DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

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SURVEY OF THE SCHOOLS OF WILMINGTON, DELAWARE

PART 1

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, December 30, 1920.

SIR: I am transmitting herewith for publication as a bulletin of the Bureau of Education a report of the survey of the schools of Wilmington, Del., made by this bureau at the request of the properly constituted authorities of the city. The details of the agreement are set forth in the introduction. I am asking for its publication for the use of the citizens of Wilmington and of officials and students of education elsewhere.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

The SECRETARY OF THE INTERIOR.

INTRODUCTION.

During March of 1920, by resolution of the Board of Education of Wilmington, a committee of 30 citizens of the city was appointed to make a survey of the public schools and of the system of education of the city. According to arrangement 10 members of the committee were appointed by the board of education, 10 by the city council, and 10 by the mayor of the city. In June the committee organized and appointed an executive committee of 9. The executive committee was directed to prepare a plan or program to be followed in making the investigation and survey and to report back to the general committee.

It was at this point the Commissioner of Education was asked what the Bureau of Education could do in furnishing experts to assist in the study, also to suggest what should be the scope of the survey, to state how long it would take to make the investigation and to make an estimate of its approximate cost. The committee stated that in its opinion three important points should be covered:

1. A report on the physical condition of the schoolhouses, with recommendations as to any changes for their improvement or betterment.
2. A report as to the business methods pursued by the board of education, with recommendations for improvement.
3. Investigation of the methods of instruction in the schools, as to courses, standards, etc., with recommendations for improvements, if any.

In reply, under date of July 2, the Commissioner of Education made the following statement:

The survey should cover:

1. A study of the schoolhouse situation, with recommendations for repairing the old buildings and making them more useful and more sanitary, replacing those out of use, and outlining a building program for the next 8 or 10 years.
2. A study of the organization of the board of education and its methods of work, with special relation to the business activities and to the schools through the superintendent and other officers.
3. A study of the organization of the schools and their administration under the direction of the superintendent, with recommendations for improvements.
4. The financing of the schools, the salaries of teachers and other school officers.
5. A study of the education, professional preparation, and experience of teachers, and the spirit of the teaching body.
6. A study of the courses of study and their adaptation to the needs of the city, with recommendations for their modification and improvement, and a statement of reasons for the same.

7. A study of methods of instruction, the results and standards, with recommendations.

As a background for all recommendations for improvements and readjustments it will be necessary to make a comprehensive study of the city as a community, its industries, the occupations of its people, and its life and ideals.

The Bureau of Education can undertake to make the survey for your committee on the following conditions:

1. That it be formally invited by your committee and that the invitation have the indorsement of the State superintendent of public instruction or the State board of education.

2. That the persons detailed to do the work shall have the hearty cooperation of your committee, the board of education, the superintendent of schools, and all others through whom information may be had, so that the work may be done in the most effective and economic way.

3. That the survey committee may be permitted to find the facts as they are, to publish them as they are found in so far as may be wise, and to make recommendations for improvements with some probability that they will have careful consideration.

4. That the Bureau of Education be permitted to publish the findings of the survey committee, with all conclusions and recommendations, as a bulletin of the bureau, first for distribution among the people of Wilmington and, second, for general distribution among students of education throughout the country.

5. That your committee pay the expenses of the survey, including the traveling and living expenses of persons employed in the survey and the honorarium of those whom it is necessary for me to employ from outside the staff of the bureau.

This last stipulation is necessary because the bureau has not a sufficient number of persons on its staff to make the survey without seriously interfering with the ordinary work of the bureau. The persons employed from the outside and paid by your committee will, of course, be employed with the approval of your committee.

Six thousand dollars will be an ample sum for all expenses of making the study and preparing the report. The printing will be done at the expense of the Federal Government.

It will be impossible for me to furnish any assistance from the Bureau of Education except on the foregoing conditions. The survey committee appointed by me would make its report to me as Commissioner of Education and I would make the report to your committee. Before making the final report your committee would have an opportunity of going over the report to see if we had made any mistakes as to findings or any misinterpretations.

I believe your schools begin in September. The survey could be made in October and November, and the report ready for printing by the middle or last of December.

Under date of August 10, the secretary of the executive committee notified the commissioner that all conditions had been met, and that he was instructed formally to invite the commissioner to undertake the survey of the schools along the general lines outlined in the commissioner's letter of July 2. He also stated that the board of education of the city of Wilmington had indorsed the invitation and that the members pledged themselves to cooperate in every way possible in the investigation.

