. By this reduction in the width, some rear light was secured; but this was of service only on the brightest days, and when the fresh air and sunshine were not shut out by rear buildings on adjoining lots.

"Plans of one of these buildings are herewith presented, which will show very clearly the arrangement of the several floors.

"It will be seen that compactness and severe plainness are the main features of this plan. A building like the above accommodated about three hundred and fifty scholars. The arrangement of seats was very inconvenient, yet one of these buildings was considered, thirty years ago, as a great improvement on anything that preceded it.

"The buildings for 'Public Schools,' as they were called, . . . contained rooms for three departments which were designated as 'Boys', ''Girls',' and 'Primary'. The last of these was located in the basement, the floor of which was generally about five feet below the sidewalk line, and ceiling perhaps the same distance above it. The 'Girls'' school was on the main floor, and the 'Boys'' on the upper, or second floor. The Primary consisted of one large room, comprising the whole

* Boese, History of the Public Schools, 1869.



FRONT ELEVATION OF WARD SCHOOL No. 13, IN HOUSTON NEAR NORFOLK STREET, SEVENTEENTH WARD.

space enclosed within the walls, which was divided in the middle at times by sliding doors so as to separate the smaller children—the abecedarians—from those who were more advanced in their studies. For the accommodation of these little ones, a gallery of rising steps was provided at one end of the room; for the larger scholars, there were two rows of seats next the walls on the sides and opposite end of the room, and the teachers desk being placed midway between the two sections, near the line of the sliding doors, necessitated 'giving the cold shoulder' to one division when facing the other. By the arrangement of seats referred to, a large space was left in the central portion of the room for marshaling the scholars, and for the numerous drafts of the monitorial system.

"The Boys' and Girls' Departments were usually similar in their plan, and were much better arranged for seating purposes than the Primary; yet even in these schools the facilities for instruction were very limited. Usually but two class-rooms were provided, and these would each seat about fifty pupils, the remainder of necessity received were taught in the large room, or alternated in the use of the two classrooms. A visitors' entrance at the front led to two, and sometimes to all of the Departments, and pupils' entrances for each department were located at the rear of the building. This was in many cases a long, straight, narrow stairway, and external to the building.

"The capacity of these buildings was for about ten or eleven hundred pupils. The accompanying diagrams, representing 'Public School No. 17' (now Grammar School No. 16), on West Thirteenth Street, in the Ninth Ward, will give a general idea of the arrangements of the floors of such a building as has been

described; but this being the last but one of the buildings erected by the Public School Society, has embraced in it many improvements that were not to be found in the earlier buildings, not the least important of which is the abandonment of the under-ground basement, the providing of one or two more class-rooms, and the adoption of staircases having frequent landings. Such buildings, being of small size, were not as economical as they might at first seem. They required a large number of buildings for a moderate number of pupils. . . .

"The 'Model Primary School' on a single lot, as formerly erected, gave accommodations for some three hundred and fifty pupils. The modern Primary School on two or three lots gives much better accommodation for three or five times that number. It will be noted that the modern plans, both Grammar and Primary, furnish a large number of class-rooms; by which the schools can be thoroughly classified, and the ends of teaching be better subserved.

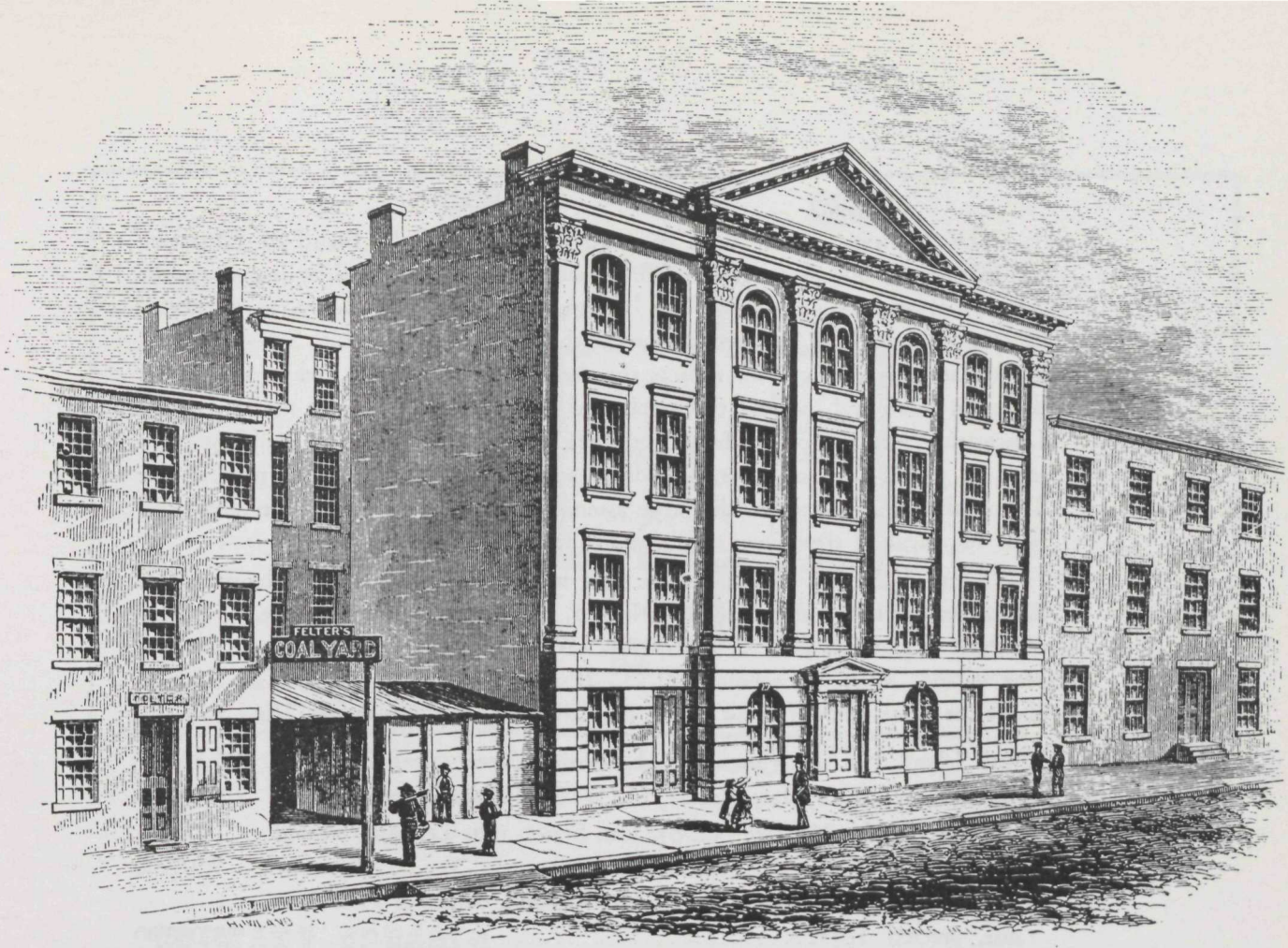
"When, in 1853, the Public School Society was united with the Board of Education, that society transferred to the Board some thirty-four buildings which were owned and had been erected by them. . . .

"In addition to such alteration and rebuilding of the *Public School* edifices, the Board of Education has, since the year 1853, enlarged or rebuilt thirty-two of the Ward School-houses (Grammar and Primary), and has erected twenty-nine new buildings.

"There are now (1869) in this city twenty-nine Primary School-houses and fifty-five Grammar School-houses, in addition to the hired premises that are used by the schools under control of the Board of Education; nine of the former and five of the latter are all that are left of the thirty-four buildings that were erected by the late Public School Society. Of the remaining Primaries, four are buildings that were purchased with the sites on which they stand, and have been altered and adapted to school purposes. The others have been erected by the Board for the special purpose for which they are used, and, in accordance with the best known principles of construction and arrangement, fitted with all conveniences for teachers and pupils, and supplied with the best styles of furniture, and the most approved heating and ventilating apparatus. The play-grounds are in all cases ample, and so arranged that the pupils at recess can enjoy their sports in the open air or under cover, as they may prefer, or circumstances may admit.

"The school sites belonging to the Board comprise over three hundred lots, and, if placed together in blocks with the streets usually allowed, would include upward of twenty acres of ground; and the floors of the school buildings placed in the same manner, would comprise some sixty acres more—quite a little farm, upon which many laborers are busily engaged sowing the seed, from which abundant harvests of untold value are annually gathered to enrich the nation.

"From the general statement preceding it will be seen that great improvements have been made within a few years past in the school buildings of this city;



FRONT ELEVATION OF WARD SCHOOL-HOUSE No. 20, IN CHRYSTIE NEAR DELANCEY STREET, TENTH WARD.

formerly the Primary Departments were located in basements that were seldom light and cheerful, and always subject to annoyances of various kinds—now all these schools are well provided for above ground, and free from disturbance; then a couple of class-rooms for an upper department were considered sufficient; now there are few buildings that have less than eight of these rooms for any department including the Primary. A building that accommodated one thousand pupils was considered a wonder. Modern buildings on the same sites accommodate in a better manner double that number. Once the school-houses of the city were remarkable for their extreme plainness, but now a wiser economy provides for the judicious adornment of these edifices, that they may present attractions to those for whose benefit they were erected.

"The school-houses of to-day are solidly built, conveniently arranged, well supplied with apparatus, and yet probably cost less than any other public buildings of the same class constructed at the same time and under similar circumstances. Improvements are constantly sought after each new building is better in some point than its immediate predecessor. . . ."

The following extract from the Annual Report of the Board of Education for 1854 shows how it sought to reduce building costs per pupil by increasing the capacity of school-houses. The first buildings erected by the Board, as illustrated by Ward School No. 21, were not unlike those built by the Public School Society, but the interior arrangement reflects the desire of the Board to reduce the size of the main room and increase the number of class rooms. However, vestiges of the Lancastrian methods of teaching, and their influence upon school building plans were to persist for many years. Many schools built in the early part of the Twentieth Century retained the large assembly rooms with sliding or folding partitions for dividing them into smaller units for class instruction.

"One of the first school houses built under the jurisdiction of the Board of Education, in 1843, (No. 21, late No. 4), in Marion Street, near Prince a plan of which is given in plate 2, cost $12,329.76, and the average attendance for this year is 583. Cost per scholar $21.15. If we add to this, the cost of those of about the same amount, built under the jurisdiction of this Board, Viz.:

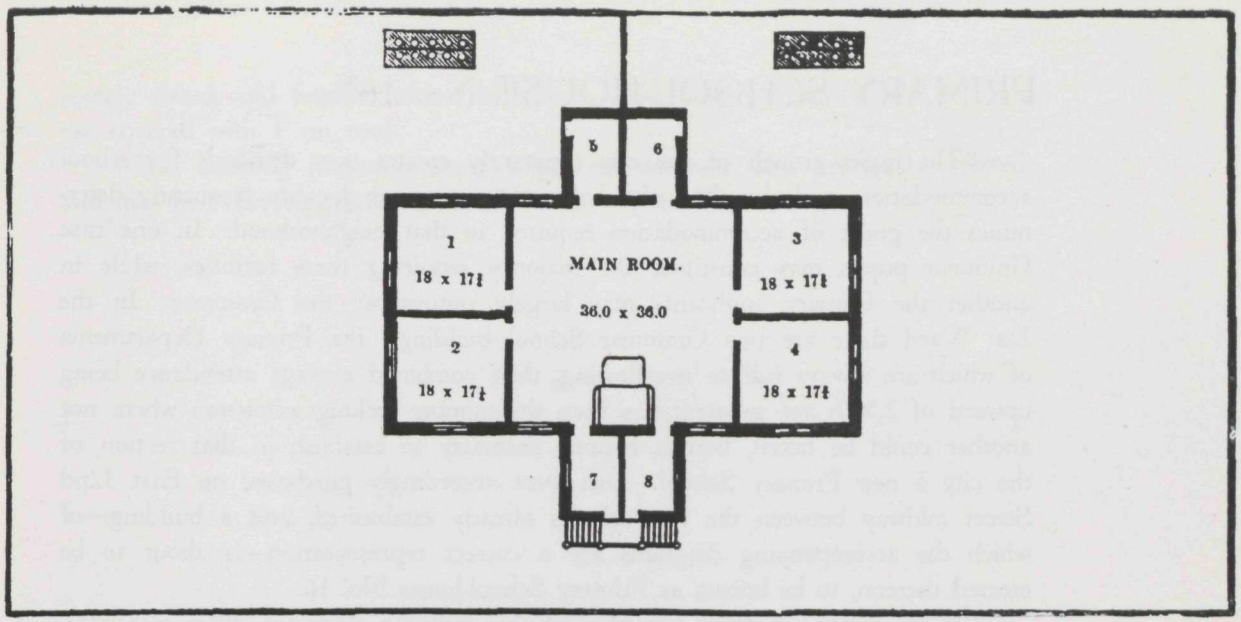
Ward School, No. 21, (late No. 4), Marion Street, near Prince...	$12,329.76
Ward School, No. 23, (late No. 6), 26 City Hall Place, erected in 1843	10,000.00
Ward School, No. 24, (late No. 8), Elm Street, near Leonard, erected in 1844	9,917.00
Ward School, No. 19, (late No. 2), Ninth Street, corner of First Avenue, erected 1843	13,000.00
Ward School, No. 31, (late No. 16), Monroe Street, near Montgomery, erected in 1844	11,842.00

"We find the aggregate cost $57,088.76, and the average attendance 2,952. Cost per scholar, $19.34.

"If we now take the same number of the school-houses of the highest cost, erected when materials and labor were very high, viz.:

Ward School, No. 40, (late No. 25), 20th Street, between First and Second Avenue, erected in 1849	$20,111.00
Ward School, No. 41, (late No. 26), in Greenwich Avenue, opposite Charles Street, erected in 1950	19,000.00
Ward School 42, (late No. 27), Allen Street, between Walker and Hester, erected in 1850	21,000.00
Ward School, No. 44, (late No. 29), corner of North Moore and Varick Streets, erected in 1851	25,911.00
Ward School No. 45, (late No. 30), 24th Street, near Seventh Avenue, erected in 1851	24,899.00

"We find the aggregate cost $110,911, and the average attendance 6,966. Cost per scholar, $15.92, showing a difference in favor of the larger and more expensive houses of $3.42 per scholar."

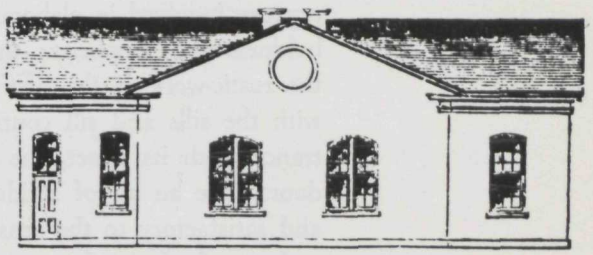


PLAN OF PRIMARY SCHOOL No. 32.

PRIMARY SCHOOLS

Throughout the history of our school system local conditions in different parts of the city created by fluctuating residential populations and the changing character of the inhabitants have led to varying demands for school accommodations. A typical situation in the 21st Ward in the 1850s is described by Boese.

FRONT ELEVATION, PRIMARY SCHOOL No. 32, in 186th-STREET, TWELFTH WARD.



SIDE ELEVATION, PRIMARY SCHOOL No. 37.

PRIMARY SCHOOL-HOUSE No. 16*

"The rapid growth of the city constantly creates new demands for school accommodation, and the class of inhabitants in a given locality frequently determines the grade of accommodation required in that neighborhood. In one case Grammar pupils may constitute the majority requiring these facilities, while in another the Primary applicants may largely outnumber the Grammar. In the 21st Ward there are two Grammar School buildings, the Primary Departments of which are always full to overflowing, their combined average attendance being upward of 2,500; yet so great has been the number seeking admission where not another could be taken, that it became necessary to establish in that section of the city a new Primary School. Lots were accordingly purchased on East 32nd Street midway between the two schools already established, and a building—of which the accompanying diagrams are a correct representation—is about to be erected thereon, to be known as Primary School-house No. 16.

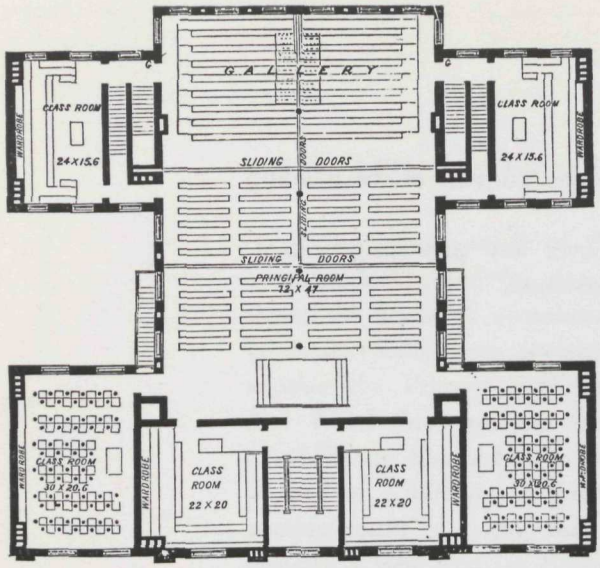
"In its general features the plan of this building does not differ materially from the Grammar School plan just considered; although the frontage of the lots is some 20 feet less, the arrangement of the rooms and stairways is very much the same; the purpose of the building, however, is different. The front of the first floor contains the janitor's apartments, very conveniently arranged; back of this are the playgrounds, both open and covered, for the pupils. A visitors' entrance at the centre of the front leads to all the Departments, and four fire-proof stairways, conveniently located, connect the playgrounds with the several floors above. The second and third floors are similar in arrangement, each having a large assembling-room, with gallery-rooms for the smallest scholars in the rear of this. There are two class-rooms at the sides of the gallery-rooms, and four more in front of the main room. In the stairway wings are found the rooms with wardrobes, etc., for the teachers' use. The accommodation afforded by this building will be for between 12 to 1,500 hundred pupils, which will materially relieve the pressing wants of the neighborhood in which it is situated.

"The exterior view shows again what may be done toward securing a really handsome building by a judicious use of simple material, without incurring the expense involved in elaborate ornamentation. The characteristics of this front are boldness and simplicity: the material used principally Philadelphia pressed brick; the rustic-work of the first story, and the keys and spring-blocks of the windows, with the sills and sill courses, being of polished brown stone. The imposing entrance, with its tower, the wing projections, and the arches of the windows and doors, give an air of solidity to the structure that is at once pleasing to the eye and satisfactory to the sense. Above the cornice—which is a fine feature in itself —the roof of the front section is carried up in a convex Mansard curve, hand-

* Boese, p. 161 f.

somely slated, and finished with a balustrade. The other portions of the building are covered with a tin roof.

"This building possesses many improvements over any previously erected, and may be fairly considered a model Primary School-house."



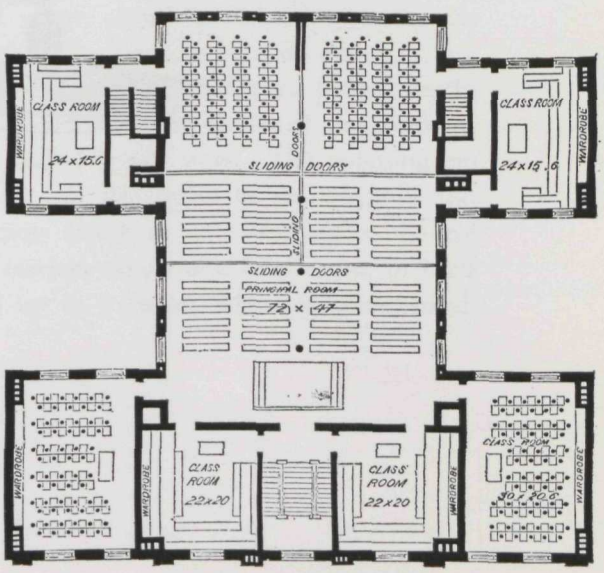
PLAN No. 2.—PRIMARY DEPARTMENT.

SCHOOL FOR GIRLS

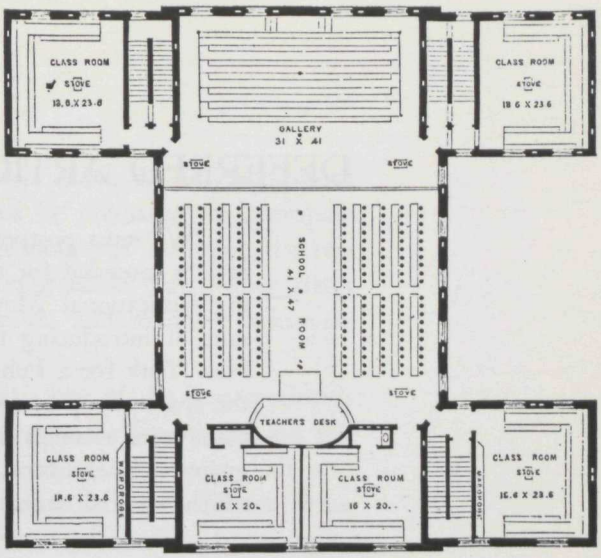
In its earlier years the Public School Society did not accept female pupils. Our historian* states:

"No 4 was the first school-house especially constructed with separate departments for boys and girls. No. 1 had no girls . . . No. 2 had a few girls, but in 1818 it was stated in a hand-bill circulated in that neighborhood by order of the Society that the teacher was forbidden to admit any more, those already enrolled being transferred to the schools of the Female Association as fast as boys, who were specially invited, could be found to take the vacated places. On the organization of No. 3 in its temporary quarters, it was found impossible to exclude the girls entirely, as the Female Association had no school in that vicinity. They had no separate department till the completion of the new building on the corner

* Boese.



PLAN No. 4.—MALE DEPARTMENT.