THE SURVEY COMMISSION.

To assist him in making this study, the Commissioner of Education appointed the following commission:

Frank F. Bunker, chief City Schools Division, Bureau of Education, director of the survey.

Thomas M. Balliet, specialist in educational theory and practice, ex-dean department of Education, New York University, New York, N. Y.

William T. Bawden, specialist in vocational education, Bureau of Education.

Ralph Bowman, specialist in municipal finance, Washington, D. C.

Mary Bradford, superintendent of schools, Kenosha, Wis.

Henrietta W. Calvin, specialist in home economics, Bureau of Education.

W. S. Deffenbaugh, specialist in city school administration, Bureau of Education.

F. B. Dresslar, specialist in school architecture, sanitation, buildings, and equipment, Bureau of Education.

Arthur W. Dunn, specialist in civic education, Bureau of Education.

Will Earhart, supervisor of music, public schools, Pittsburgh, Pa.

Alice Barrows Fernandez, specialist in social and industrial problems, Bureau of Education.

Florence C. Fox, specialist in primary grade education, Bureau of Education.

W. B. Ittner, consulting specialist in school architecture, St. Louis, Mo.

Marie L. Rose, associate director Child Health Organization of America, New York, N. Y.

George R. Twiss, professor secondary education and State high school inspector, Ohio State University, Columbus, Ohio.

Nina C. Van der Walker, specialist in kindergarten education, Bureau of Education.

The field work of the survey commission began on October 11 and ended on November 6. While the time for the examination of conditions was necessarily short, nevertheless through careful organization of the work and through frequent meetings of the staff for the discussion of every phase of the problem, definite and positive conclusions in which all concurred were very quickly reached. Although the commission as a whole considered every important activity of the work of the system, each member was detailed to the particular field of his interest. The reports of the members of the commission were organized by the director of the survey and transmitted to the Commissioner of Education for his approval.

Inasmuch as the citizens' committee desires to present to the General Assembly of Delaware which convenes on January 4, 1921, recommendations for legislation based upon the findings of the survey commission, the report is issued in two parts. Part I comprises that portion of the findings of the commission which deals with matters having to do with legislation, while Part II consists of the commission's discussion of the more strictly educational aspects of Wilmington's school problem.

The commission desires to express its appreciation of the courtesy and consideration universally shown its members by the members of the board of education, the superintendent of schools and his staff, by the officials of the city government, by the various civic bodies and welfare organizations, and by the citizens generally, many of whom were called upon individually for information concerning conditions. Without exception all cooperated to make the investigation as thorough and as efficient as the time would permit.

SURVEY OF THE SCHOOLS OF WILMINGTON, DELAWARE.

Chapter I.

THE EDUCATIONAL BACKGROUND.

Educational discussion and progress in Delaware during the past four years have centered about the adoption and retention of a new school code for the State and about the question whether or not Wilmington shall adopt it, thereby becoming an integral part of the school system of the State. A sketch of the chief features of the new code and of Wilmington's relation to it is essential to a clear understanding of Wilmington's problems.

THE DELAWARE SCHOOL CODE OF 1919.

Recognizing that the school laws of Delaware had been enacted piecemeal, as emergencies dictated, during a period of many years; that, in consequence, they were lacking in cohesion and unity; and that, indeed, at many points they were actually contradictory, the Delaware General Assembly of 1917 created a public school commission, directing it "to study the educational situation in Delaware, to harmonize, unify, and revise the school laws and to evolve an improved and effective system of public instruction," and to report its findings to the general assembly. The General Education Board, of New York, was called upon to make the analysis and to formulate recommendations. Out of the study made by its experts there emerged a bill comprising the new school code which after six weeks of spirited debate in the legislature and throughout the State, resulting in important changes in the bill, became a law, in April, 1919, by the close margin of 1 vote in the senate and 7 votes in the house.

While without doubt in a number of its less important details the code of 1919 was legitimately open to criticism, nevertheless a careful analysis of the document discloses the fact that in its essential features it not only marks a distinct advance but it embodies many of those features of the laws of other States which have proved, under the strain of practice, to be sound and beneficial.

IMPORTANT FEATURES OF THE 1919 SCHOOL CODE.

1. *The State board of education.*—The new code provides that the governor shall appoint a board of five members, each member serving for five years. The members receive no salary, but receive $10 a day for attendance upon board meetings; the aggregate annual sum received by each, however, it is stipulated shall not exceed $120. This board appoints a State commissioner of education, who is the secretary and the executive officer of the board, and his professional

and clerical assistants. Upon the State board rests the responsibility of enforcing the law. To enable the board to accomplish this, it is empowered to remove for cause any school officer in the State, whether elected or appointed, and to appoint a successor for the unexpired term.

The code specifically charges the State board with the following duties: To determine the educational policies of the State and to enact rules and regulations for the administration of the public-school system which, when enacted, shall have the force of law; to exercise general control and supervision over the public schools of the State; to direct and develop public sentiment in support of public education; to conduct investigations relating to the educational needs and conditions of the State; to recommend desirable changes in existing laws; to decide all controversies arising from the administering of the public-school system; to prescribe rules and regulations for the hygienic, sanitary, and protective construction of school buildings, for the health and physical inspection of children, for the grading and standardizing of all public schools, for the examination of teachers, for the taking of a biennial school census, and for the enforcement of school attendance; to prescribe minimum courses of study in all public schools, the textbooks to be used, and the prices at which these shall be sold; to fix the conditions and requirements which must be met by high schools in order that they may receive State aid; to determine the date of the opening and closing of school terms, hours of daily session and holidays; to require all persons conducting private schools to make an annual report of school enrollment, attendance, and ages of children; to approve plans for all new school buildings; to approve all training courses for teachers; and to condemn any public-school building which violates its rules for sanitation and safety.

The old laws provided for a State board composed of seven members likewise appointed by the governor and for a State commissoner of education also appointed by the governor who was independent of the State board and liable to work at cross-purposes with it. In short the chief difference between the old and the new law respecting the State board lies in this that under the old law the State board has no power to enforce its policies, while its duties were so indefinitely set forth that many misunderstandings arose due to varying interpretations. Under the new code the duties of the board are specifically defined. It is also given power to enforce its policies. In consequence it can not, as before, shift or evade its responsibility.

2. The State commissioner of education.—Under the new code the State commissioner must be a graduate of a standard college; must have had two years' professional graduate work in some university and must have had not less than seven years' experience in teaching

and school administration. He is appointed by the State board of education and in function acts as the executive officer of the State board. While he is authorized by law to make recommendations to the State board on all matters affecting educational policies and public school affairs, he has no powers independent of the State board.

3. *County boards and superintendents.*—The new code provides for a county board, in each of the counties of Delaware, comprising three members elected by the people of the county outside the special districts. These boards are vested with authority to manage and control all public-school property; to act as trustees for any bequests made to the schools of the county or of a particular district; to maintain a "uniform, equal, and effective system of free public schools throughout the county" comprising both elementary and high schools, providing separate schools for white and colored children; to procure ample and suitable grounds, buildings, and equipment, subject to the standards fixed by the State board of education, for all the schools of the county; to prepare and submit a budget to the levy court which shall provide ample funds for school maintenance; to make and distribute annually a printed report covering the needs and accomplishments of the schools of the county; and to appoint a county superintendent of schools. The county board, in addition, may in its discretion, consolidate school districts; may remove a member of a local board of school trustees for cause and fill all vacancies; and it may suspend or remove for cause, subject to review under certain conditions by the State board, any principal, teacher, or other school officer within the county.

The executive officer of the county board under the new code is the county superintendent, whose duty it is to see that the school code, the rules, regulations, and policies of both the State board of education and the county board are carried into effect. He can be removed from office by the State board for cause.

Under the old laws both the county board and the superintendent were appointed by the governor of the State. They were independent of each other and were not obliged under the law to cooperate. The duties of the county board under the old laws were optional and perfunctory. These boards could advise and recommend, but they had no authority to carry their recommendations into execution.

4. *Special school districts.*—In the new code provision is made whereby certain cities, towns, and school districts designated by the general assembly may become special school districts provided they adopt the new school code, and whereby the State board is authorized and empowered to create other school districts. The governing body of such special districts shall be a board of education elected by the voters of the special districts. The duties of such a board correspond to those of a county board. The executive officer of such a board

comprises the superintendent, who is appointed by the board, and whose duties correspond in general to those of a county superintendent. Inasmuch as Wilmington has not adopted the Delaware school code, the city is not recognized under the code as a special district.

Before a city or district, under the code, may be declared a special school district it must have met the requirements laid down by the State board in respect to grounds, buildings, and equipment; to the extent of elementary and high school work offered; to the length of the school year and to the qualifications required of superintendent and teachers.