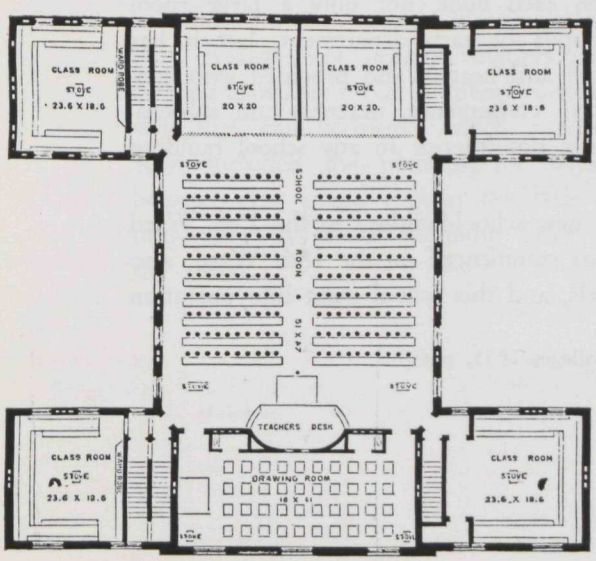


PLAN No. 3.—PRIMARY DEPARTMENT.

of Grove and Hudson Streets, in 1821. In No. 4, Mrs. Picton was appointed teacher of the Female Department, at a salary of $300, her husband receiving $800 for the Boys' Department, with $200 additional for house-rent, the teachers of the other schools living in the school buildings. In order to obtain the greatest possible benefit from his training and experience, Mr. Picton, of whom great things were evidently expected, was entirely emancipated from the by-laws and Manual, and directed 'to conduct his school in any way he thought fit until further orders from the trustees.' "

Thus in 1821 the Society established the pattern of separating boys and girls in grades above the primary department. The Board of Education went a step further in erecting separate schools for boys and girls in some wards.

Some of the new buildings that were built in the 1850s were of such excellent design as to attract nationwide interest. One of these was a separate school for girls. The plan of this building was so highly regarded by a New England educational journal that it felt obliged to alter its publishing schedule.



PLAN No. 4.—FEMALE DEPARTMENT.

DEFERRED ARTICLES*

We must postpone to our next number several articles and communications intended for this, together with many statistics and notices respecting Educational Movements in different parts of our country. For the sake of introducing the following plans of the edifice recently opened in New York for a Public School, exclusively for Girls, we shall also abridge the space set apart for a notice of *Educational Journals and Books*. These plans were accompanied by a communication from Professor Elias Loomis, giving a brief history of the Public Schools in the City of New York, which we shall insert hereafter.

The following is excerpt from the article:

"In no one direction is the progress of public instruction more evident than in the provision now made or which is now proposed for the education of girls in a few of the large cities of our country. In many of the large towns of New England even, where it has generally been supposed that there was an equality of school privileges for children of either sex, the girls were expressly and entirely excluded, or they were allowed to attend for a few months in the year, down to a comparatively recent period. Even within the last quarter of a century, the proposition to extend the course of instruction for girls in the city of Boston was opposed and defeated by some of the most influential citizens and friends of public schools. . . . Prof. Loomis, one of the School Commissioners in the 15th Ward, New York, has forwarded to us the following memorandum of the new Public Grammar School-house for girls.

'Several years since the school officers of the 15th Ward formed the plan of establishing a new school devoted exclusively to the instruction of girls. They designed that the first floor (above the basement) should be devoted to the instruction of the youngest pupils; the second floor to the pupils of a middle age; and the upper floor to those pupils who were most advanced. . . . The building has been completed and was opened for the reception of pupils on the 6th of February, 1851. This building contains on each floor, not only a large room suitable for assembling together all the pupils of each department, but it has also six class-rooms of large size, well lighted and heated, and provided with convenient seats, black-boards, etc. In respect to convenience, neatness and substantial accommodations, this building is certainly not inferior to any school building in the city.

'After the arrangements for erecting a new school-building in the 15th Ward had made considerable progress, another was commenced on the 18th Ward, also designed exclusively for the reception of girls, and this school went into operation

* American Journal of Education, New England Colleges 1855, p 407 f.

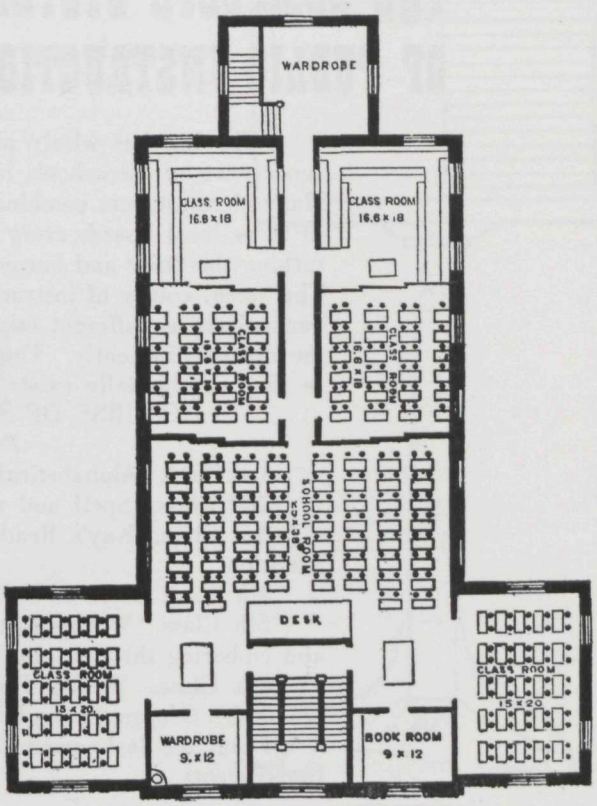
in September, 1855. These are the only Ward Schools which do not admit both boys and girls in the same building. It may perhaps be premature to anticipate what will be the verdict of the public, respecting the policy of assigning the two sexes, to separate school-buildings, but it seems not improbable that it may result in our having one set of schools exclusively for boys, and another exclusively for girls.'

"The building represented in the following plans is one of the best specimens of School Architecture in the country. The arrangements for ventilation are not as perfect as they might have been made. The plan of one large hall and several large class-rooms on the same floor, will admit of the scholars being distributed into several classes, with an assistant for each class-room, or of being kept under the immediate management of the principal, and sent out for recitation to several class-rooms."

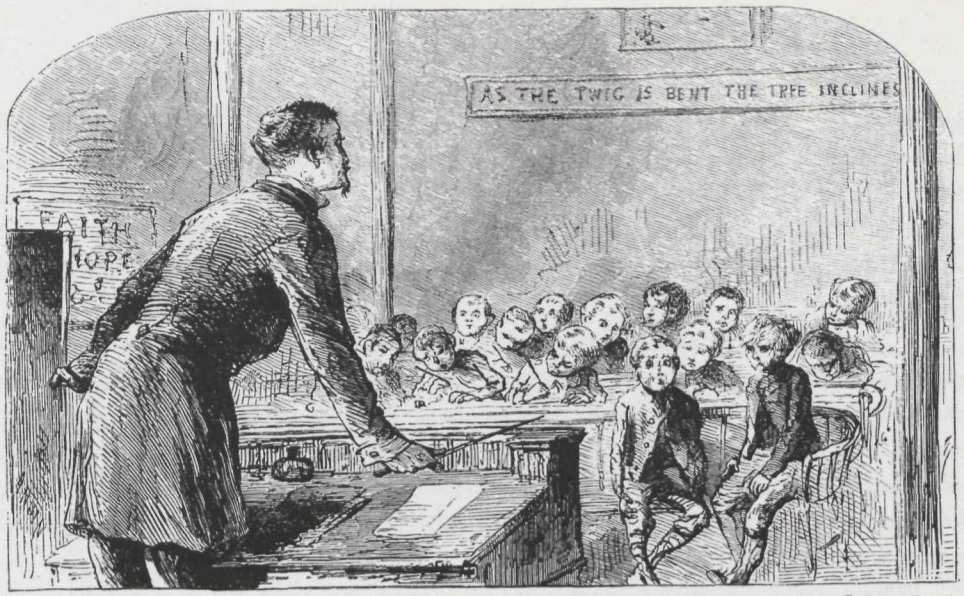
There are no galleries in this building and the long benches in the main room and in some of the classrooms have given away to double seats. Nor are there any movable partitions to divide the "schoolroom" into classrooms. This plan, however, must be regarded as an advanced design that was not typical of the schools that were built during the next three decades. The local Boards in each ward planned their own buildings and many of them showed little improvement over those of 1843.

While Public School No. 47 would not merit today the praise given it a century ago, it undoubtedly served the more limited requirements of the course of study at that time.

The complete course of public instruction, as defined by the Board of Education, is a model for its brevity and is revealing for the latitude it allowed the local Boards—not only in matters concerning instruction, but in "every function that they can perform", which, presumably, included the planning of school houses. This would explain the lack of uniformity in school planning prior to the 1890's.



III.



LAYING DOWN THE LAW. *Culver Service*

THE COMPLETE SYSTEM AND COURSE OF PUBLIC INSTRUCTION*

"The law has wisely placed the immediate government and official supervision of the schools in the local Boards of their respective wards. Many circumstances combine to render it expedient to leave in the hands of those local Boards every function that they can perform, without disturbing the unity and harmony of the system, or impairing its efficiency. The actual course of instruction in the schools varies, therefore, in some particulars, as different teachers and Boards of School Officers arrange the details differently. The following presents a full synopsis of them as they substantially exist:—

COURSE OF STUDIES IN WARD SCHOOLS

Primary Department

1st Class. Alphabetical Cards.

2nd Class. Spell and read monosyllables.

3rd Class. Kay's Reader, No. 2, and Sanders' Spellers; Tables of Addition.

4th Class. Same as 3rd, with ciphering through addition.

5th Class. Webb's Reader, No. 2, Swan's Speller, Price's Table-book and ciphering through multiplication.

6th Class. Webb's Reader, No. 3, Pierson's Speller and Tables, Monteith's Geography, and ciphering through division.

From the last-named class the promotions are made to the Upper Departments.

* Annual Report of the Board of Education, 1854.

UPPER DEPARTMENT

Male Department

Class 1st. Receives the promotions from the Primary Department; and reviews the simple rules, and becomes thoroughly acquainted with the Tables of Weights and Measures; also studies Geography.

Class 2nd. Federal Money and Denominate Numbers as far as Compound Multiplication; pursues the study of Geography also; Spelling from dictation, thoroughly taught.

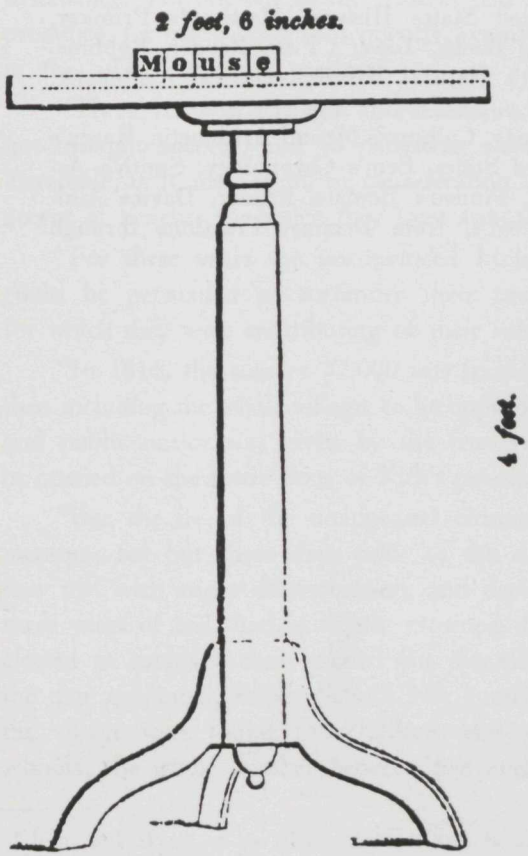
Class 3rd. Denominate Numbers and Reduction; commences the study of grammar, and becomes proficient in Geography.

Class 4th. Rule of Three and Fractions, History of the United States, English Grammar and Composition, Geography, Spelling.

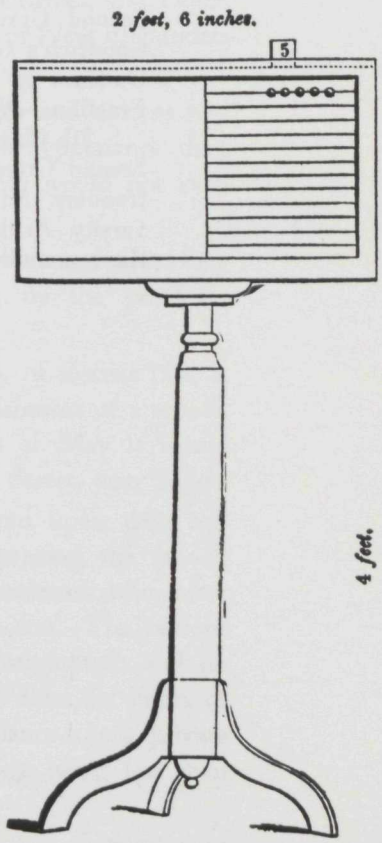
Class 5th. As far as the Square and Cube Roots; thorough course of Historical and Grammatical Instruction; and commences the study of Algebra.

Class 6th. Is subdivided into two classes; the pupils of which are preparing for admission into the Free Academy, by pursuing the course of study requisite to the accomplishment of that end.

All the Classes are taught Penmanship, Declamation and Drawing,



THE SYLLABARIUM, OR SPELLING-STICK.



THE ABACUS, OR NUMERICAL FRAME

Female Department

1st Class. Sanders' Spelling Book, Underhill's Table-book, Parley's Geography, Sanders' Third Reader, Davies' Arithmetic—Numeration, Addition and Subtraction.

2nd Class. Sanders' Spelling-book, Underhill's Table-book, Parley's Geography, Angell's Fourth Reader, Davies' Arithmetic—Multiplication and Subtraction.

3rd Class. Swan's Speller, Price's Table-book, Hazen's First Grammar, Fitch's Geography, Angell's Fifth Reader, Davies' Arithmetic—Division, Short and Long.

4th Class. Hazen's Definer, Price's Table-book, Hazen's First Grammar, Clark's Astronomy, Goodrich's Geography—Reading Books: Willard's History of the United States, Webb's Fourth Reader—Davies' Arithmetic, through Reduction, and Federal Money.

5th Class. Gummere's Spelling-book, Price's Table-book, Well's Grammar, Davenport's History of the United States, Clark's Astronomy, Goodrich's Geography—Reading Books: Robbin's Outlines of History, Tower's Fourth Reader—Davies' Arithmetic, through the Compound Rules.

6th Class. Lynd's Etymology, Colburn's Mental Arithmetic, Hazen's Second Grammar, Scott's United States History, Mattison's Primary, Goodrich's Geography—Reading Books, Tower's Fifth Reader, Robbins' Outlines of History, Ackerman's Natural History—Davies' Arithmetic, Fractions—Vulgar and Decimal.

7th Class. Thomas' Etymology, Colburn's Mental Arithmetic, Hazen's Second Grammar, Scott's United States, Bem's Chronology, Smith's Astronomy, Mitchell's Geography, Pinneo's Hemans Reader, Davies' University Arithmetic, and Greenleaf's, from Decimal Fractions through the remainder of the book."

EARLY BROOKLYN SCHOOLS

The Brooklyn school system was started in 1816 when Public School No. 1 was opened. We are indebted to Thomas W. Fields* for an account of its beginning and development over more than half a century.

"In all the schools hitherto established (before 1816), the expenses were paid by the patrons of the schools, although the legislature had as early as 1795 appropriated $50,000 a year, during five years, for their encouragement, and in 1805 established the Common School Fund. Brooklyn does not seem to have availed herself of the privileges granted by these acts until 1813, when the trustees of district No. 1 were elected.**

"The new system of educational support did not, however, commend itself to our Dutch ancestors. They were willing and eager enough to organize and support institutions of learning in their own languid and primitive fashion; but they did not take kindly to this Yankee mode of enforcing payment for their sustenance. All but one of the trustees had suspiciously Puritan names, and Dutch prejudice, for many years subsequently, resented the interference of New Englanders in the affairs of their precincts.

"Three years of struggle and resistance between the trustees and citizens had not brought success; and so persistent were the latter in their repugnance that, incredible as it may seem, in consideration of Dutch thrift, they would not even accept of benefits for which they were annually paying.

"For three years the unconvinced Hollanders paid school-taxes, before they could be persuaded to surrender their prejudices and profit by the privileges for which they were contributing of their substance.

"In 1816, the sum of $2,000 was levied upon the property of district No. 1, then including the whole village, to be appropriated to the establishment of a school, and public notice was given by the trustees that on the 6th of May it would be opened on the lower floor of Kirk's printing office, in Adams Street, near Sands.

"But the ire of the unappeased citizens was at last vented upon their tormentors; for but three days prior to the day fixed for commencing the school, they met with angry determination, and deposed the worthy gentlemen who, after three years of toil, had so nearly crowned their labors with success. The persons elected to supplant them carried out the measures they had inaugurated; and on the day appointed, Public School No. 1 was duly opened.* Within the limits of the village were found 552 children who were not in attendance upon private schools; the whole number between five and fifteen years of age being less than

---

* Historical Sketch of the Public Schools and Board of Education of the City of Brooklyn, by the Superintendent, 1873.

** District No. 1 then included all of the Village of Brooklyn.

one thousand. . . . Judge John Dikeman was the first principal of public schools under State law. . .

"In 1821, one hundred and eighty-eight pupils were taught in that school, at the expense of $454; and in 1824 two hundred received the same privilege, at a cost to (sic) each of four dollars, after deducting the appropriation from the State of $413. The tuition was conducted on the Monitorial, or Lancasterian system."

Superintendent Field was a forthright and outspoken man, gifted with an easy capacity to unburden his thoughts. He appears not to have shared the architectural ideas of some members of his Board. The following are some of his characterizations of the early schoolhouses in Brooklyn.

"No. 12

The building occupied by this school was erected soon after the completion of No. 11. Its peculiar architecture has, happily for education, never been imitated, and it remains the sole specimen of an attempt to combine the facilities for education with the conveniences for rope-making.

"No. 13

Was established in the latter part of 1849, and was remarkable for its destruction by tornado and conflagration. In one of those parixysms of originality which have affected the Board at various times, it directed the construction of two school-houses in conformity with the whimsical conceptions of the then School-house Committee. Nos. 6 and 13 unluckily fell under the unfortunate influence of one of these aberrations. They were constructed with their greatest length fronting upon the street, comparatively shallow in depth, and without wings.

"At 8 o'clock in the morning, a fierce tornado swept over the two cities, and many a stout structure in them felt its power, and not a few of the weaker fell victims to its fury. No. 13 stood broadside to the direction of the tempest, which it might still have resisted but for an unfortunate exhibition of economy in its construction. The side walls had not been carried up close to the roof, and large spaces remained between the rafters on the top of the wall. When the fiercest blast of the tornado struck the building, it lifted the front edge of the roof, and the immense, sail-like resistance of the great roof to the blast secured its destruction. In an instant the front half rolled back upon the other moiety of the roof, and both crushed through the first floor. The gable end of the building, now unsupported, yielded to the fury of the wind, and fell crashing through the fallen roof and floors to the basement. A brave old Irishman, John Sheedy, who subsequently fought through the whole period of the Civil War, was caught by the fall-

---

* "The first establishment of this school is ascertained, . . . to have been in July, 1661. . . . It is shown, by various documents, to have been in existence at different periods, under one form or another, for more than two centuries. It was not until May 6, 1816, that it was opened as a district school, under the State Law of 1805, in Adams Street, near Sands."

ing timbers, and pinned so firmly to the furnace that his clothes were burned from his side before he could extricate himself from the ruins.

"The wreck of the building, thus suddenly thrown around the furnaces, was soon in flames, and in an hour was wholly consumed. Of the one thousand children who would have been crushed and imprisoned in the ruins had this destruction occurred during the hours of school session, it is beyond conjecture to suppose that one-half would have escaped the crash of the falling wreck, or the still more horrible fate of burning to death. The building of public school No. 13 was the last which was erected by funds obtained from district tax.

"No. 14

The building occupied by this school, also remarkable for the tragic event connected with its destruction, was erected the early part of 1854. Fortunately for the interests of education, no attempt has been made to imitate its plan of construction. It is a satirical comment upon the sagacity of school officers, that this monstrosity of architecture was considered a model more worthy of imitation by the building committee of the Western city than all other school structures in Brooklyn and New York.

"This building which had been constructed agreeably to some eccentric system of architecture, was the offspring of the imagination of the then chairman of the School-house Committee. It has been rebuilt since . . . in strict adherence to this whimsical design. . . .

"No 24

This school was organized as Bushwick District School No. 2, at the Bushwick Cross-roads, a hamlet of the old Dutch period, and, at the time of its establishment, almost as thoroughly Hollandish as in the days of Peter Stuyvesant . . . This primitive school-house was a model of economy in space and materials. The whole area of ground appropriated for it was twenty-eight feet square, and the structure twenty-two by twenty-four feet, with ceilings so low that any person of ordinary stature could reach it with extended hand while standing on the floor. The seats were formed of slabs, pierced for legs, which protruded through the flat side, on which the pupils were daily tortured with (while?) sitting, and the desks were equally rude and inconvenient . . .

"No. 35

Now in process of construction (in 1873) on the corner of Lewis Avenue and Decatur Street, marks a new era in the progress of improvement of school structures, which will be a source of gratification to all the members of the Board who have been instrumental in its promotion. In the immense structures hitherto erected many conveniences, and even necessities, were sacrificed to economy. This equivocal virtue affected not only the expenditure of money, but the utilizing of

space. A large assembly-room was deemed absolutely indispensable in each department, and, as a natural sequence, its space must be made available for recitation-rooms. The taste for scenic effect of a former building committee determined their decision in favor of sliding glass partitions. The arguments, or rather excuses, urged in favor of a plan involving so many inconveniences, were remarkable at once for their fallacy, their ingenuity, and their success. It was absurd, the committee declared, to erect a building at great cost to the overburdened tax-payers, with a large room which could only be occupied as an assembly-room three or four times each day. It must, therefore, be susceptible of division into class-rooms. 'Now, the teachers need watching, for they are notoriously eye-servants; and therefore, the partitions must be transparent, to admit of constant espionage by the principal.' Montaigne's perplexity seems never to have occurred to the plausible but somewhat illogical advocates of detective supervision. If the teachers were vigilant over their pupils only while the principal serves as spy, who will assure us of his fidelity? But the climax of unanswerable reason was reached, when the vehement advocate found a peroration in, 'And then look at the beautiful scene when the great doors of glass slide noiselessly back and exhibit five hundred smiling faces.' It was in vain to urge that the sensation drama, or the tricks of the stage, was a poor model for the purposes of education; in vain to say that these thin partitions, with their numerous apertures, transmitted sound with fatal facility for study; in vain to urge the constant distraction of the pupils from their exercises, by the need of making their class-rooms constant thoroughfares for noisy or busy feet.

Although the new order of architecture does not wholly defend the teachers and pupils from these discomforts, it is a vast advance upon that which has prevailed so long. The new structures now in course of erection for Nos. 24 and 35 will be three stories in height besides the basement and attic. Their extreme length will be one hundred and thirteen feet, of which seven feet six inches is a double stair-case with independent walls. The front width is ninety-four feet, of which twenty feet on each side of the main building is thirty-five feet in depth. These two wings are to be occupied in front with class-rooms, and in the rear with a second set of stair-case. The building will be thus provided with five independent entrances to each story. Had no other advantage been gained by this plan than increased security to life from fire or other contingency, the gain would have amply compensated for the additional cost; but the primary and almost incalculable benefit obtained, is in the comparative security of the recitation-rooms from that necessary intrusion of scholars not members of the class which has made the glass-partitioned class-rooms well-nigh intolerable. Eight class-rooms are by this plan completely isolated, and two others are only partially liable to intrusion, certainly from less than one-fourth of the sources which affect those of other school structures. The dimensions of the main building, excluding the wings and

stair-house, are one hundred and five feet in length, by fifty-four feet six inches in breadth. The extreme height is seventy-eight feet, divided into basement, three stories of class-rooms, and the attic.

"The front rooms of the basement are to be furnished as apartments for the residence of the janitor and his family, while the remainder of the space serves as a sheltered playground. The great attic also has an important function in the economy of ventilation and heating. It is not anticipated that the new buildings will be completed for occupation before the first of September in 1874.

"The new plans include another class of improvements, of which the greatest praise can hardly be considered exaggerated. Every recitation-room is provided with a pupils' wardrobe, and every department with a teachers' clothes-room, stationary wash-basins, and water-closet. The nameless horrors of buildings unprovided with these conveniences are scarcely to be imagined.

"Where economy of space is so great a desideratum, it will surprise many, even of the Board, to learn, that in some of our best structures one-fifth of the available space has been solely occupied for clothes-rooms.

Culver Service

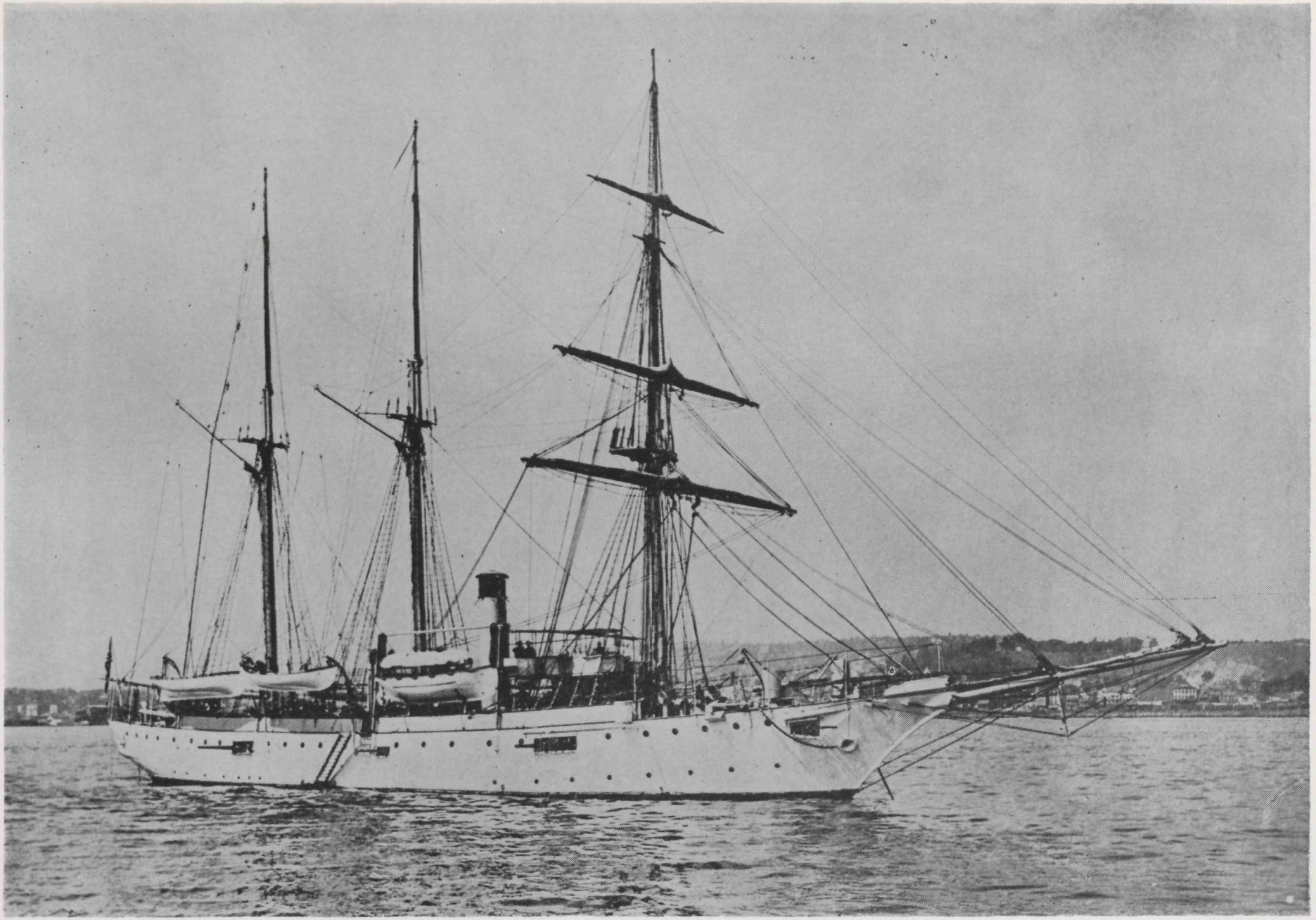
FIRST ANNUAL REPORT OF THE CITY SUPERINTENDENT OF SCHOOLS

"The City of New York, as at present established, came into corporate existence on January 1, 1898, through the consolidation, by act of the legislature, of the following localities with the old City of New York, which embraced what are now known as the Boroughs of Manhattan and The Bronx: The County of Kings (City of Brooklyn), the County of Richmond, the city of Long Island City, the towns of Newton, Flushing and Jamaica, and that part of the town of Hempstead, in the County of Queens, which is westerly of a straight line drawn from the southeasterly point of the town of Flushing through the middle of the channel between Rockaway Beach and Shelter Island, in the County of Queens, to the Atlantic Ocean. The territory embraced within the boundaries of the consolidated city is 306 square miles. Many parts of this territory—that part, for instance, of Manhattan Island bounded by East River, East Fourteenth street, Third avenue, the Bowery, and Catherine street—are densely populated. The locality just described is probably more densely populated than any other equal area in the world. In other parts of the city, such as the farm lands in the boroughs of Queens and Richmond, and parts of Brooklyn and The Bronx, the population is comparatively sparse.

"Under these conditions it is obvious that the schools found within the territory of the city, adapted as they had been in some cases to a dense city population, in others to a thinly settled farming community, were and are of the most varying description. They range all the way from the great city high school to the little district schoolhouse with its single room and single teacher.

"The methods of administering the schools in the various communities now consolidated into a single city were as various as the schools themselves. In the old City of New York (now the boroughs of Manhattan and The Bronx) there was a board of education consisting of twenty-one members, vested with powers chiefly legislative, and a board of superintendents, consisting of a city superintendent and fifteen assistant superintendents, charged with the general supervision of the schools, and the licensing and nomination of teachers. In addition, the city was divided into thirty-five inspection districts, for each of which the Mayor was authorized to appoint five inspectors whose duty it was to visit and inspect the schools in their several districts and report the results of their investigations. In the City of Brooklyn there was a board of education consisting of forty-five members, which possessed not only legislative powers, but, through local committees,—a local committee of three members being appointed for each school—the power to nominate and appoint all teachers; and a superintendent of schools and two associate superintendents, whose duty it was to supervise the schools and to

Former Schoolship, St. Marys



Schoolship "Newport"

license teachers. In what is now the borough of Queens, in addition to the board of education of Long Island City, there were thirty-five school districts, each having an independent school board or board of trustees. In what is now the borough of Richmond there were twenty-nine school districts, each under an independent school board or board of trustees."

There were 388 school buildings, reflecting all styles of classical design with combinations and additions to those dictated by the local authorities. The seating capacity ranged from 48 to 2,500 pupils.

These had been controlled by no less than 67 administrative boards having extensive powers and an additional 155 local appointive bodies exercising varying degrees of influence. The heating, ventilating, lighting, plumbing, seating and teaching equipment was as varied as the American market could supply.

Schoolship John W. Brown of the Metropolitan Vocational High School

CONSOLIDATED SCHOOL SYSTEM

A letter (in 1899) from Mr. C. B. J. Snyder, Chief School Architect, indicates the urgent need for more buildings and some of the educational problems created by high land values, the heavy immigration (which in the years 1900-1904, was to increase the day school registers by more than 132,000 pupils or 33.3 percent), and other factors.

"It must be admitted that the conditions which we have to confront here in New York are entirely different from those presented by any other city in this or any other country. The density of population and the number of children coming from the blocks and acres of five-story, four-family tenements in various parts of the city is simply appalling. School buildings accommodating 2,500 children are numerous in the lower East Side, but new ones are being erected all the time, and yet there is a demand for further accommodations. That this population is somewhat cosmopolitan can be judged from the fact that frequently twenty and more languages and dialects have been represented in one class of the lowest grade, 50 percent, of which could not speak a word of English beyond the words 'yes' or 'all right,' 'no'. . . .

"These conditions, which are without parallel, beget large buildings, especially since it has not been unusual to expend $250,000 to $300,000 for a plot of ground, of say 20,000 sq. ft., secured not by purchase, but (only) through condemnation proceedings. . . . Such large cost, as well as the limited area of the block fronts, precludes the possibility of allowing one inch of ground area to go to waste; . . . the fronts must be placed on the building line and land being only reserved at the rear to insure light. Even this at times has been most different where the plots are only 100 ft. deep, while the building of necessity must occupy 62 to 65 ft. of this depth.

"That such districts are not slighted in the kind of buildings can be seen by the cut of Public School No. 20."

Mr. Snyder thus goes on to describe two other buildings which are typical of a large number he designed before he retired in January 1923.

"Photographs . . . of Public School No. 165, the first-story plan showing indoor playroom and outside play courts, and second-story plan, . . . shows the typical arrangement and design of all buildings of this type. Girls' high school, plans and perspective of which are sent, is also of this type of schoolhouse plan.

"This H-type of building has been designed to meet the needs when avenue property is expensive and the traffic so great, either by trolley, elevated, or otherwise, as to render it practically impossible to open the windows at any time, and in fact to hear with the windows closed.

"In each of these buildings, the cellar which is below grade, is given over entirely to the heating and ventilating apparatus, . . . and as the sentiment here

is opposed to basement playrooms, even one step below grade, we are obliged in most cases to give over the entire first story for an indoor playroom, . . . lighted so as to be used for screening lectures, for which portable seatings are provided. Occasionally a quiet corner of the first floor is set aside for a kindergarten. The second, third, and fourth stories are divided into classrooms, six or eight of which are arranged by means of sliding doors as to admit of their being used as an assembly room, as is shown in second-floor plan of Public School No. 165.

"This we are obliged to do, as property is so expensive we cannot afford to form an assembly room which cannot be used for any other purpose.

"The fifth story is given over to manual and physical training, cooking room, and a gymnasium. In each of the examples here cited, the high-pitched roofs are utilized for obtaining head room for the gymnasiums and other rooms, the space above being devoted to the necessary vent flues. The fifth stories also afford accommodations for clay modeling, sewing rooms, and a large library. . . .

"The heating and ventilation of all our buildings is by steam or hot water, (with) engines and blowers of a capacity sufficient to supply 30 cu. ft. of fresh air per occupant per minute. All desks and seats are of the single adjustable type. . . . The entire fifth-story of each building is devoted to manual and physical training purposes. . . ."

The condition described by Mr. Snyder also applied to the borough of Brooklyn in which there were nearly 1,400 more pupils than there were classroom seats. In the city as a whole 25,000 pupils were attending school part time although there were some 8,000 vacant seats and 204 empty classrooms. Some of the excess facilities were in outlying sections of the city; others were in former residential areas taken over by industry. One of the communities in Queens erected three new school buildings immediately prior to consolidation in anticipation of future growth. During the year 1898-1899 these buildings remained empty.

1900 — 1930

The period from 1900 on has been characterized by an upward extension of the years of schooling and the growth of the high school system. Expansion seemed to follow along three channels. The general population was growing. At the same time, proportionately and numerically, more pupils were entering school. Furthermore, having once entered, more pupils were staying on for more years of schooling. The holding powers of the upper school levels was increasing. As a result, more educational space became necessary and the educational plant grew.

In 1900 only 3.2 percent of the total enrollment was in the high schools. In 1906 fifty percent of the pupils were concentrated between grades 2B and 6A. By 1930 the distribution of pupils through the grades had evened out considerably and 17 percent were enrolled in the high schools, a figure that was to rise to 25 percent by 1934.

This period also witnessed a broadening of the curriculum which affected the design and facilities of our school buildings. From an early beginning in 1905 our junior high school system has developed. More shops were added in the junior and academic high schools and a number of special schools were built for vocational education. By comparing the floor plans of the schools prior to consolidation with those of this period, the extension and changes in the curriculum become apparent.

Between 1900 and 1910 the city experienced a population growth of 1,329,000, or nearly 39 percent; the census of 1920 showed an increase of 853,000 during the preceding decade, and between 1920 and 1930 it grew by 1,310,000 at which time the total population reached 6,903,000 inhabitants. The average school register in 1900 was 419,000 pupils; it rose to 1,043,000 in 1930. This rapid growth led to school congestion in many areas of the city.

The consolidation of 1898 gave the city an area of 319 square miles, a large part of which was farmland, there being some 10,500 people engaged in agriculture within the corporation limits at that time. In 1900, 54 percent of the city's population resided in Manhattan. The continuing extension of transit facilities led to the urbanization of rural areas and the building up of the smaller independent communities which became a part of the municipality. Manhattan accounted for only 27 percent of the city's population in 1930.

Between 1900 and 1930 the Board of Education spent over $400,000,000 for new school buildings and additions which provided 797,300 pupil sittings.

The changing character of neighborhoods in older sections of the city and the outward expansion of population, however, led to the near depletion of the child population in some sections of the city and to heavy congestion in schools in other parts of it which necessitated operating them on double and even triple sessions.

In 1902 there were 68,000 pupils on part time instruction; by 1912 the number had risen to 90,000. So great was the demand for school facilities that the Board of Education was compelled to erect "temporary" wooden portable school houses, some of which remained in use until the great building program following the second world war programmed their elimination.

It must be remembered that this thirty year period (1900-30) witnessed profound changes in the world scene. Great population movements, an acceleration of invention, tremendous advances in communication, a world war, inflation and economic maladjustments produced what almost amounted to a revolution in social and educational concepts.

The tensions and movements of these three decades have been well described by numerous capable historians with as many varient points of view and need not be repeated here. However, the impact of these social changes on New York City school construction does need mention.

It was a period of unfolding horizons. From oil lamps and gas to electricity and flourescents; from horsecars to motor buses; from magic lantern to "talking" motion pictures; from telegraph to "wireless"—the number of inventions, and with them the fields of knowledge, began to expand. Soon compartmentalization and specialization appeared. There was more to know and more to learn. This quickly had its impact on the school curriculum, particularly at the secondary school levels. While this was happening, apprenticeship training in the United States had been declining and the schools undertook to provide some trade training.

New schools began to appear with more and more elaborate provisions for scientific and industrial training. There were more laboratories and shops in more varied fields. To these were added additional specialized facilities such as large auditoriums, cafeterias, and health education areas. The new school plans began to approach modern standards.

It was after World War I and before the beginning of the depressed thirties that a great acceleration in school construction was undertaken by the Board of Education. As was usual after a period of war, economic conditions, marriages, and birthrates expanded. With favorable conditions a drive toward home ownership and suburban living developed. As is true currently, large new developments were opened in the less congested periphel areas of the city. In these new developments few schools of adequate size were available. Then, as now, new schools, classrooms and seats were needed, and needed quickly.

A simple solution for rapid planning and construction seemed to present itself in developing stock plans which could be standardized. It was during this period that U-type, E-type, L-type plans were developed. A type most easily fitted to an available site could be selected. Since the contractors had built from such plans before, (it was argued), estimating could be more accurate and construction more rapid. However, while this system seemed to offer advantages, there were also

drawbacks. Errors were perpetuated. Faulty conditions were repeated. A plan originally designed for an area with a high water table was reused several times before the elevation of the boiler level was corrected. Educational deficiencies could not be caught before the plan was repeated elsewhere. These standardized buildings are evident in all sections of our city today. With all their faults and lack of flexibility they are giving, and will continue to give excellent service for many years to come, but they have set back school planning progress.

1930 — 1955

This portion of our story covers the most turbulent quarter of a century in the history of the world. It has been a quarter of a century of world-wide social, economic, and political maladjustment; of depression, war, inflation, and conflicting ideologies. It was a quarter of a century that produced many serious dislocations in our educational system, of overcrowding, congestion, obsolescence, and a shortage of school accommodations in newly developed areas.

First came the depression period of the thirties. The city's income shrank. Tax monies were scarce. Retrenchment followed. Appropriations for school building and maintenance were cut back sharply. School buildings suffered. A back-log of work began to accumulate.

The war years that followed, resulting in scarcities of men and materials, did nothing to improve the situation. Even the minimal program of the preceding years came to a virtual halt. Badly needed new construction had to be deferred. The old buildings grew older. The back-log of deferred work grew.

As the war years drew toward an end and as victory and the demobilization of the armed forces approached, fears began to be felt for the national economy. Could the nation absorb a sudden accretion to the labor force of millions of returned veterans; — men and women? In anticipation, the nation began to plan for a great post-war public works program. In this, as in other things, New York City took the lead. Augmenting the depression and war-depleted staff of our own Bureau of Construction, a group of private architects were employed under contract, to draw plans for a 6-year post-war building program. This was designed to take up any unemployment slack that might develop. It was anticipated that the private architects might provide a new approach, bring in fresh new ideas and produce new horizons in school building design. Architects' plans began to be completed for shining new schools with large rooms, porticos, towers, and trimmings. The old concept of school buildings as public monuments had not yet withered or died.

Time proved that the fears for our economy were unjustified. Demobilized personnel were absorbed into the labor force with only minor readjustments. Far from contracting, the national economy began to expand. Employment, wages, national productivity and prices began to soar. Spiraling building costs continued to inhibit school construction, and limited budgets continued to contribute to the mounting problem of providing desperately needed acceptable educational housing.

With all this, the national birth-rate began to climb. In New York City more and more babies were being born each year. In five years these would be entering the elementary schools; in eleven, the junior high schools; in fourteen, the secondary schools. To complicate the situation, with full employment and high

wages, and a drive toward home ownership, populations began to migrate from the depressed older sections of the cities; from crowded tenements and the traffic jammed streets, into new locations in the undeveloped peripheral areas of the city, where schools were few and far apart. To take the places they vacated, in the deteriorated tenements and old brownstones, came large numbers of migrants from our island possessions and refugees from foreign lands, bringing with them problems of language and mores. They changed the utilization of large residential areas and the appearance of the streets. More families and individuals began to occupy each shelter, block and acre than ever before. Streets which had formerly been quiet, sedate back-eddies in the bustling activity of the city, became turbulent currents of life and motion. Foreign tongues, foreign costumes and foreign faces flooded into the neighborhood schools. Reminiscent of previous migrations, history was being repeated. In adjacent areas, slum clearance and large scale re-housing added to the threat of a critical shortage of class-rooms and teachers.

All in all, a confusing situation was developing. Here slums were being replaced by new projects. There, ancient mansions and quiet streets were being rapidly converted to multiple dwellings. New tracts were being opened in the peripheral areas of the city. Tremendous housing and re-housing projects were rising everywhere. The whole city seemed to be on the move. Populations were shifting and being replaced at a faster pace than ever before. School buildings which had been half empty for a decade or more were filled. Other schools, which had just about met the neighborhood needs for many years, were being forced to go on "double session". Problems were developing in all directions. The Board of Education, alert to the threat of obsolescence on the one hand and to a developing crisis in new seating on the other, already experiencing overcrowding in a number of areas, engaged in a continuing series of studies to determine the probable scope, duration and direction of these developments. It then alerted the city administration to the seriousness of the problem. The City of New York responded with ever increasing allocations for school building in the annual capital budgets.

At the same time the Board of Education's Committee on Buildings and Sites began clearing its decks for action. It re-studied, reorganized and simplified its procedures to insure an accelerated, regular and uninterrupted flow of new building projects. With construction costs mounting steadily over the years (1956 more than 200 per cent above 1939 averages) the Board of Education then devised numerous structural and design economies, revised existing plans accordingly, and succeeded in cutting construction costs without impairing structural safety, aesthetic qualities, administrative effiicency or educational adequacy. This was an achievement to be proud of.

From a faltering and hesitant beginning in 1946, only one year after the termination of World War II, the volume of new construction passing before the

Committee on Buildings and Sites, processed and reviewed in the Division of Housing and developed by our Bureau of Construction grew toward a record making peak by the middle of 1956, with a definite promise of even greater achievements for the future. Never before in the history of public education, anywhere in the world, was more educational space provided or more money expended in so short a period than during this mid-century decade. Furthermore, it must be emphasized and reiterated, despite the speed and economy which accompanied this achievement there was no compromise of educational requirements.

While all this was taking place, a quieter though perhaps far more spectacular and dramatic achievement was being accomplished by our Bureau of Plant Operation and Maintenance. The tremendous back-log of work resulting from two decades of attrition because of shortages of money, men and materials were being quietly eliminated. Boiler repairs and replacements, roofs, windows, playgrounds, parapets, loose or broken masonry, sanitation paint and face-lifting were undertaken all over the city. Older buildings, with sturdy walls and frames were brought to life again, while the regular services necessary to a plant of more than 850 structures were not neglected. Some of the changes accomplished in the older structures appeared almost unbelieveable.