5. *Local school districts and committees.*—Probably in no particular is the new school code more nearly in line with progressive school practice generally than in the changes it creates in the functions and duties of the local district school committee. Under the old law the district was the school unit and the district committee was in large measure a law unto itself. In consequence, the largest variation in efficiency of control, as among the districts of the State, was reported. In scores of districts, it is authoritatively reported, the school buildings were neglected; neither were they supplied with needed furniture nor with proper equipment or adequate supplies. Again, it is reported, in many districts no financial accounting was ever made, and that committees permitted bills for various items of operating expense to go unpaid, thereby running their districts into debt. In many districts, too, bonds were issued without any provision being taken to reduce the bonded indebtedness. It is said that nearly $300,000 of such old unpaid debts were turned over to the authorities under the new code to be paid out of taxes raised under the latter. Again, it is reported that under the old system many local boards in employing teachers held to no standard of professional qualifications and, indeed, that many were appointed solely on grounds of personal relationships. Furthermore, that in many instances salaries were so low that only those possessing the poorest qualifications could be secured or retained.

One important reason why the district plan of school organization, wherever it has obtained, has always worked out in just this way lies in the fact that good schools with well-trained and well-qualified teachers, equipped with modern aids to education, cost money. As money must be raised by taxation and as most efforts to increase taxation even for providing those things which are of direct benefit are unpopular, the result is that often local district committees not only make little or no effort to secure adequate funds for their schools, but they actually shorten the school terms, neglect repairs, fail to provide adequate supplies, and hire the cheapest teachers in order not to excite the nerve that connects the community mind with its pocketbook.

Only through enlarging the unit of taxation and of administrative control can conditions be equalized, can haphazard and shiftless methods be eliminated, and the individual local school be made a part of a system that shall be administered as a whole by those professionally trained for such work.

The new school code is written upon the theory that the smallest unit for such purposes which is at all satisfactory is the county. In this the new code is in harmony with the trend of progressive practice throughout the country. Indeed, Delaware must abandon the local district system of taxation and of control if she wishes to give her children who live in the country educational advantages which are at all comparable with those afforded country and village children living in many other States.

Specifically, the new code withdraws from the local school committee the authority to levy and collect school taxes and places it in the hands of a levy court of the county. It also withdraws from them the authority to employ teachers and fix their salaries, vesting their appointment, subject to local approval, with the county board of education, elected by the people of the county. In respect to salaries the code provides a minimum salary schedule based on the grade of certificate and tenure of service. Any school unit, however, may go as far above this minimum limit as it chooses. In all other essential particulars the local district committee is vested with as much authority as it had under the old system.

6. *The colored schools.*—Under the old laws, local property taxes for the support of colored schools had to be raised wholly on property owned by the colored people; and those for the support of white schools had to be levied, likewise, exclusively on property owned by white people. The same segregation of poll taxes was also made. Naturally the method led to a wide variation in school-tax rates for colored and white schools not only among various communities, but within the same community as well. Except with respect to the segregation of poll taxes, it is believed that Delaware stood along among all the States of the Union in thus discriminating against the Negro.

Under the new code all property in the same school unit is subject to the same rate for the support of all schools, both white and colored, within the unit, as it should be, and poll taxes are not segregated.

The new code, in short, eliminates all of the discrimination against the Negro in educational matters which obtained under the old system.

7. *Compulsory school attendance.*—In respect, again, to putting on the statute books of Delaware a compulsory attendance law that goes to the heart of the matter, the new code is in line with the best practice of other States. While the law requires that all children between 7 and 14 years of age shall attend school during the entire period each

year the schools are in session, it also permits the proper officials to excuse, subject to the rules and regulations of the State board, pupils from attendance when it seems to be necessary. It also wisely provides that children 14, 15, or 16 years of age who have not completed the work of the eighth grade must attend school not less than 100 days during each school year. Violation of the law carries a penalty of a fine ranging from $5 to $50, and in default of payment, a jail sentence of from two to five days.

THE 1919 SCHOOL CODE VITIATED THROUGH AMENDMENTS.

The foregoing outline comprises the chief features of the new school code of 1919 by way of comparison and contrast with the system which it replaced. While, without doubt, in a number of details the school code needed modification to meet better some of the peculiar and unique conditions to be found in Delaware, nevertheless in its chief features it so closely follows progressive school practices which have stood the acid test of actual practice in other States that the commission has no hesitation in indorsing the main provisions of the code as it stood when first adopted. The new code, however, did three things which were especially obnoxious to those who were opposed to it. It materially increased taxes for school purposes. It increased the compulsory attendance period and put teeth in the attendance law, and it abolished the anarchy that existed in public-school administration and substituted therefor an orderly and organized system of school administration.