To achieve all this it was necessary to stretch each construction dollar. Every structural feature was carefully studied. Every educational requirement was as carefully scrutinized. Constant studies, revisions and reviews were made. Research projects were instituted and all unnecessary frills and ornaments were eliminated. New clean-cut functional structures of comparatively simple design began to replace the monumental planning of the past. A new era in school design had arrived.

The studies are still continuing. Nothing is being taken for granted. Furniture, chalkboards, public address systems, paint, lighting, flooring and floor covering, all have been subjected to intensive study and the studies continue. At the same time educational requirements of structures are being examined just as carefully. Numerous committees of teachers and supervisors involving hundreds of professionally trained and competent teachers are engaged in revising the "Manual of School Planning." This is a publication issued by the Division of Housing which is designed to serve as a guide to architects engaged in school design.

The results of these activities are readily apparent in our new and modernized school buildings. Structurally adequate and educationally acceptable school housing for all the children, with accommodations designed to meet the requirements of the entire curriculum, at every educational level, is the final objective of the Board of Education of the City of New York and its Committee on Buildings and Sites. The story here told gives clear evidence that they are well on the way toward achieving their goal.

SCHOOLS — 1956

The preceding pages, delineating the history of One Hundred and Fifty Years of school building progress showed the gradual changes in school design. These followed closely on the heels of changing and evolving pedagogical methodology and advances in structural techniques, methods and materials. From the uncomfortably drafty, sometimes overheated, poorly lighted and ventilated structures of the past to the modern comfort of the new school building is an amazing transition.

Aside from the changes that have overtaken building construction in general; aside from the use of new materials and methods; aside from new conveniences and new inventions, the school buildings of today incorporate many additional and distinctive features which are specifically designed to assist in the learning process. The new buildings actually help teachers to teach and students to learn.

Educators today are clearly aware of the fact that learning is largely dependent on the physical comfort of the pupil. The human body must be comfortable and at ease before it can concentrate on extraneous matters. If lighting is inadequate or too glaring the eyes are aware of strain and try to adjust. If the seat is too high or too low; if the room is too warm or too cool; if the acoustics are not right, the human body tries to overcome these deficiencies and necessarily diverts its attention while seeking bodily comfort. The rate of learning suffers in proportion as the body strains for this comfort.

While the physical requirement of body comfort is basic, there are still other factors that differentiate the modern school from the old time shelter. The school must be an efficient and effective environment within which the school curriculum can be housed. Rooms must be designed specifically for the type of activity to be explored. A course in chemistry or physics must have adequate laboratory facilities. Shops must have machinery and power lines. Other parts of the curriculum require comparable teaching and learning aids. In other words, the corridors, classrooms, offices, shops, laboratories, library, gymnasium, cafeteria and service spaces must be designed around the function they will serve, and all must serve as efficient educational tools. Even their orientation with respect to compass points must be taken into account. These classrooms and buildings are more than mere shelters or structures in which to house children.

To meet the physical requirements for bodily comfort in the learning process and for environment designed as an educational tool, a whole new science is emerging. Contributing toward this science, experimental evidence is being accumulated. The mass of empirical data is growing. New concepts, new pedagogical methods, physical and curriculum requirements are being crystalized in the brick and stone and steel of our new school buildings.

With these standards around which to plan, the monumental concept of school design has just about disappeared. Brand new structures of simple lines, straightforward and unrestrained in design have taken their place. The standardized E-type H-type, T-type or U-type or any other "type" structures have just about disappeared. The modern architect is not restrained in his efforts to meet the needs of the curriculum and the community, as set down in the "Program of Requirements", within the confines of the average city school site. The results are evident in the novel and untrammeled design solutions which are illustrated on these pages.

Most of these school buildings do not exceed three stories in height. Because classrooms and educational spaces are less formal, and because school building codes have been revised, it has become possible to lower ceiling heights. As a result, the whole school structure is lower; hugs the ground more closely, and classrooms are more in scale with their occupants. Children entering the schoolroom are not overwhelmed by space as formerly. Because functional aspects are considered before the aesthetic, structures are not stereotyped. Because architects are free to develop their own designs, new forms have emerged. Structural plan components in new schools may take the shape of cylinders, cubes, combined oblongs, hollow squares, or appear suspended in air on columns above sheltered play areas. Vertical transportation may be by elevators, escalators, ramps, well designed stairways, or combinations of these. Playgrounds are more than outdoor assembly points. They are true recreational areas, with all equipment necessary for recreation and healthful activities.

Because new structural materials are available, construction can be lighter. Because more knowledge is available for the intelligent use of these materials classroom lighting, both natural and artificial has been tremendously improved. Because of better heating and ventilation methods, the children are more comfortable all year round. Because of movable furniture, greater flexibility and informality is possible and the artificiality of the old time rigid classroom dissipated. Beyond all these improvements, new concepts of safety and sanitation have produced a healthier and happier environment for both children and teachers.

Nor is the community forgotten in new school design. Special features and spaces are included in all new school plans to provide for community use of school buildings. There are community storerooms, sanitary facilities, and special areas set aside from the regular school spaces. These facilities are usually combined and located in such a manner as to offer no interference with the regular school program.

Additional flexibility is inherent in the planning. This additional flexibility is designed to defer obsolescence. Interior partitions are designed so that they can be taken down readily without disturbing the regular service lines. All piping and wiring, wherever possible are kept out of these walls. Thus, should it become

necessary at any future period to relocate a wall in order to increase the size of an area, this will be possible with comparatively little disturbance of power, sanitary or supply lines.

In short, new school buildings, designed to retain their fresh newness and appearance for more years, are erected with built-in features which will tend to delay obsolescence. Like modern office buildings, they possess the flexibility necessary for change to accommodate new tenants or activities. They are readily adaptable to future changes in the curriculum, room size, utilization and evolving educational needs. Walls and partitions can be moved. Furniture is not fastened to the floor. Future expansion is provided for in each plan. These new school structures will not grow old too soon.

While all this may be a justifiable basis for self congratulation and gratification it is comparatively little in comparison to the quanitative and financial aspects of the total achievement. More than 250 construction projects, including 169 new school buildings, providing 200,000 new seats for our school age children, produced in a ten-year period is the record. Within these figures appears the school-mindedness of the Administration of the City of New York and the efficiency of its various agencies that cleared the road for such an amazing record of financing and construction. The table and data presented in the following paragraphs provide some of the major facts of New York City's building program in this mid-century decade.

THE CAPITAL BUDGET

Allocation for new school construction and related services
1947-1956

Budget year	*Allocation (In Millions)*	*No. of Projects*
1947	2.3	0
1948	34.7	6
1949	34.6	13
1950	50.4	13
1951	47.9	17
1952	66.1	19
1953	69.5	30
1954	72.2	20
1955	99.2	24
1956	101.8	27

This table accounts for new construction only. However, the modernization of old schools and additions to existing facilities increased the totals even more. In the process, ancient buildings not adaptable to modernization have been returned to the city. Many sturdy old buildings were modernized. Many of the new

School Planning Conference — Division of Housing

buildings were erected in newly opened suburban areas where until quite recently cows had been pastured, and farms and greenhouses had occupied the land.

Counting additions, the 250 projects previously mentioned included 200 new structures and at least 50 complete modernizations; several quite major and extensive in scope. These provided an accrual in enrollment capacity of at least 200,000 seats at all school levels. The new and modernized facilities for the education of our children exceed in number the total populations of such cities as Bridgeport, Hartford, New Haven, Phoenix, or Sacramento, among others.

For general construction and mechanical trades alone—and these are the basic contracts in all construction work—the more than 250 projects represent an outlay of close to $400 million. This does not include the attendant outlays for preplanning, for the time of the educational staff, consultation and review by the technical staff of the Division of Housing, for surveys, borings, architectural and engineering services, acquisition and clearance of sites, school furniture and equipment, research studies, community, educational and technical conferences. All of this adds another $100 million or more to the total. To sum up, the past decade has witnessed an expenditure of approximately one-half billion dollars for new and improved educational facilities for our children of the City of New York. This is far in excess of what many of our state governments have spent on all phases of education during this same decade.

The need for more school housing still continues, and must continue for some years into the future. However, new school construction is managing to

keep pace with our expanding population and the growth of the suburbs. In addition the more than willing cooperation extended by our schooling-conscious city administration is resulting in improvements and betterments which already make our local school plant superior to that of any other city in the world.

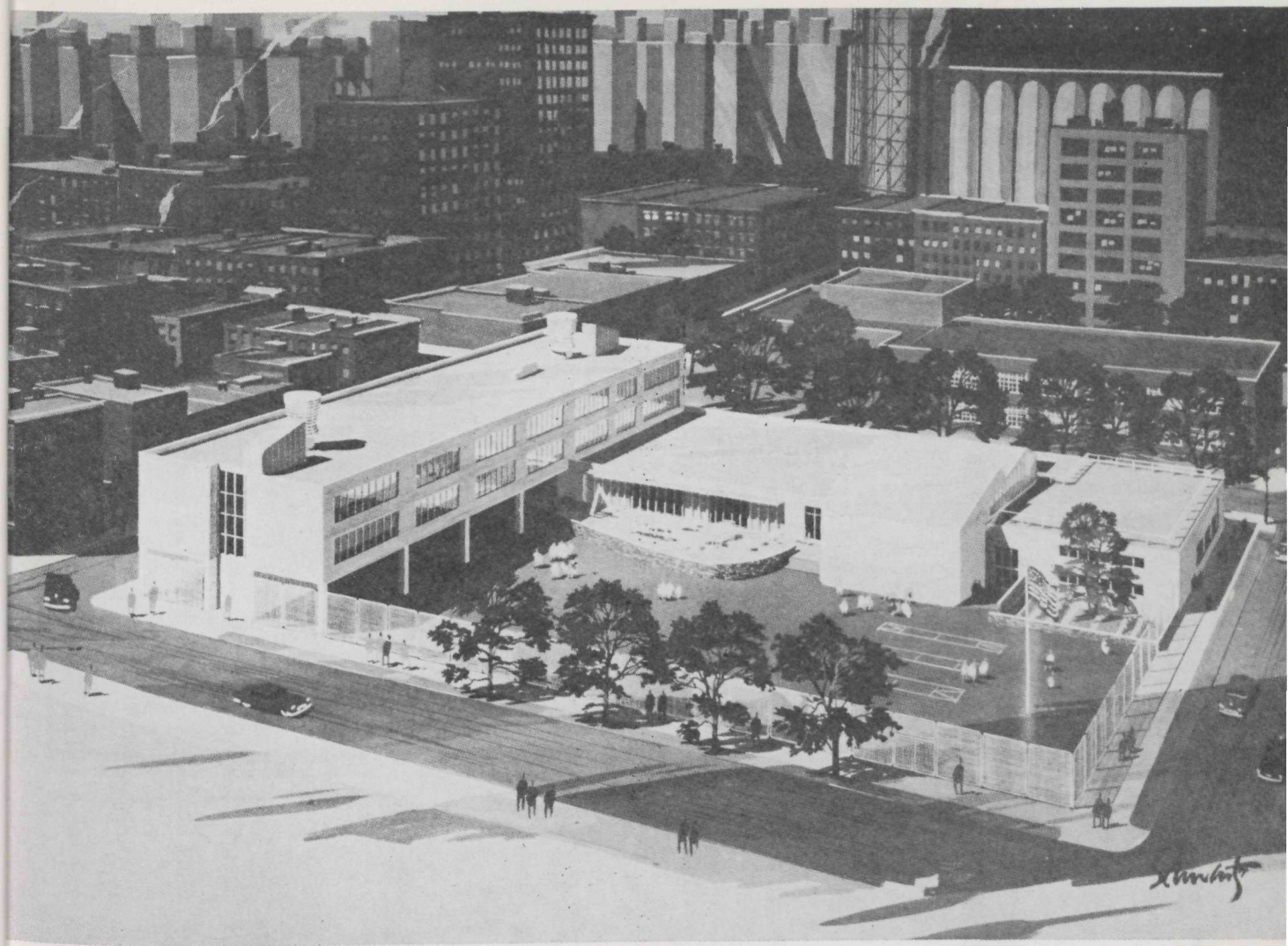
The problem of providing adequate and acceptable school housing for the children of the City of New York during this past decade has been gargantuan. Meeting and conquering the problem provides faith and confidence for meeting the needs of the future.

Thus ends the text of our story. Throughout the telling we have been aware of its sketchy character. However we have also been aware of the danger of detailing a story that has been retold many times, though perhaps from other points of view. We, of the Committee on Buildings and Sites and of the Division of Housing have our own point of view — school building planning in relation to social trends and educational planning.

We have learned through the years that education reflects the society and the period within which it exists. Therefore are we conscious of the fact that a school building must be rather more than an architectural concept and an engineers calculations. It is for that reason that constant research is going forward, that conferences are being constantly organized; that consultants from various social and civic agencies are contacted, and that subjective opinions and findings are being tested by objective methods. Whether the problem be one of space requirements for certain aspects of the curriculum or the best type of chair, chalkboard, chalk, or public address system, objective tests furnish the answer — for the time being. Nothing is regarded as permanently closed. The best chalkboard or chair of today may be outmoded tomorrow. Therefore, the investigation is never closed. The curriculum needs of today will undoubtedly be modified tomorrow, therefore school designs are not "frozen".

This will become apparent as you examine the miniature plans and the photographs shown on the succeeding pages. You will notice that there are no types. No two structures are alike. Each is designed to meet the needs of its community and its curriculum, within the limits of the available site. Each contains the best of what has gone before, with something added. There is no compromise with educational adequacy. This may throw the burden on the architect and the engineer, but the results have been gratifying. The originality and adequacy with which each problem has been met is visible in the school buildings that are arising in every section of the City of New York. A great city deserves great schools. It has them and is getting more of them.

SOME RECENT SCHOOL PLANS



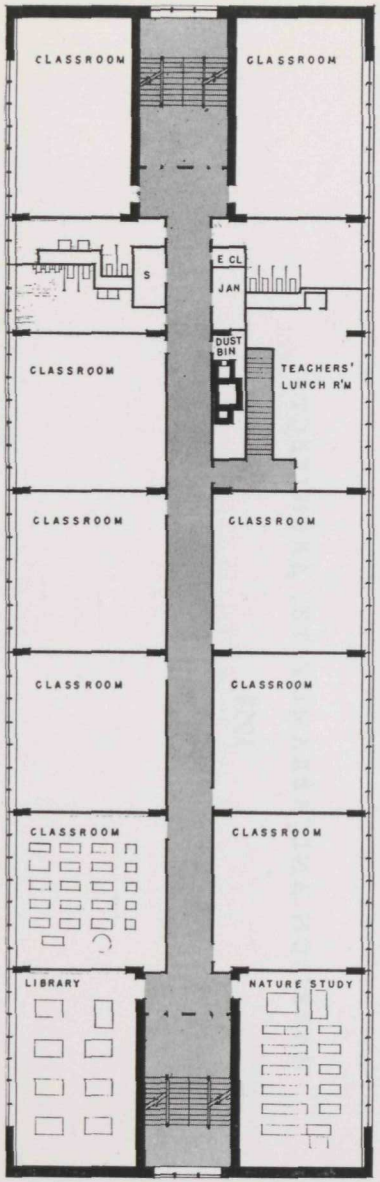
P. S. 34 MANHATTAN

FRANKLIN DELANO ROOSEVELT SCHOOL

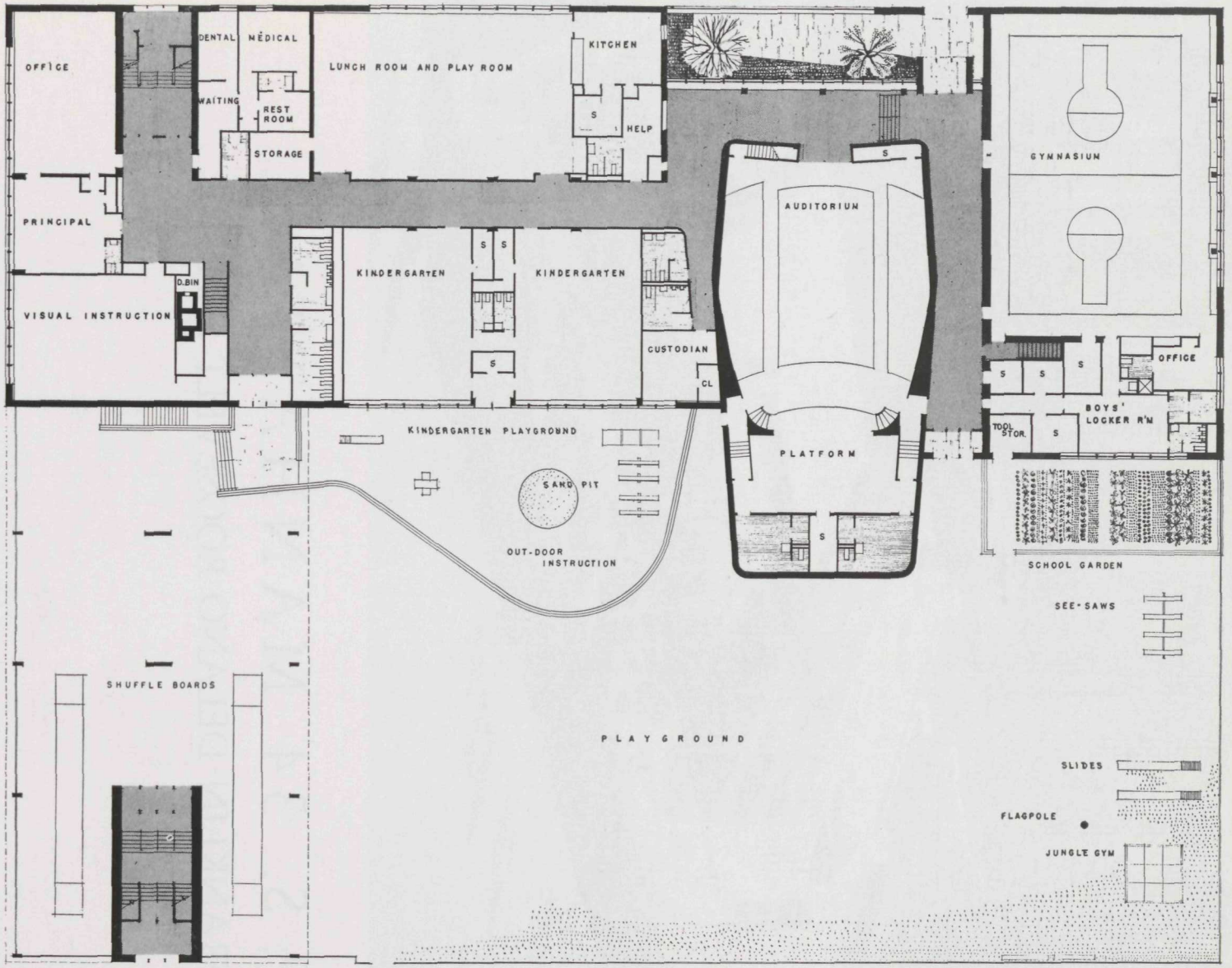
NEW YORK CITY BOARD OF EDUCATION

HARRISON AND ABRAMOVITZ, ARCHITECTS

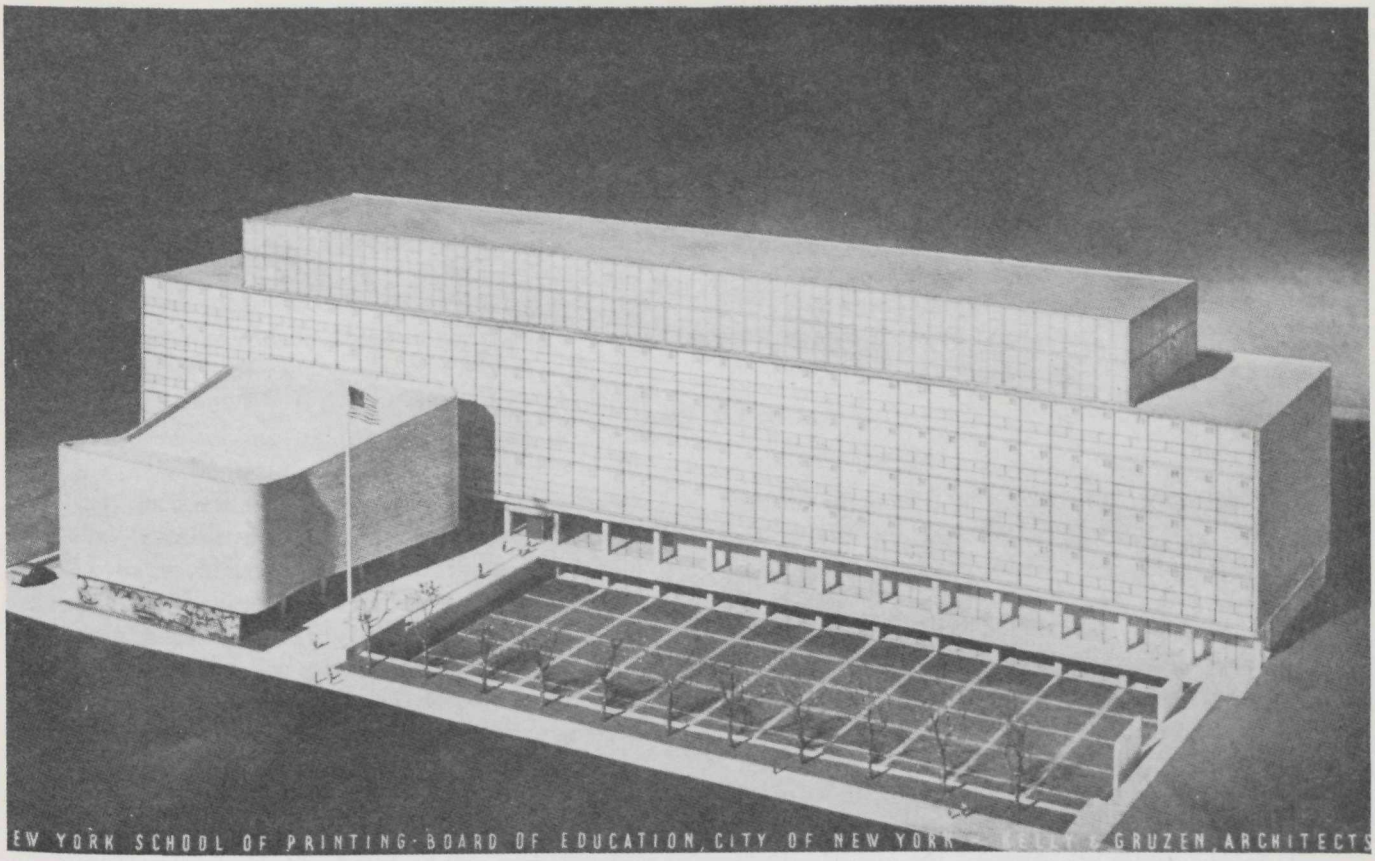
1954

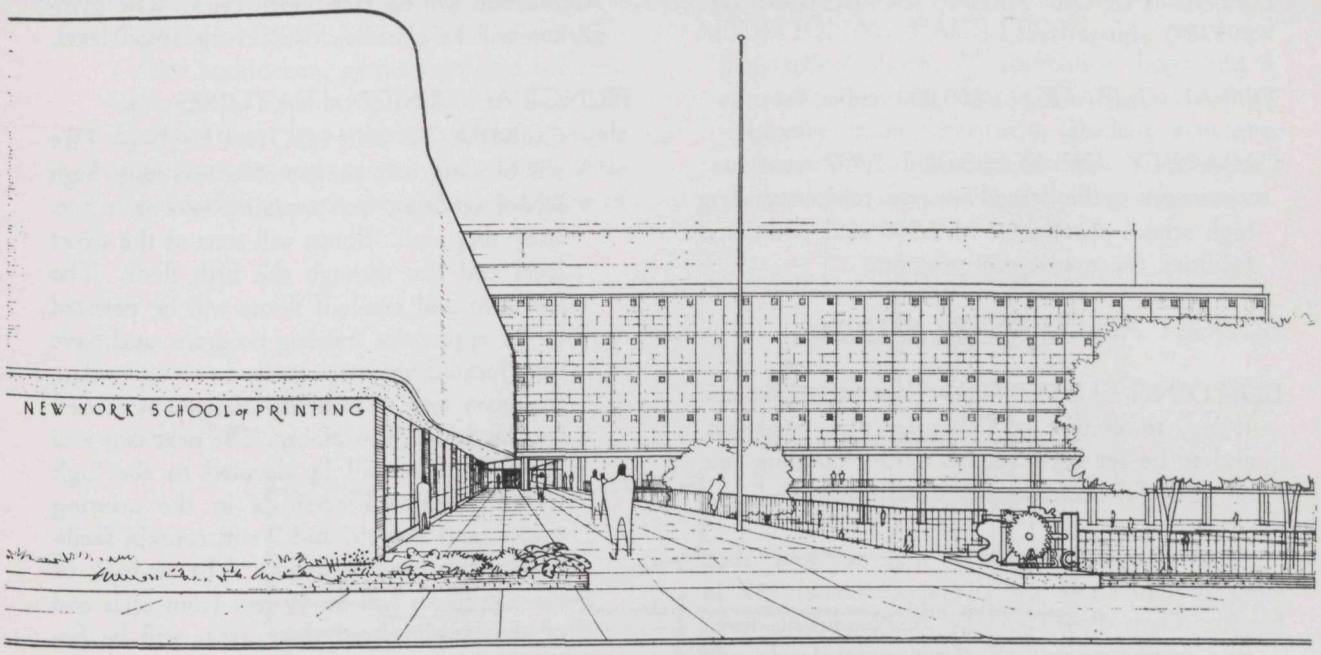


SECOND FLOOR PLAN



FIRST FLOOR PLAN





NEW YORK HIGH SCHOOL OF PRINTING

New York, N. Y.

BOARD OF EDUCATION, CITY OF NEW YORK

KELLY & GRUZEN, *Architects*

NEW YORK HIGH SCHOOL OF PRINTING

NEW YORK, N. Y.

BOARD OF EDUCATION, CITY OF NEW YORK

KELLY & GRUZEN, *Architects*

LOCATION: Occupying 400′ frontage on both 49th and 50th Streets, between Ninth and Tenth Avenues. Main entrance of building faces 49th.

SITE: Comprises 78,767 square feet, or less than two acres.

AREA ON SITE BUILDING WILL OCCUPY: 44,160 square feet.

TOTAL FLOOR AREA IN BUILDING: 273,000 square feet.

TOTAL CUBAGE: 3,800,000 cubic feet.

CAPACITY OF SCHOOL: 2,727 students: maximum to be served at one time, including high school enrollment of 1,500 and additional facilities for apprentice program.

BUDGET ALLOWANCE: $5,100,000.

BUILDING ELEMENTS: *Shop and Academic Wing,* to consist of 7 stories plus basement, and to be set back 120 feet from building line on 49th Street.

Auditorium-Gymnasium Wing, to join shop wing at right angle and rise approximately 45′ in height. Gym floor will be on basement level, gym ceiling to be 10′ above street level: and auditorium to be located above gym.

CONSTRUCTION: Steel frame, fireproof, concrete floor slabs, with special provisions for the installation of extremely heavy shop equipment where required. Entire facade of the shop portions of the school wing (first five floors) will be sheathed with directional glass block, of 12 square inch size, except for a clear vision strip running horizontally at eye level. The glass block in each structural bay will be punctuated by a metal louver, inserted at a point near the ceiling height to provide escape for accumulated warm air. Windows on 6th and 7th floors, academic section, will be aluminum double hung, with lightweight spandrel construction.

Auditorium will be faced with brick. The gymnasium will be glass enclosed at the street level.

PRINCIPAL DESIGN FEATURES:

1. COMPACT SCHOOL PLAN—The school wing will consist of a two-story high school academic unit superimposed on a five-story shop unit. Shops will start at the street level and rise through the fifth floor. The first two and one-half floors will be devoted to the apprentice training program, and have been located here principally to accommodate the heavy type of technical equipment needed for this advanced training. The next two and one-half floors will be devoted to the high school vocational curricula in the printing trades; and floors 6 and 7 will contain facilities for academic curricula. The set-back of the top floors will be 40 feet from each end of the building and these areas will be finished with a quarry tile roof and made available to students for study, relaxation or other special activities. The basement of the school wing will be occupied by service elements to the West; and the cafeteria, at the level of the sunken play area, to the Southeast.

2. USE OF ESCALATORS—The multi-story shop and academic wing will be serviced by escalators representing the first use of escalators for student circulation in New York City public schools—and possibly first use for a secondary school in the country. Escalators will be located in the center of the school wing and will rise from the street level to the top of the building, in criss-crossed banks, two to a floor, twelve in all. It will be possible to handle approximately 1,600 students in a 10-minute period, and to run both escalators either up or down simultaneously in one direction during peak loads. A cost analysis of both an elevator and an escalator system indicated that escalators would be less expensive to install and operate, as well as more efficient for handling student circulation. Two service elevators and legally required stairs also serve building.

3. COMMUNITY USE PROVISIONS——The auditorium, gymnasium and cafeteria units have been so placed that they will facilitate use by students, printing trade organizations and community groups without interfering with the normal activities of the school itself, which will be in operation until 9:00 P.M. daily. The auditorium and gymnasium will have separate entrances, with lobbies for each, off the main entrance plaza; and access to the cafeteria will be from a double stairway directly off the first floor of the school wing.

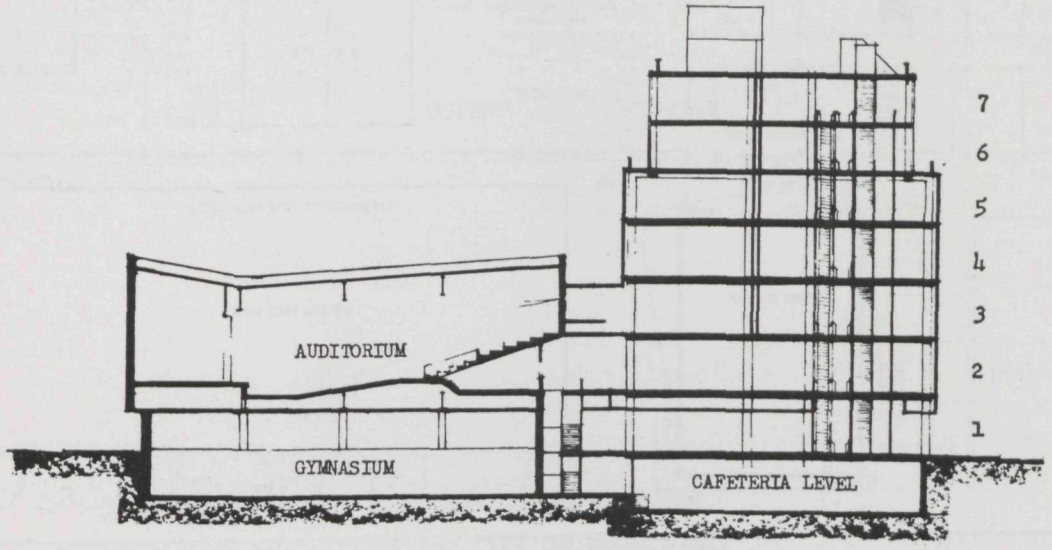
Auditorium capacity: 700

Gymnasium capacity: 600, with bleacher seating

Cafeteria capacity: 500

4. RECREATIONAL FACILITIES—In spite of an extremely limited site, the plan calls for an open recreational and athletic area of approximately 26,000 square feet, to be 10 feet below the sidewalk level and adjacent to the main entrance. Orientation of the play area is to the South for maximum sunlight.

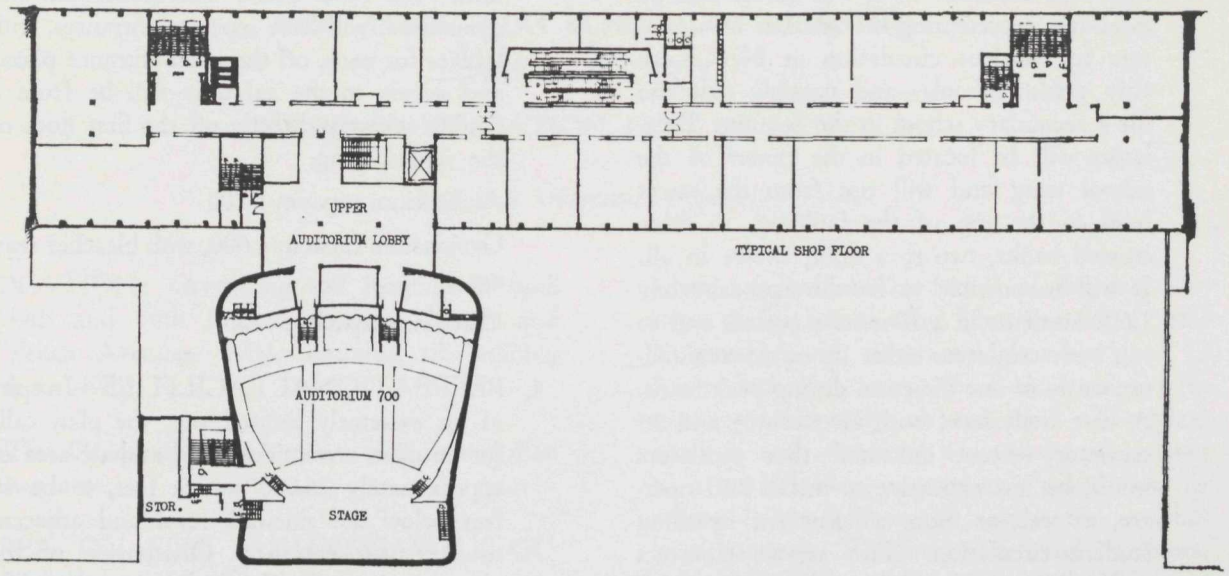
ADDITIONAL FACILITIES: 35 vocational high school shops; 26 apprentice shops and 4 apprentice training classrooms. Special rooms: —Library music deartment, student activities, administration and service facilities. Classrooms: 24 academic classrooms, including laboratories.



SECTION

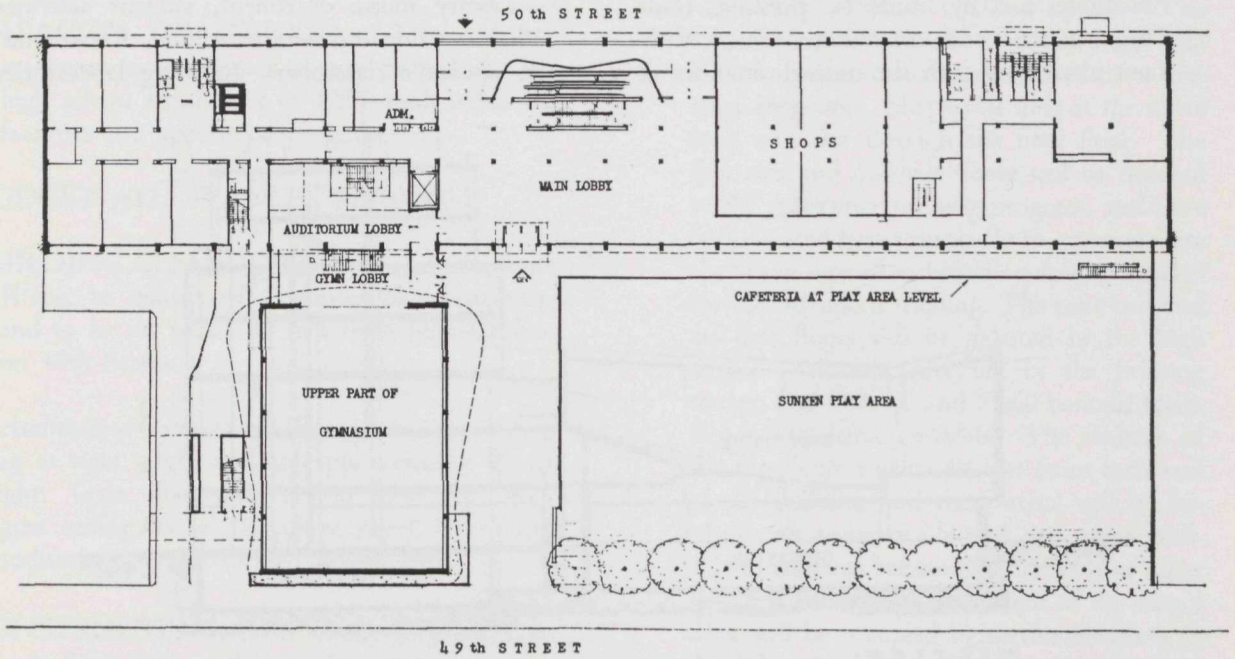
NEW YORK SCHOOL OF PRINTING - NEW YORK, N. Y.

BOARD OF EDUCATION, CITY OF NEW YORK
KELLY & GRUZEN, ARCHITECTS



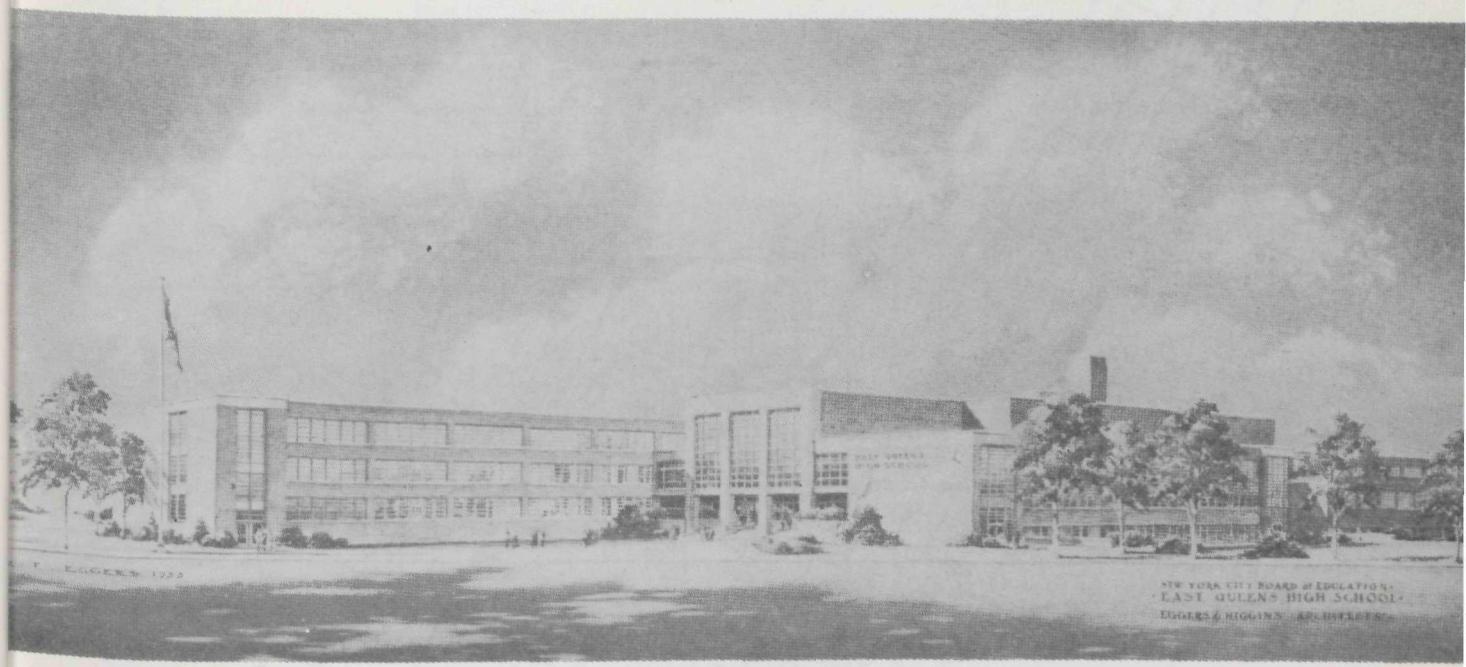
SECOND FLOOR

NEW YORK SCHOOL OF PRINTING - NEW YORK, N. Y. BOARD OF EDUCATION, CITY OF NEW YORK
KELLY & GRUZEN, ARCHITECTS



GROUND FLOOR PLAN

NEW YORK SCHOOL OF PRINTING - NEW YORK, N. Y. BOARD OF EDUCATION, CITY OF NEW YORK
KELLY & GRUZEN, ARCHITECTS



EAST QUEENS HIGH SCHOOL

Hillside Avenue & 229th Street, Queens, N. Y.