The law became effective in April, 1919. Gov. Townsend at once, under the new law, appointed the State board of education and the county board, which were to serve until the elections provided for in the code could be held.

THE SPECIAL SESSION OF 1920.[1]

At a special session of the legislature of Delaware in the spring of 1920 an act was passed transferring from the general fund of the State to the school fund $490,000, to be used for the support and encouragement of the elementary public schools of the State for the school year 1920–21, and annually thereafter, and $50,000 to pay for the transportation of pupils. It is said that it was thought by

[1] The form of this section of this report is somewhat different from its form in the galley proof, from which extracts have, I believe, been made by some of the Delaware newspapers. The change has been made by me to make the section conform more strictly to the facts as I have found them upon personal investigation, and to avoid all appearance of criticism of the methods of any person or group of persons. This is in keeping with the fixed policy of the Bureau of Education to adhere as strictly as possible to clear statements of pertinent facts and principles and to avoid all personalities. The bureau is interested only in conditions, and not in the processes by which they have come about, unless a knowledge and statement of these processes are necessary to insure improvement. It is not interested in local controversies, factional or otherwise.

P. P. CLAXTON,
Commissioner of Education.

some of those who favored the new school code that the relief from school taxes that would be afforded the taxpayers by this measure would allay much of the opposition to the code and allow the law to have a fair trial.

The act making this appropriation, however, changed the provisions of the code in other important respects. It made possible lowering of the qualifications required of teachers in that it authorized the State board of education to issue certificates of certain kinds on the results of examination, which under the code of 1919 were issued only to those who had taken a prescribed amount of normal-school or college work; reduced the term of county superintendents from two years to one year; the term of superintendents of special school districts from three years to one year; reduced the maximum rate of taxation for schools from 1½ per cent to 1 per cent of the assessed valuation of taxable property; restricted the powers of the State commissioner of education and of superintendents of counties and special districts; enlarged the powers of boards of school trustees in school attendance districts; fixed the minimum length of the school term at 180 days instead of 10 calendar months; released children 14, 15, and 16 years old who have not completed the eighth grade and who are regularly or legally employed to labor at home or elsewhere from attendance at school; reduced to 100 days required attendance of children when not regularly or legally employed to labor at home or elsewhere, and provided that in elections on the issuing of school bonds by county boards of education for grounds, buildings, and equipment suffrage shall be based not upon citizenship but upon a property qualification, giving to each voter one vote for every dollar or fractional part of a dollar assessed against him or her, according to the last assessment for school purposes for all the districts under the county board of education.

The transfer of the $540,000 from the general fund of the State for the support of the schools and for transportation is wise in that it transfers a considerable portion of the burden of the support of schools from the smaller unit of the district to the larger unit of the State, thus tending to even the burden of support and the opportunities for education.

Most of the other provisions enumerated above in the code of 1920, and some others not here enumerated, are evidently much less wise and progressive than the corresponding provisions of the code of 1919.

THE PLAN OF WEIGHTED VOTES.

The amendment by which a person's voting power was made to turn upon the value of his property is one of the most remarkable laws ever placed on the statute books of any State. The commission believes it to be entirely unique and without precedent in this

country. Certainly the spirit of American democracy requires in matters of this kind recognition of men rather than of money. The law is so unusual as to deserve quoting. Pertinent extracts follow:

> At said election [special elections held to vote school bonds] every person paying school taxes in any of the said districts shall be entitled to vote and shall have one vote for every dollar or fractional part of a dollar assessed against him or her according to the last assessment for school purposes for all the districts under the county board of education.
>
> At each voting place as aforesaid there shall be exposed in convenient places for inspection by the voters lists showing the amount of the total assessment in all the districts under the county board of education, according to the last assessment for school purposes of each voter entitled to vote at such place.
>
> No ballot shall be counted unless it shall be endorsed with the name of the voter and the number of votes to which he or she is entitled according to the last school assessment, except that if a voter inadvertently shall cast a ballot claiming a greater or less number of votes than he or she shall be entitled to cast, by endorsing same erroneously on the ballot, or shall omit to claim his or her appropriate number of votes, the election officers shall before counting the said ballot correct same by endorsing the number of votes correctly. It shall be no objection to any ballot that the endorsement thereon is not in the handwriting of the voter depositing the same.