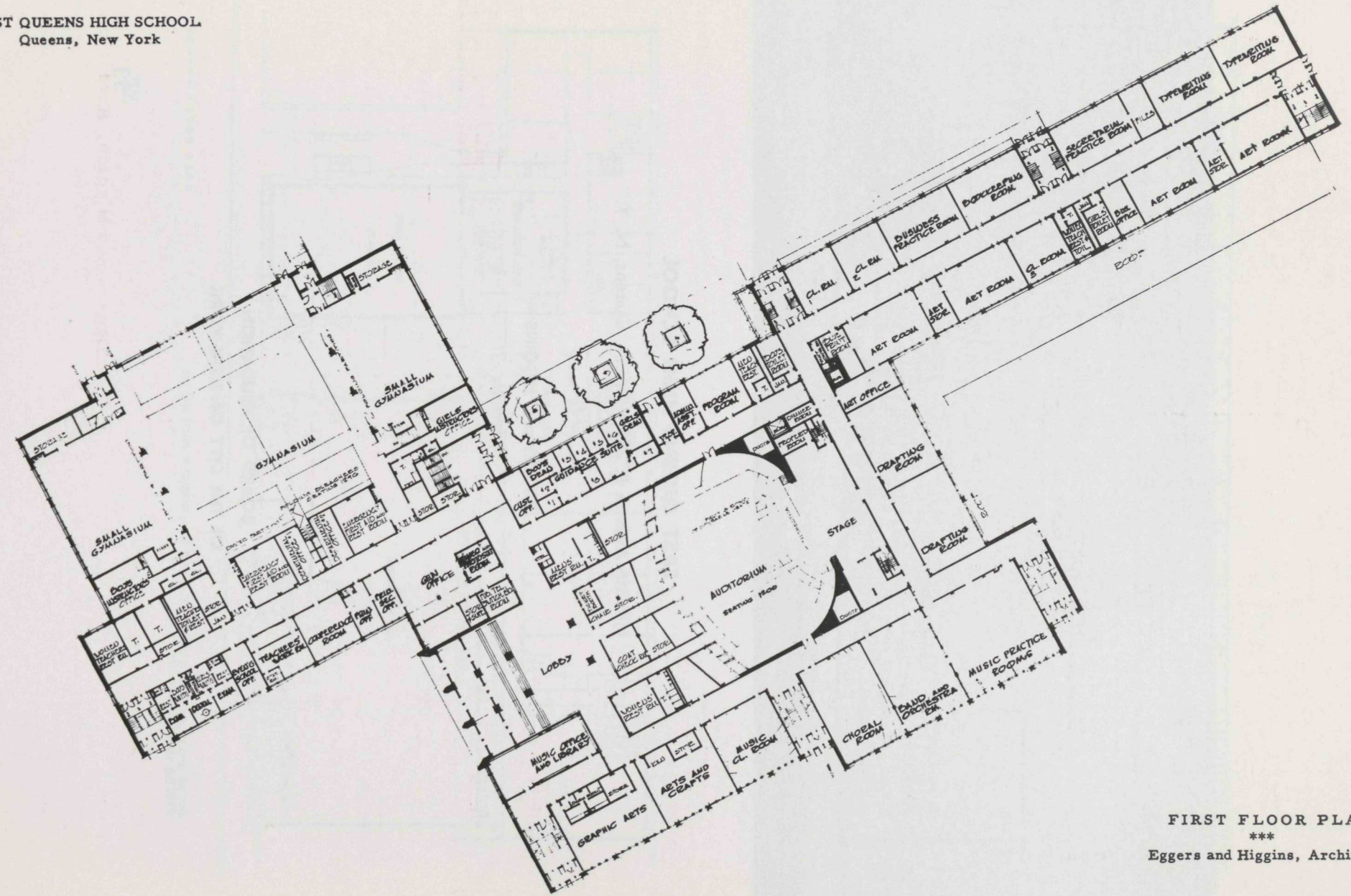
EGGERS and HIGGINS

Architects

BOARD OF EDUCATION

OF THE CITY OF NEW YORK

EAST QUEENS HIGH SCHOOL
Queens, New York

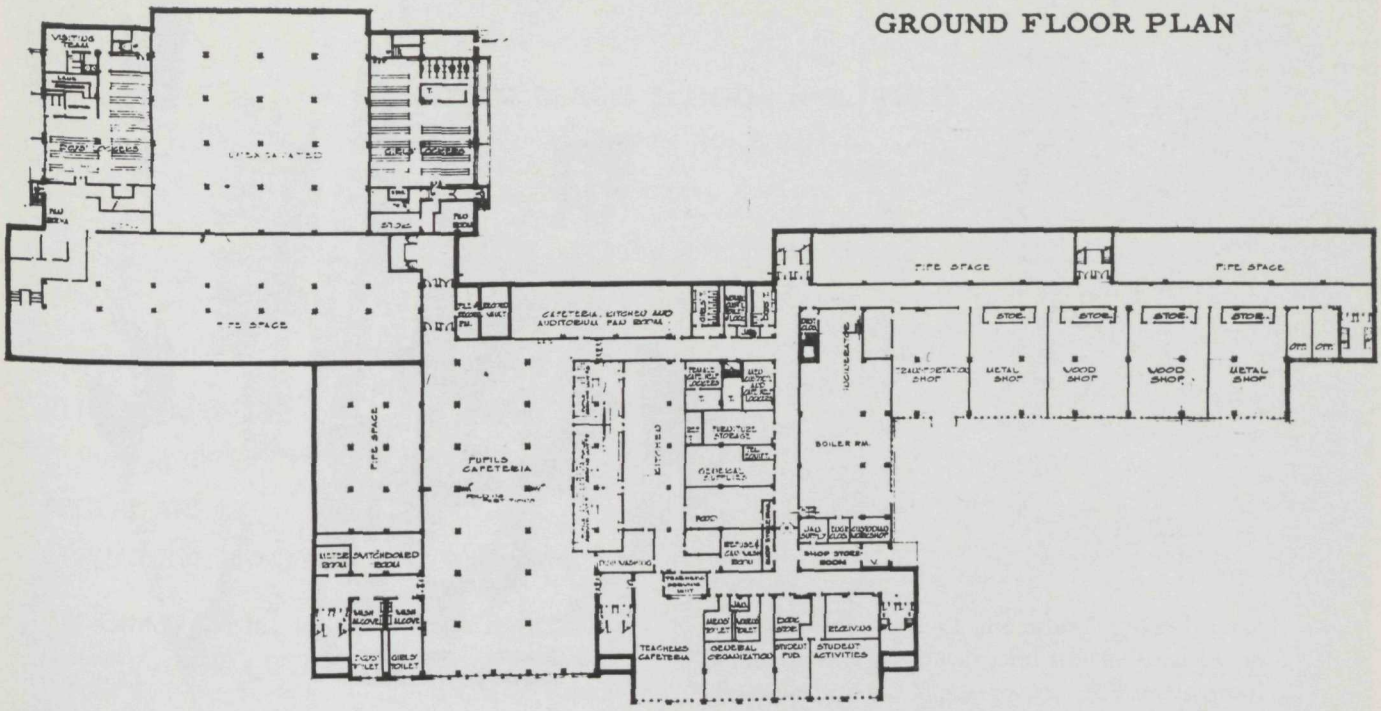


FIRST FLOOR PLAN

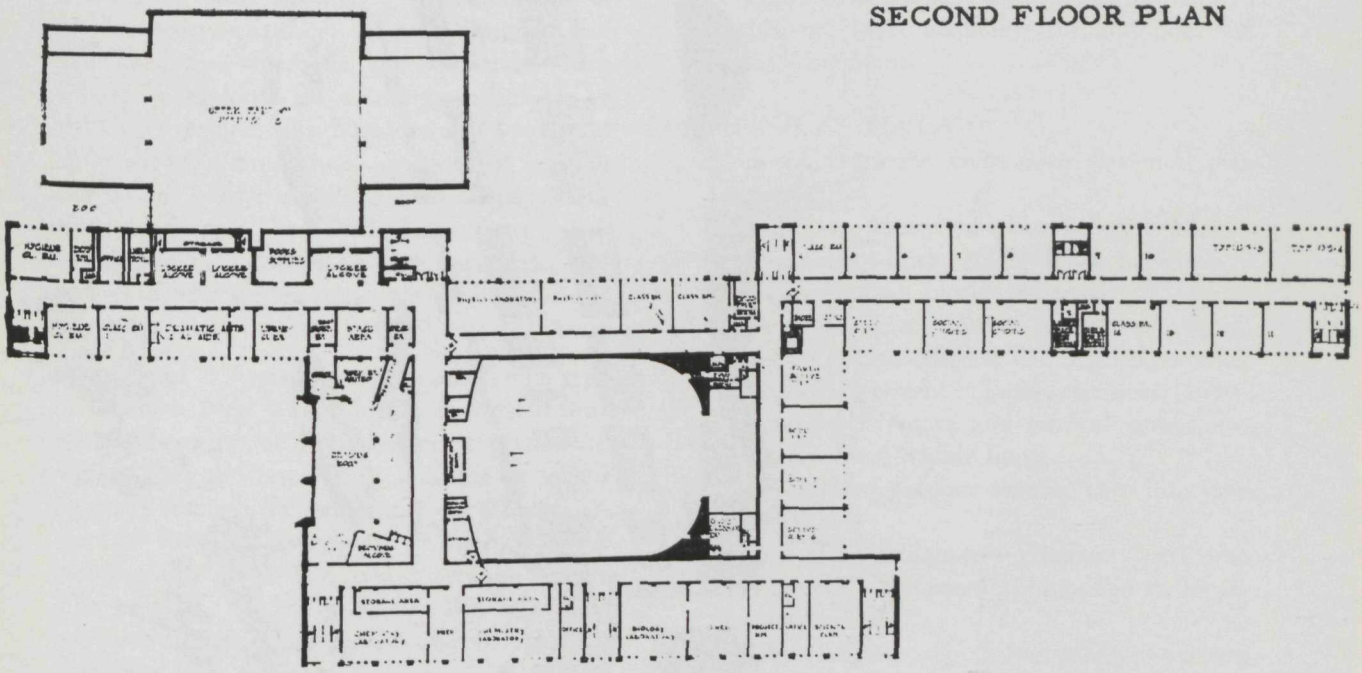
***

Eggers and Higgins, Architects

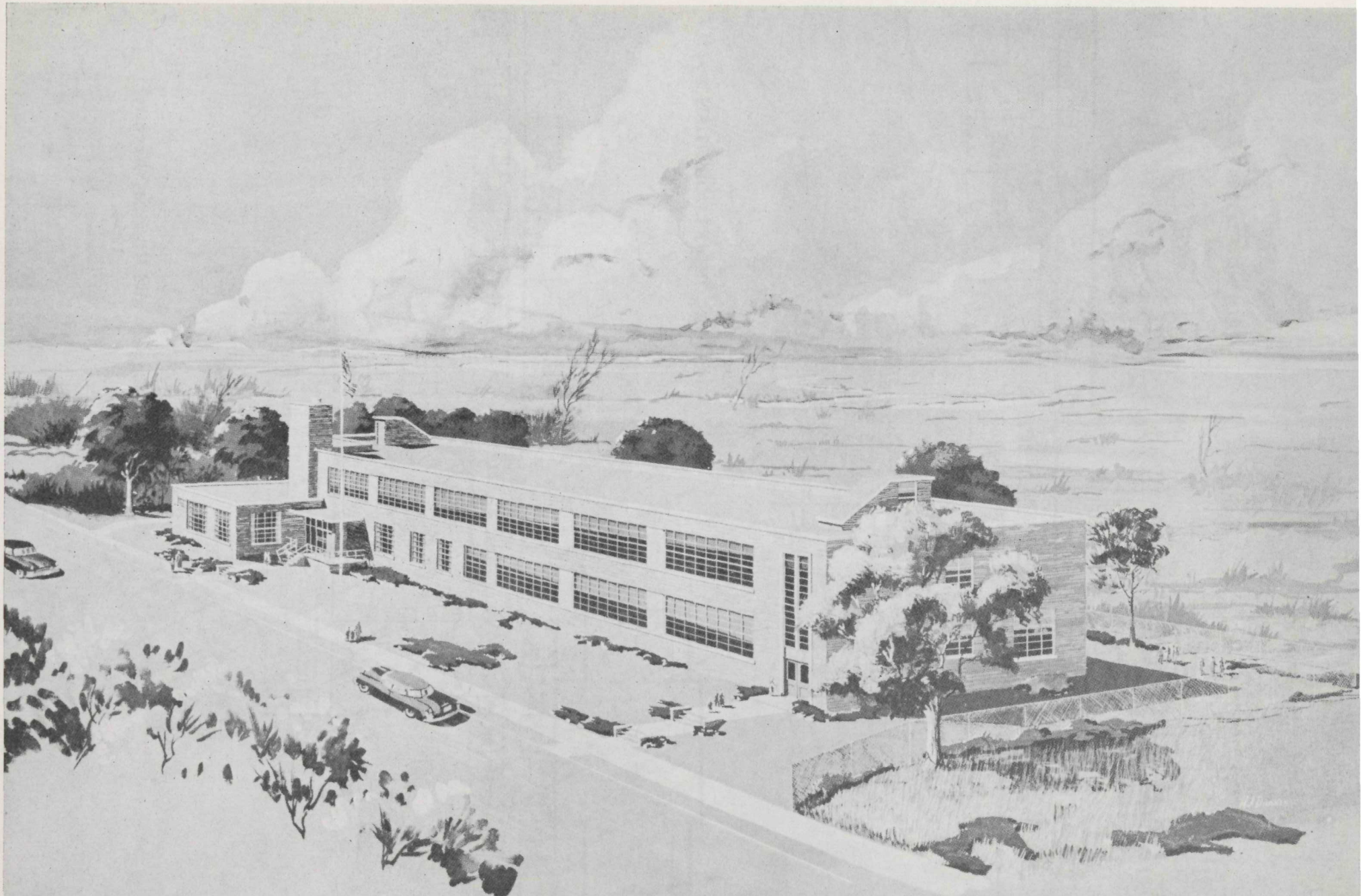
GROUND FLOOR PLAN



SECOND FLOOR PLAN



Eggers and Higgins, Architects
1954



gerritsen beach school, ps 277 brooklyn, ny ferrenz & taylor architects nyc

GERRITSEN BEACH SCHOOL (P.S. 2771)

Local School District No. 40, Brooklyn, N. Y.

FERRENZ & TAYLOR, *Architects*

152 West 42nd St., New York, N. Y.

GRADES: Kindergarten through Sixth

PUPIL CAPACITY: 640

CONSTRUCTON COST: $1,072,166.00

FLOOR AREA: 38,550 sq. ft.

CUBIC CONTENT: 609,900 cu. ft.

PROGRAM: This school departs considerably from the types of school buildings previously built in New York City. The Board of Education felt that the rapid growth of the outlying parts of the city and the tremendous increase in building costs required a re-examination of its construction policy. Recent research had developed new methods and materials which should be explored for economies adaptable to the City's requirements. Many smaller towns and cities were building schools designed to serve as centers for both the children and the adults of the community. These seemed to offer a logical solution to the needs of the new population centers which had sprung up within the city, but far from the older centers.

Public School 277 was chosen to pioneer this type of school in New York City. It is situated near the southern tip of Brooklyn on a portion of Marine Park which was made available for school purposes through the cooperation of the Department of Parks. The program called for a small building not more than two stories in height. The capacity, originally set at 450, was later increased to 640. Construction and maintenance economies were stressed.

The actual building site only covers one acre, but in effect the entire open area of the surrounding park becomes part of the school grounds. An adjacent existing playground will be used by all grades except the Kindergarten. A Kindergarten Playground and a School Garden are required within the boundaries of the Site. The Library, Lunchroom-Playroom, Teachers' Lunchroom and Kitchen are to be adaptable for after-hour use by the Community.

TECHNICAL DATA:

Reinforced concrete continuous flat slab construction.

Foundations—poured in place concrete piles.

Exterior walls—brick, cinder block back-up.

Partitions—hollow block, plastered.

Floors—Monolithic, mainly asphalt tile finish.

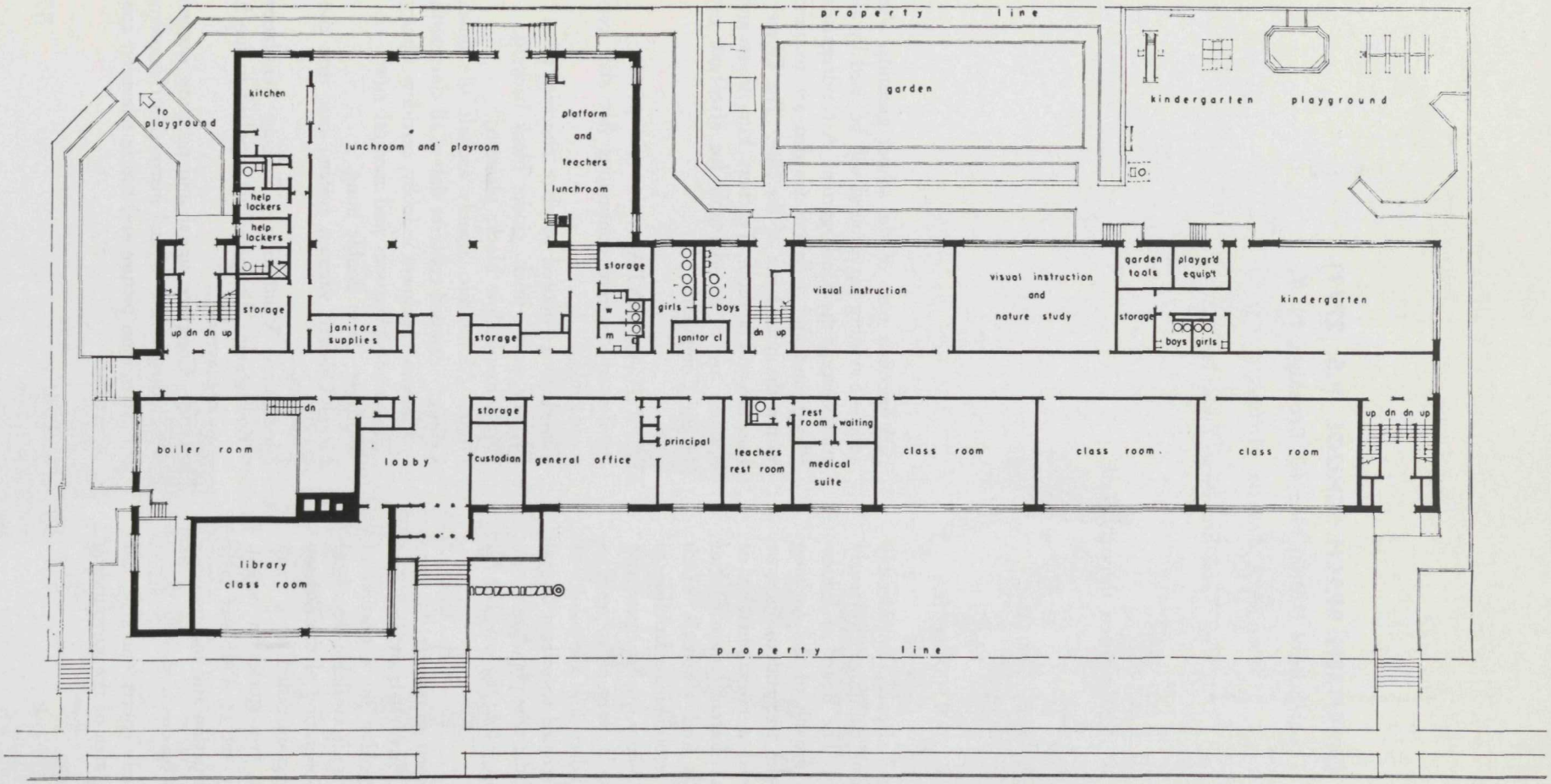
Ceilings—exposed concrete slab in all classrooms, acoustical treatment in lobby, corridors, library, lunchroom-playroom and medical suite.

Windows—Steel double hung.

Heat—Oil-fired vacuum system, cast iron convectors.

Mechanical Ventilation — Exhaust ventilation throughout. Tempered air supplied to lunchroom-playroom.

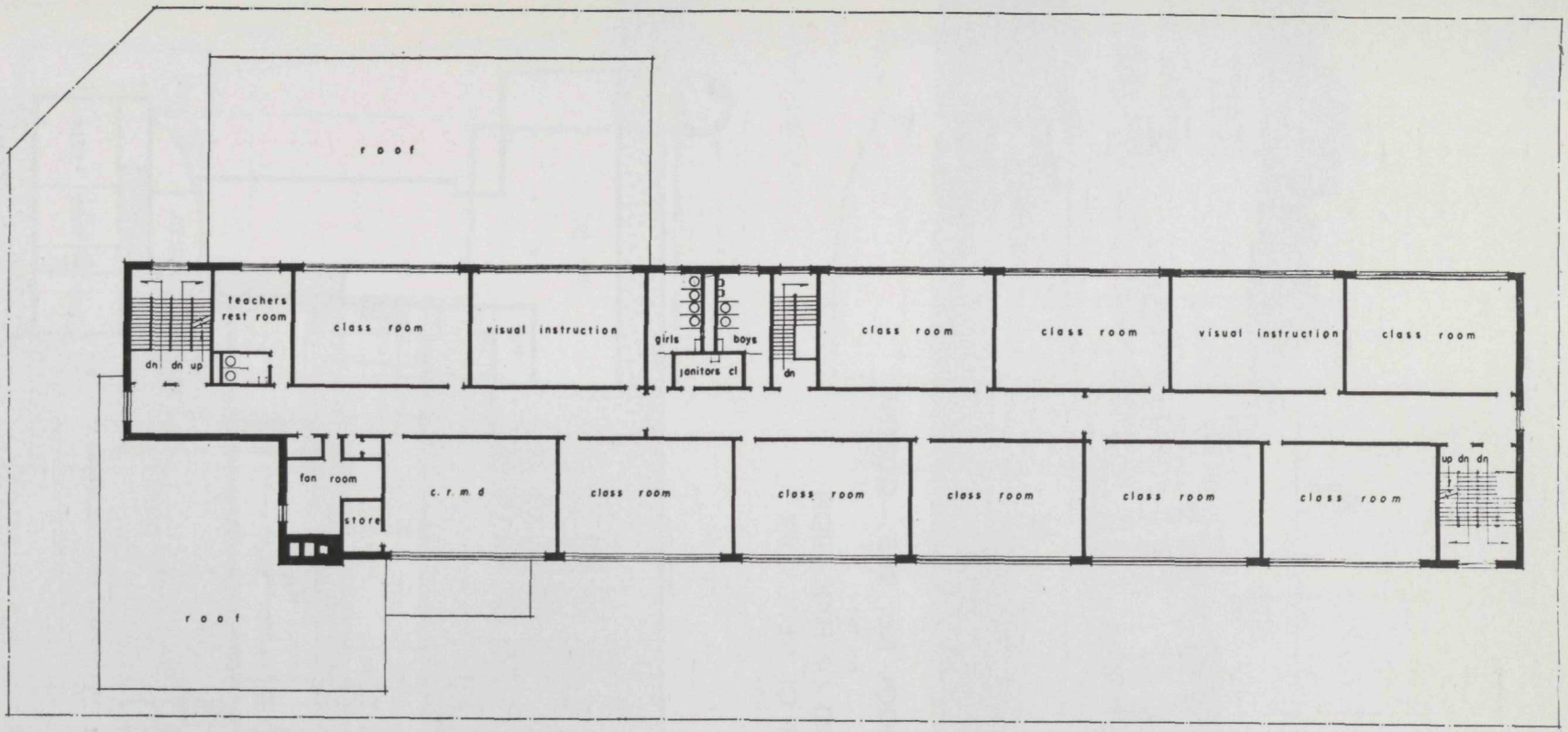
Electrical—Complete signal and program systems including radio. Visual instruction classrooms have motion picture and future television connections.



first floor plan

0 5 10 20 30 40

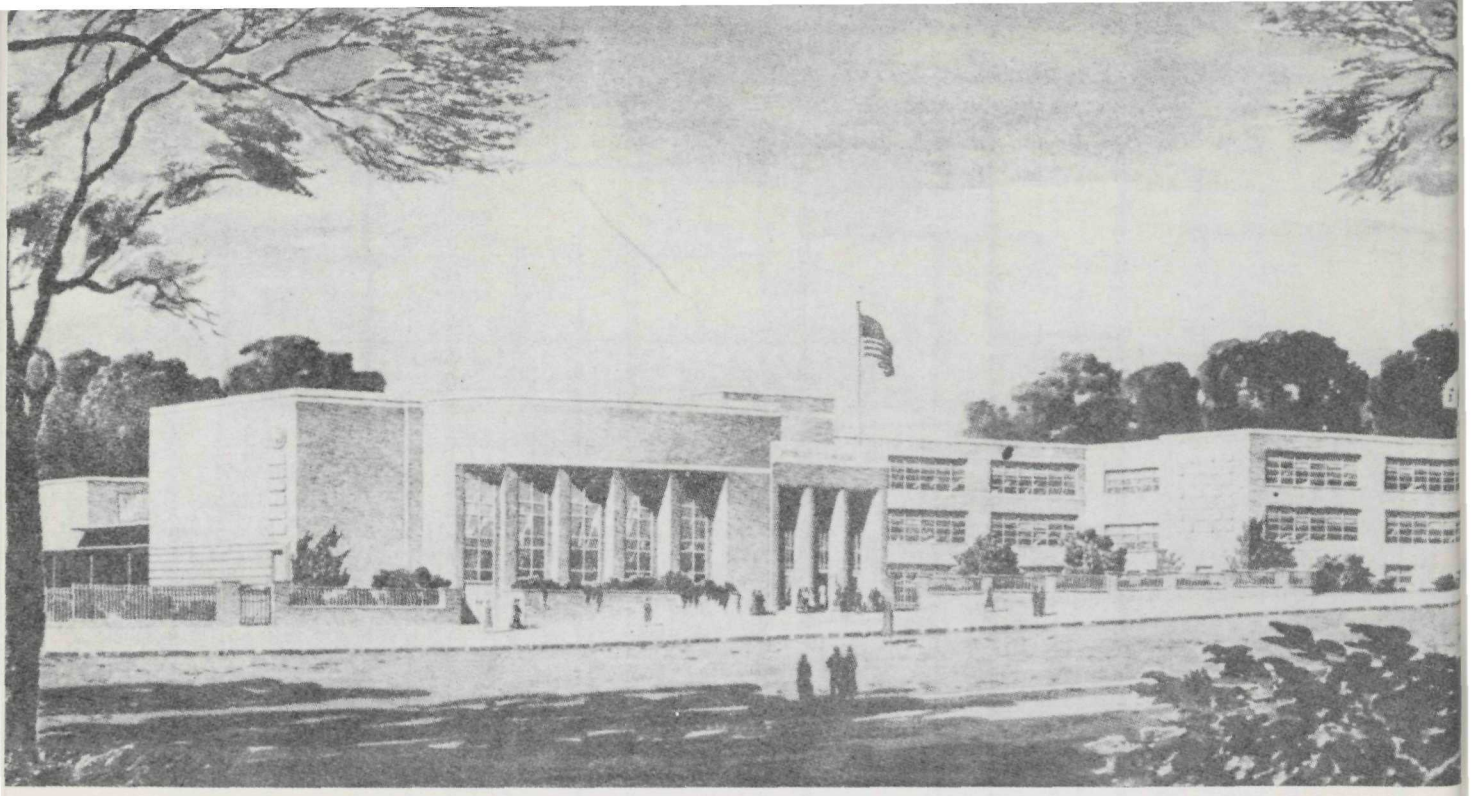
gerritsen beach school ps 277 brooklyn ny ferrenz & taylor architects nyc



second floor plan

0 5 10 20 30 40

gerritsen beach school ps 277 brooklyn ny ferrenz & taylor architects nyc

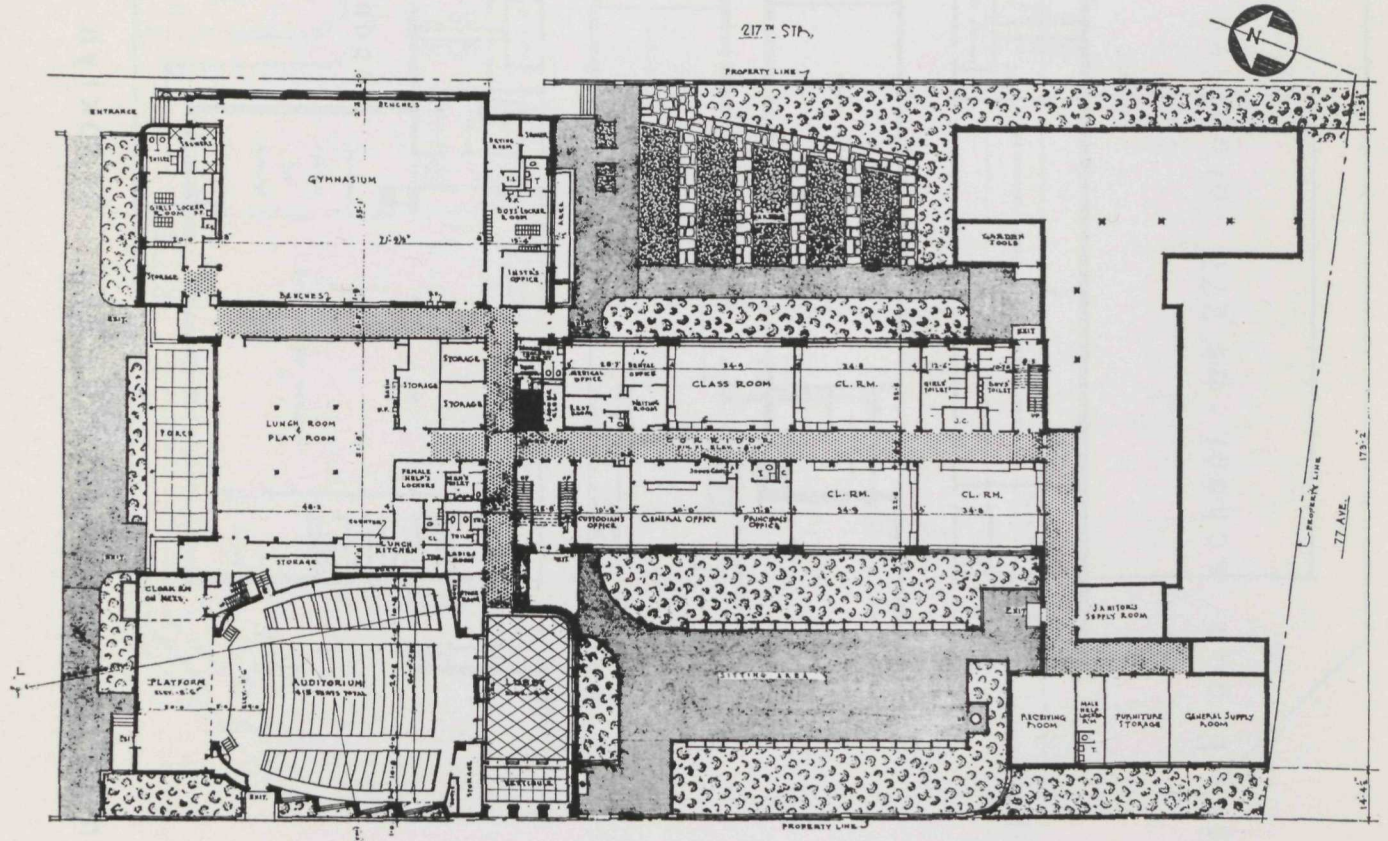


PUBLIC SCHOOL No. 205 — QUEENS

for the

BOARD OF EDUCATION

CITY OF NEW YORK



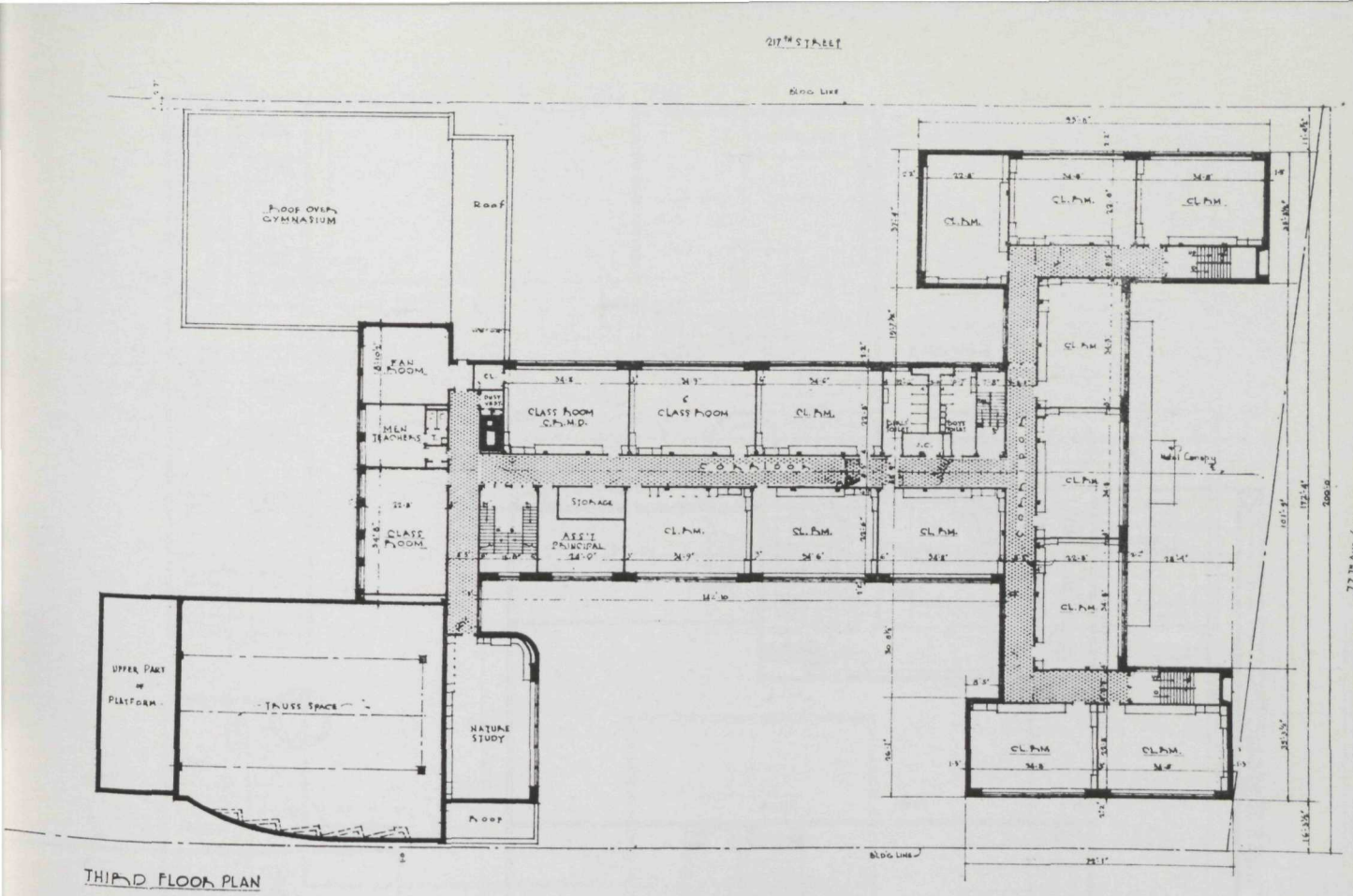
FIRST FLOOR PLAN

BELL BOULEVARD

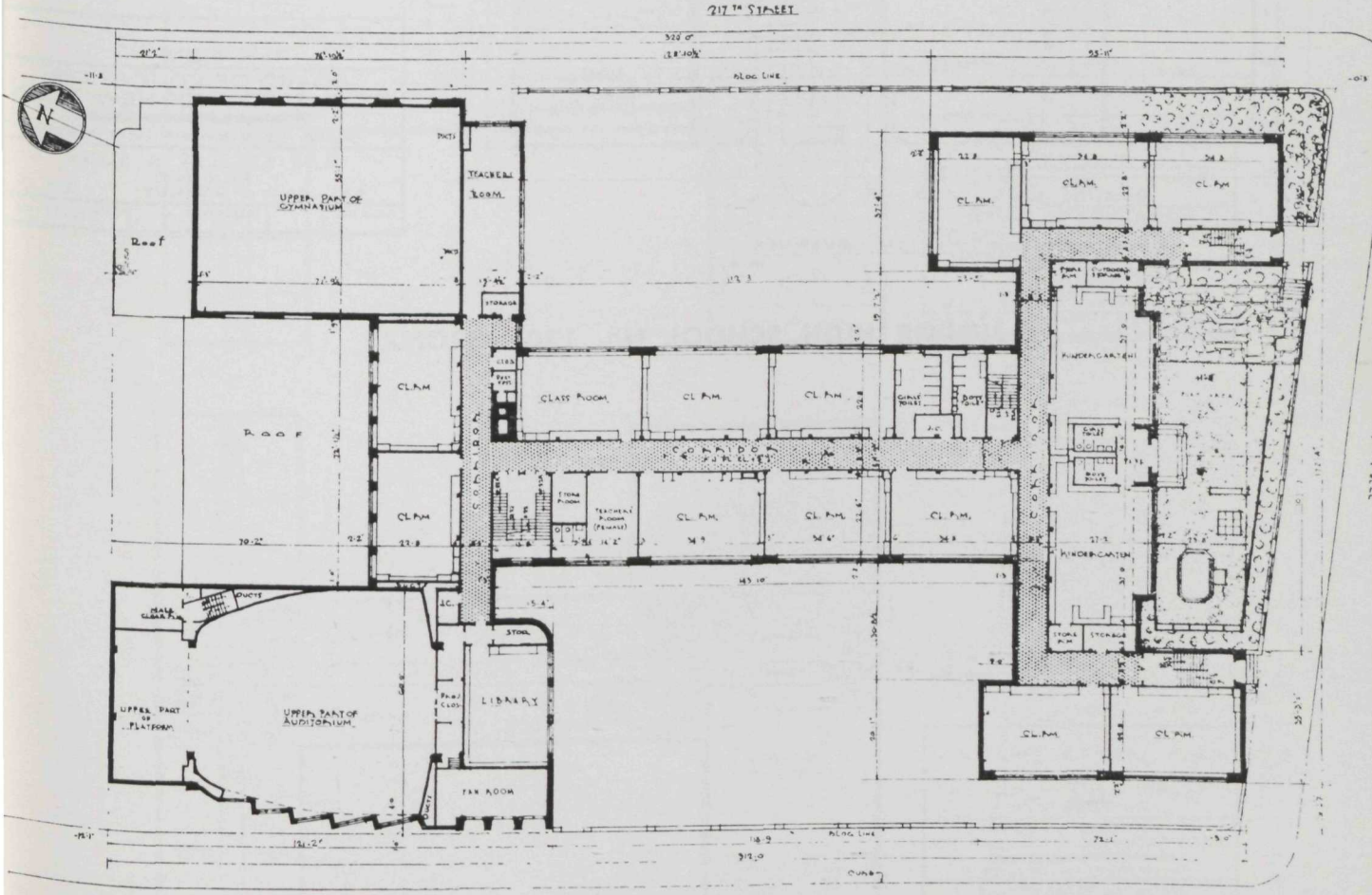
N.Y. PUBLIC SCHOOL Nº 205
QUEENS N.Y.C.

STARRETT & VAN VLECK — REGINALD E. MARSH ARCHITECTS
JUNE 20, 1932
DWN BY M.J.
JOB Nº DD-23

NOTE - ALL CONSTRUCTION DETAILS AND FINISHING MATERIALS WILL BE IN ACCORDANCE WITH THE BOARD OF EDUCATION STANDARD SPECIFICATIONS



THIRD FLOOR PLAN



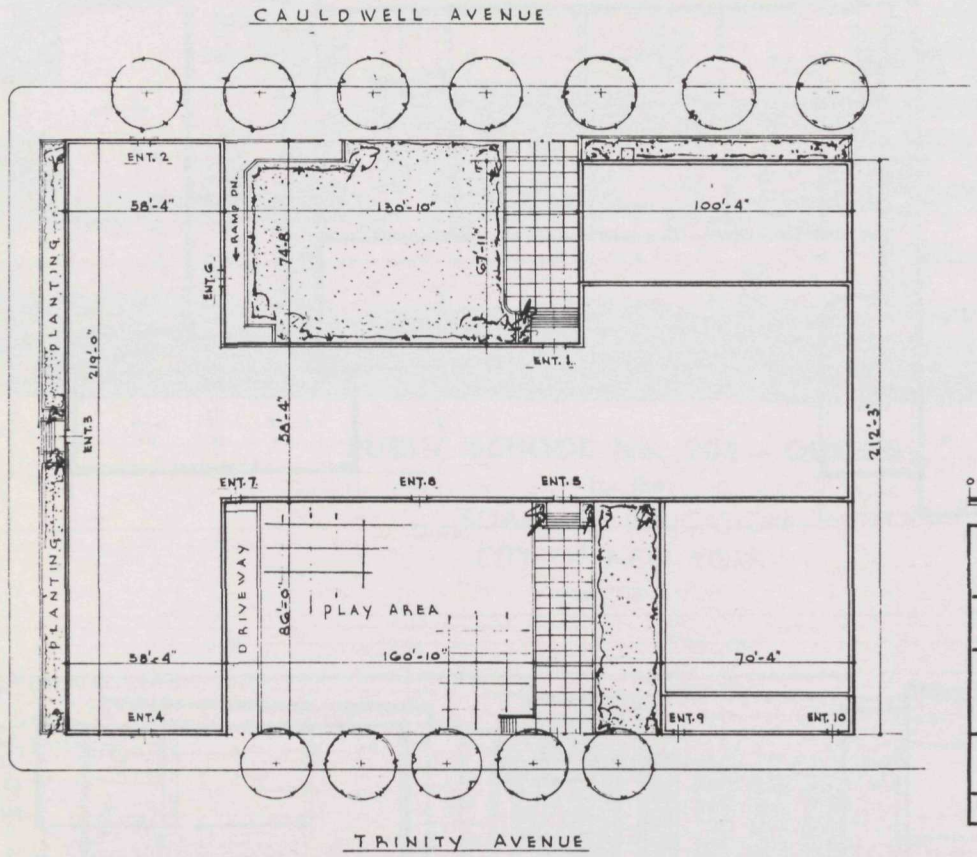
SECOND FLOOR PLAN

BELL BOULEVARD

N.Y. PUBLIC SCHOOL No. 205
QUEENS, N.Y.C.

STARRETT & VAN VLECK, REGINALD E. MARSH
ARCHITECTS
JUNE 20, 1932
JOB NO. 20-25

NOTE - ALL CONSTRUCTION DETAILS AND FINISHING MATERIALS WILL BE IN ACCORDANCE WITH THE BOARD OF EDUCATION STANDARD SPECIFICATIONS



SITE PLAN

J. H. S. 120 BRONX

NEW BUILDING

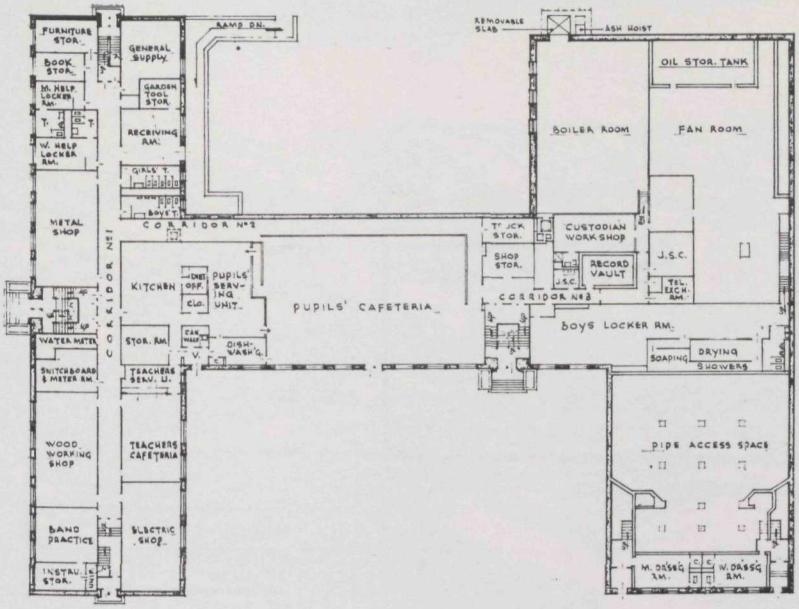
BOARD OF EDUCATION
OF THE CITY OF NEW YORK

WILLIAM JANSEN - SUPERINTENDENT OF SCHOOLS

S. J. KESSLER & SONS
ARCHITECTS
551 FIFTH AVENUE N. Y. C.

SHEET NO. 1	SHEETS IN SET 7	DATE 6-17-54

JUNIOR HIGH SCHOOL No. 120 — BRONX



0 8' 16' 24' 32'

SCALE IN FEET

BASEMENT FLOOR PLAN

J. H. S. 120 BRONX

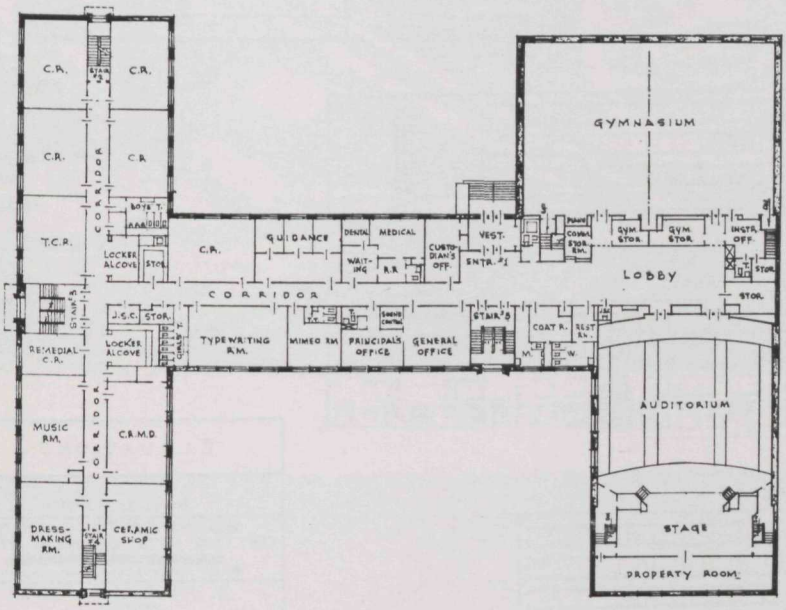
NEW BUILDING

BOARD OF EDUCATION
OF THE CITY OF NEW YORK

WILLIAM JANSEN - SUPERINTENDENT OF SCHOOLS

S. J. KESSLER & SONS
ARCHITECTS
551 FIFTH AVENUE N. Y. C.

SHEET NO. 2	SHEETS IN SET 7	DATE 6-17-54



0 8' 16' 24' 32'

SCALE IN FEET

FIRST FLOOR PLAN

J. H. S. 120 BRONX

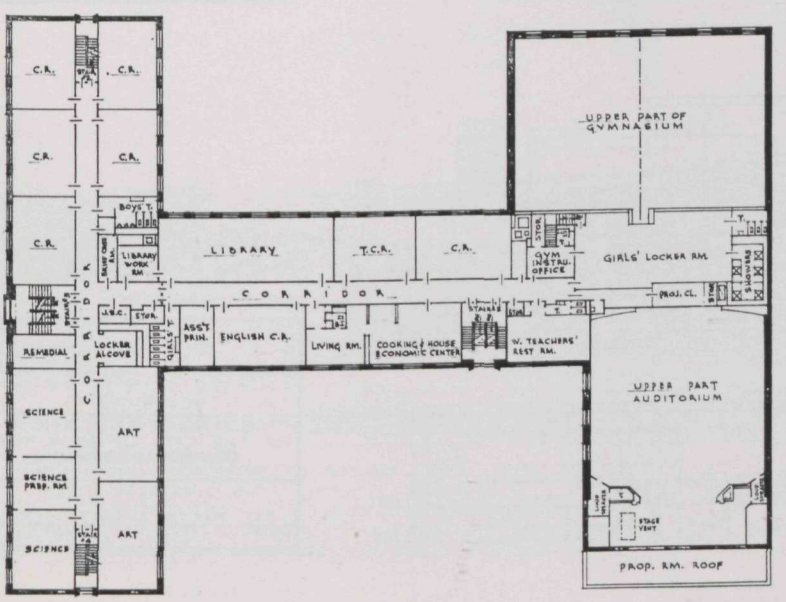
NEW BUILDING

BOARD OF EDUCATION
OF THE CITY OF NEW YORK

WILLIAM JANSEN - SUPERINTENDENT OF SCHOOLS

S. J. KESSLER & SONS
ARCHITECTS
551 FIFTH AVENUE N. Y. C.

SHEET NO. 3	SHEETS IN SET 7	DATE 6-17-54



0 8' 16' 24' 32'

SCALE IN FEET

SECOND FLOOR PLAN

J. H. S. 120 BRONX

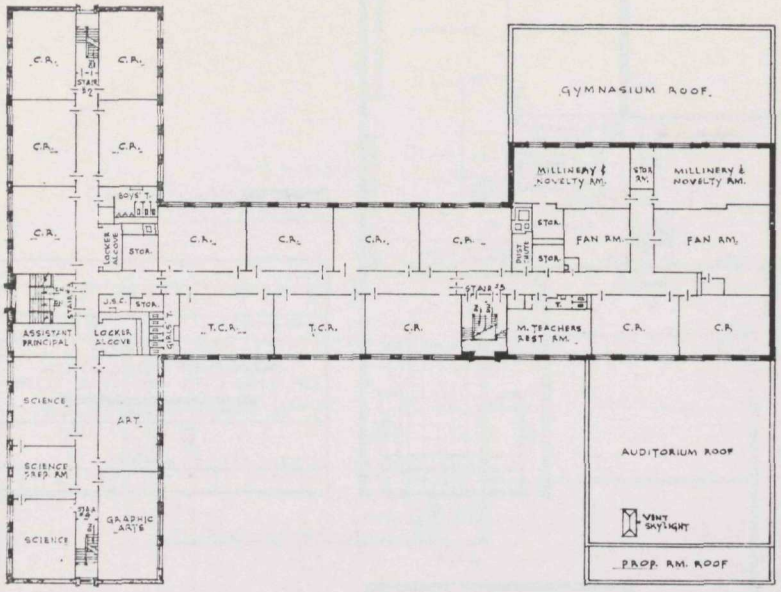
NEW BUILDING

BOARD OF EDUCATION
OF THE CITY OF NEW YORK

WILLIAM JANSEN - SUPERINTENDENT OF SCHOOLS

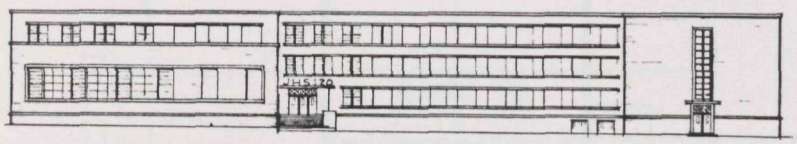
S. J. KESSLER & SONS
ARCHITECTS
551 FIFTH AVENUE N. Y. C.

SHEET NO. 4	SHEETS IN SET 7	DATE 6-17-54

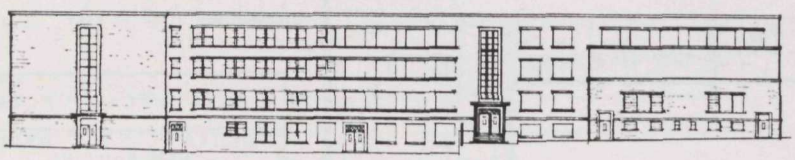


0' 8' 16' 24' 32'
SCALE IN FEET

THIRD FLOOR PLAN
J.H.S. 120 BRONX
NEW BUILDING
BOARD OF EDUCATION OF THE CITY OF NEW YORK
WILLIAM JANSEN - SUPERINTENDENT OF SCHOOLS
S. J. KESSLER & SONS
ARCHITECTS
551 FIFTH AVENUE N.Y.C.
SHEET NO. 5 | SHEETS IN SET 7 | DATE 6-17-54



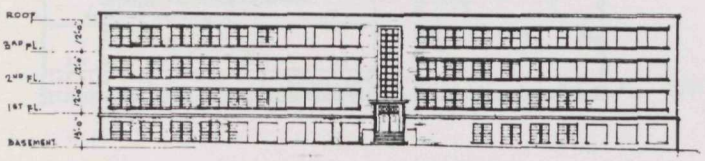
CAULDWELL AVENUE ELEVATION



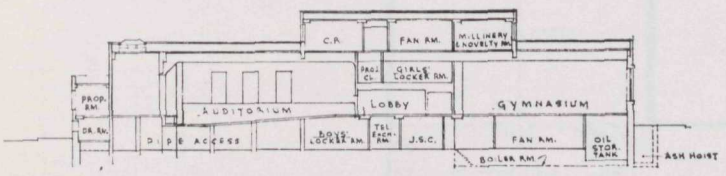
TRINITY AVENUE ELEVATION

0' 8' 16' 24' 32'
SCALE IN FEET

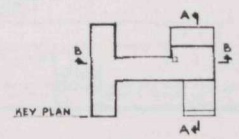
ELEVATIONS
J.H.S. 120 BRONX
NEW BUILDING
BOARD OF EDUCATION OF THE CITY OF NEW YORK
WILLIAM JANSEN - SUPERINTENDENT OF SCHOOLS
S. J. KESSLER & SONS
ARCHITECTS
551 FIFTH AVENUE N.Y.C.
SHEET NO. 6 | SHEETS IN SET 7 | DATE 6-17-54



EAST 161ST STREET ELEVATION

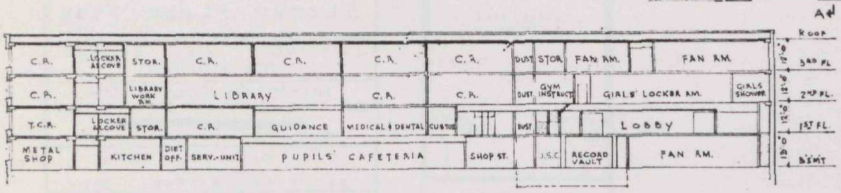


TRANSVERSE SECTION: A-A



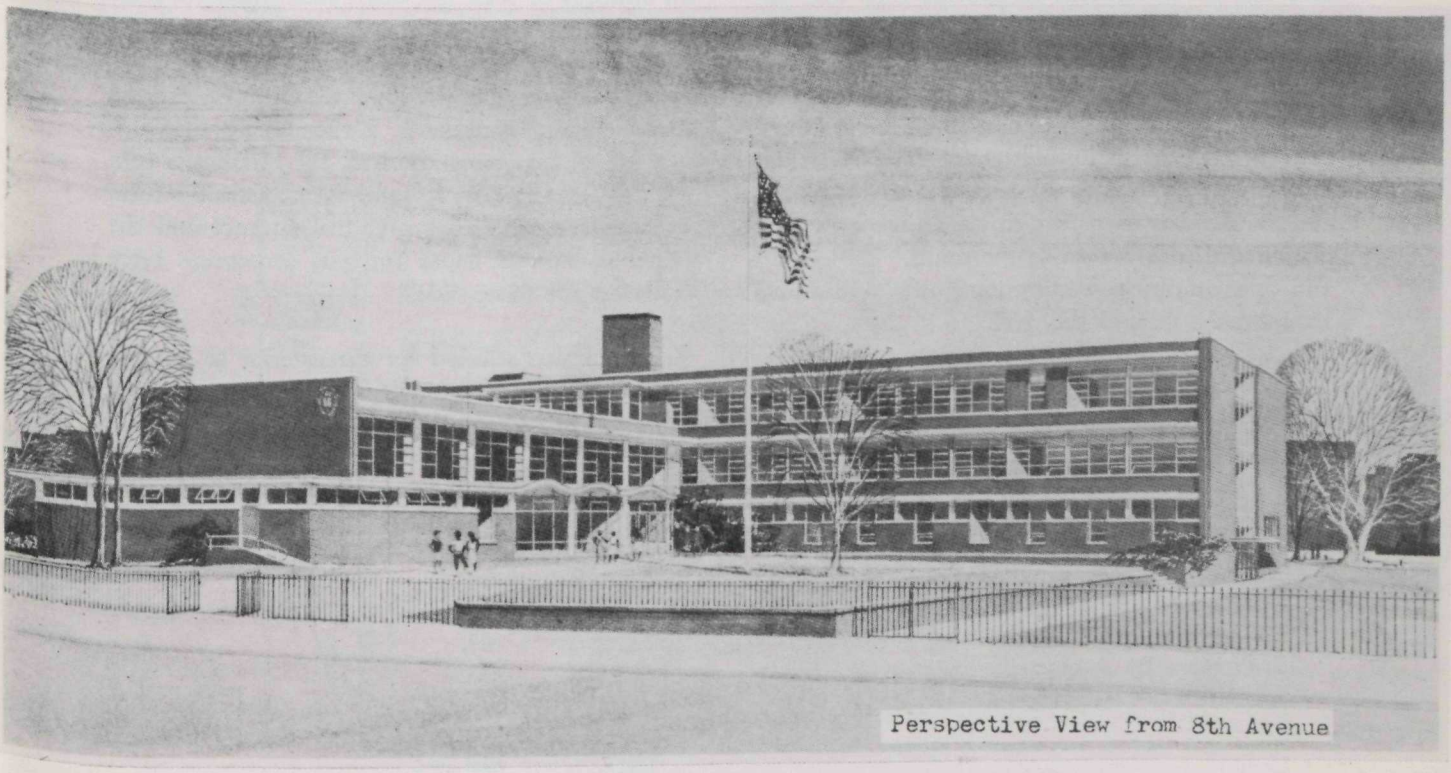
0' 8' 16' 24' 32'
SCALE IN FEET

SECTIONS
J.H.S. 120 BRONX
NEW BUILDING
BOARD OF EDUCATION OF THE CITY OF NEW YORK
WILLIAM JANSEN - SUPERINTENDENT OF SCHOOLS
S. J. KESSLER & SONS
ARCHITECTS
551 FIFTH AVENUE N.Y.C.
SHEET NO. 7 | SHEETS IN SET 7 | DATE 6-17-54



LONGITUDINAL SECTION: B-B

P.S. 156 — MANHATTAN



Perspective View from 8th Avenue

THE DR. EUGENE PERCY ROBERTS SCHOOL

8th Avenue & 155th Street, New York, N. Y.

THE BOARD OF EDUCATION
OF THE CITY OF NEW YORK

Public School 156, an elementary school for 650 pupils, has been designed to serve a neighborhood where the juvenile population has been greatly increased through the construction of Colonial Houses by the New York City Housing Authority. The school is located on a large triangular plot north of the 155th Street viaduct between Eighth Avenue and the Harlem River.

Completion of this structure will mark another step in the reclamation of the waterfront. Ultimately the express Harlem River Drive will be built as shown in the aerial view on the cover. It is expected that a temporary connecting road can be made soon, which will extend the Drive adjacent to the school property. The school playground has been designed by the City Park Department with particular emphasis on its combined school and community use.

The Architects proposed a three-story design in order to lift the classrooms above the future ramps that will be constructed to provide exits and entrances for the Drive, as well as to economize on the number of piles required for the foundations, due to the fact that rock lies over 100 feet below the surface at this point in the river where there was a cove in Revolutionary days. The first floor is devoted to administrative and service rooms, and the Kindergartens, which are adjacent to their playground with a vista to the south. The second and third stories have classrooms only, and afford an unbroken view of the river.

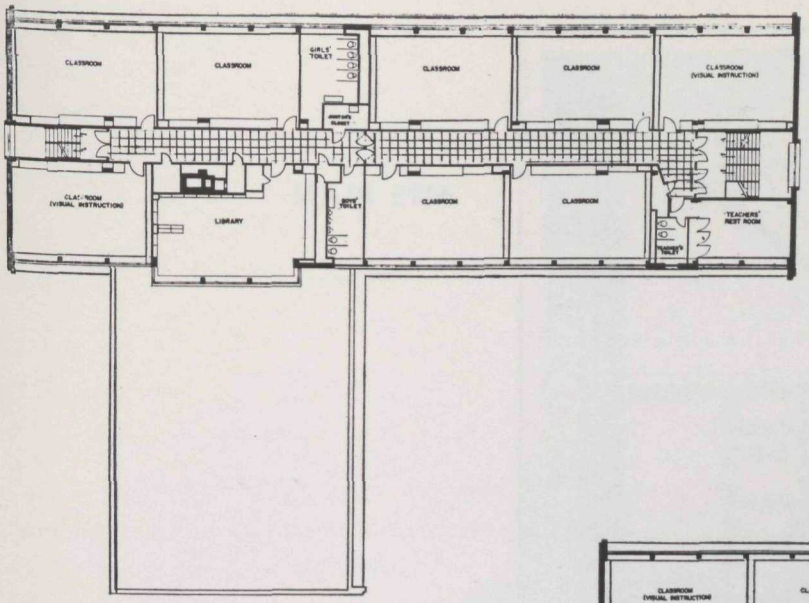
The school contains 15 classrooms with accommodations for Kindergarten and grades one through six. In all, there are places for 752 pupils including the facilities of special rooms such as the Library, Nature Study room, and a classroom for the instruction of retarded children.

An Auditorium of 4,000 sq. ft. has been designed for multiple service with a seating capacity of 500 persons, and equipment for a Gymnasium as well as Lunch Room use. Locker and other facilities are arranged to provide for the separate community use of the Gymnasium and recreation areas.

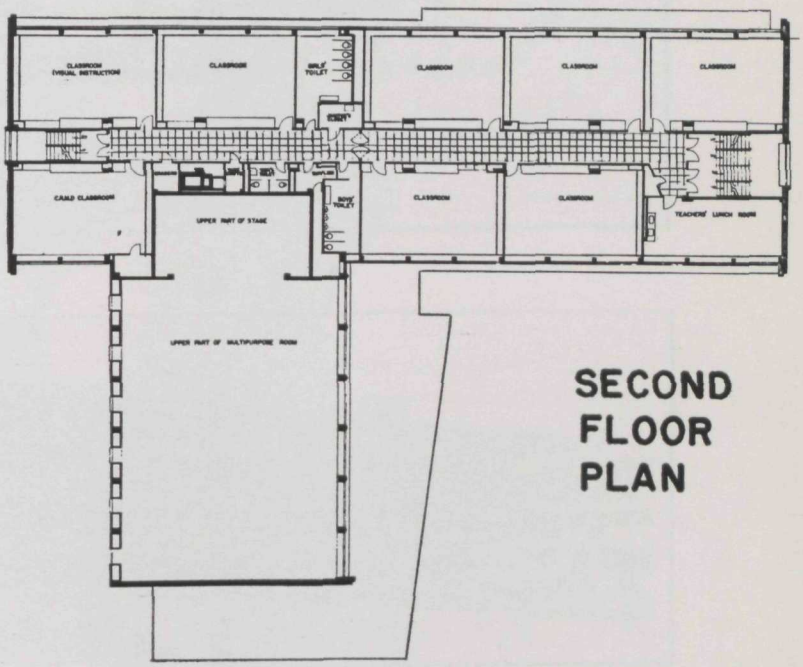
At the suggestion of the Board of Education the Architects investigated the possibility of achieving a savings in cubage by eliminating the furred space in corridor ceilings usually given over to bulky ventilation ducts. The building as finally designed shows that by placing these ducts in the empty spaces over the class room closets along the corridor walls, the heights of ceilings which had previously been controlled by headroom in the corridor could now be set by what was a suitable ceiling height for the classrooms. This permitted a material reduction in floor-to-floor height throughout the job.

A welcome by-product of this lessened height is an intimacy of scale not often found in three-story buildings. This effect is enhanced by the simple device of extending the reinforced concrete floor slabs out over the windows to form continuous sun-shielding "eyebrows". Remembering that this is a school for young children, the Architects consciously introduced a few playful notes in the form of a roller-coaster roof over the entrance and the bandbox storage house with its serpentine brick walls on the River side.

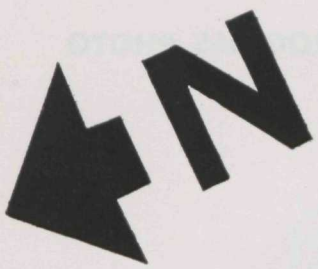
Red brick was selected for the exterior to provide more harmonious continuity between the red brick buildings of Colonial Houses and the Harlem River Houses. The trim is white limestone. Double hung aluminum windows with no-draft hopper vents at the sill are used. Interior walls are of glazed acoustical block.

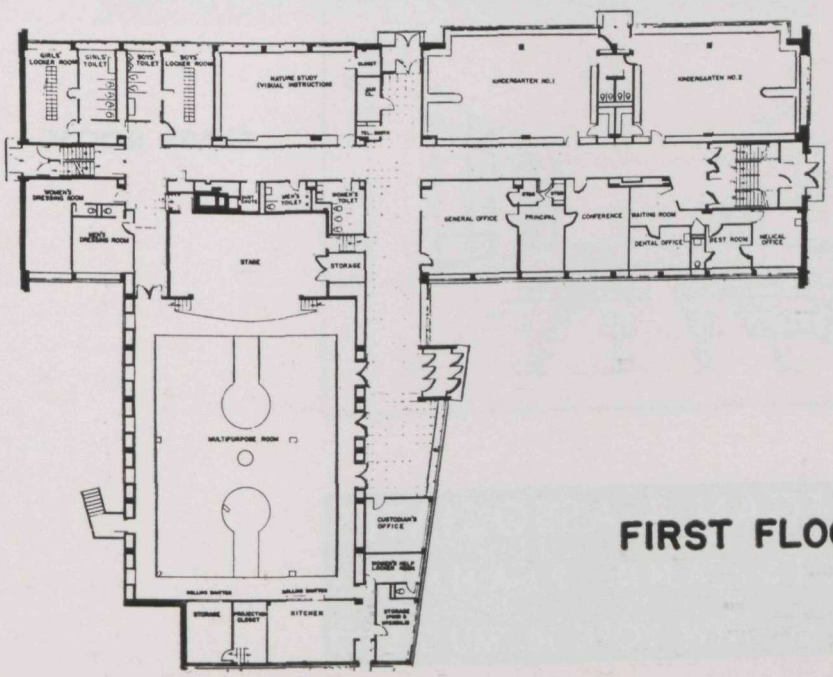


THIRD FLOOR PLAN

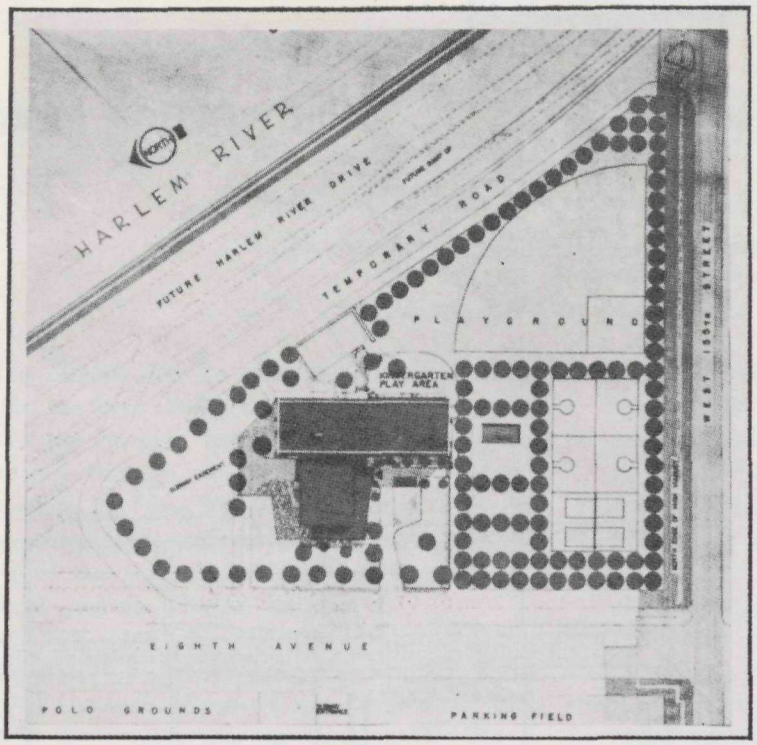


SECOND FLOOR PLAN

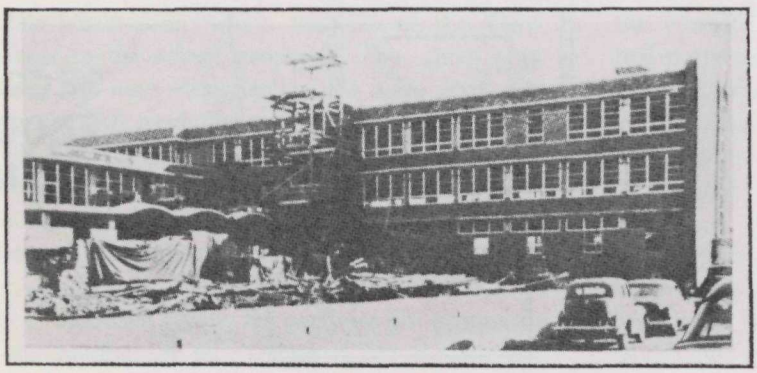




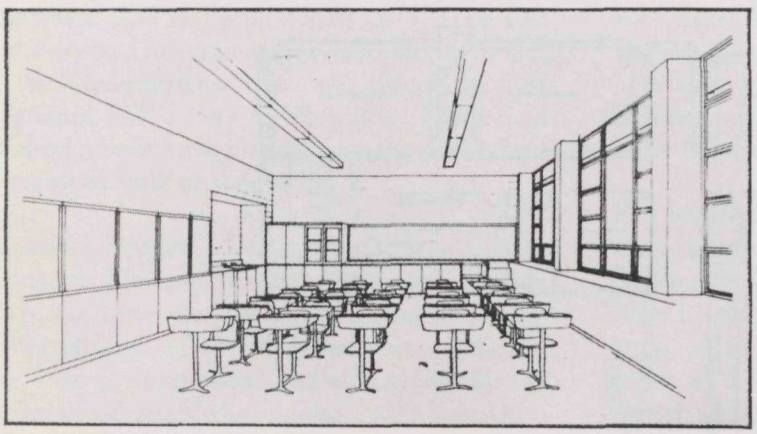
FIRST FLOOR PLAN



SITE PLAN



PROGRESS PHOTO



CLASS ROOM