In other words, the man who pays $1 in taxes is entitled to 1 vote: the man who pays $500 in taxes is entitled to 500 votes. Under this arrangement of weighted votes there are doubtless many districts in Delaware in which one man, or a very few men, can outvote all the other citizens of the district. Again, there are districts in which a single corporation can outvote all the residents of the district, although none of the officers of the corporation live in the district or have any children attending the school of the district. A more thoroughly vicious or undemocratic plan of determining whether or not moneys for school improvement shall be voted could scarcely be devised.

In preparation for the next session of the legislature, which convenes January 4, 1921, a committee of 35 citizens has been appointed to "frame a modern school law to be presented to the next session of the general assembly as a substitute for the present school code."

WILMINGTON AND THE SCHOOL CODE.

The Wilmington schools are organized and controlled under acts of the general assembly, which grant to the city practically complete autonomy in matters of education. It is scarcely to be wondered at, then, that when the proposal that Wilmington should adopt the school code and submit to its provisions, which in many details of school administration would have transferred control from Wilmington to Dover, the city board of education, in whose hands the decision rested, declined.

It was pointed out in the discussion among the reasons advanced for not adopting the code that it would place the control of the Wil-

mington schools in the hands of persons residing outside of the city; that it would give the State board of education and the State commissioner of education authority to regulate the work and management of the schools in almost every detail; that under the new law, if Wilmington failed to comply with all the rules and regulations made by the State board, the latter could penalize the city by abolishing the special district which Wilmington was to comprise and declare that the schools and all of their assets should become part of the system of New Castle County, the county in which Wilmington is situated, and subject to the authority of the county board of education; that, in such event, the city board of education could be compelled to deed over to the New Castle County board the legal title to all of its property; and that under the power granted to the State board under this law "to change, alter, fix, and determine the boundaries of any and all special school districts herein designated, and of any and all special school districts hereafter created," the State board might detach portions of the city and merge them with adjoining rural districts.

It was pointed out in the discussion also that while some favored the adoption on the ground that it would mean changing an unwieldy city board of 13, elected by wards, to a board of 3, elected at large, yet that no such change in the size and manner of electing the city board would obtain, inasmuch as section 120 of article 5 provides that Wilmington shall not change the manner of electing the board nor its size. Again, it was shown that whereas many were urging the adoption of the code, because they thought that under its provisions the fixing of a tax rate for the support of the schools would be taken out of the city council and virtually placed with the board of education, that again in this important matter the new law excepted Wilmington, and that in consequence under it no relief in this could be obtained.

In short, because no advantages would accrue to the school department of Wilmington, under the new law, and that, on the other hand, accepting the code would mean the surrender of Wilmington's independence, home rule, and local management, the city board decided that it was unwise to adopt the code.

THE CODE WAS DRAWN FOR RURAL DISTRICTS.

A careful examination of the 1919 school code convinces the commission that it was drawn with the conditions obtaining in the rural districts of Delaware and their needs chiefly in mind. It would seem that the inclusion of Wilmington might have been an afterthought, for the provisions inserted in the law relating to Wilmington are certainly not well considered. Wilmington is the only city of size in the

State. While the educational advantages offered to children who live in the country ought to be, as nearly as possible, equal in value to those offered the child who chances to reside in the city, nevertheless it must be recognized that the problem of providing such opportunity, as between the city and the county, is vastly different—so different, in fact, that it is impossible that the same plan of organization, of administration, and of control can be equally effective in both. For this reason, then, cities in most States are granted a much larger measure of freedom from control by the State office in the matter of the management of their schools than would have been granted Wilmington had the new school code been adopted by that city.

MINIMUM STANDARDS ONLY SHOULD BE REQUIRED.

Every reason points to the desirability of so framing school laws that the cities of a State may be component parts of the State system subject to State supervision and control in certain requirements which the State has a right to demand of all its schools, to the end that all its children shall be guaranteed the rudiments of an education obtained under healthful conditions, and yet without repressing the city in meeting these standards nor preventing it from going as far beyond these minimum requirements as it may desire.

For example, the State can properly prescribe that all schools in the State should hold school a minimum number of days each year; but the precise dates of opening or closing the school term, when vacations shall be held, and whether or not the school year shall exceed the prescribed minimum should properly be left to the city. Again, it is quite in point that the State should prescribe minimum courses of study for the schools of the State, prescribing a minimum list of subjects which shall be taught in the elementary schools and the high schools; also to prescribe that the language in which such minimum courses shall be taught shall be the English language; but large latitude should be allowed the cities of a State in meeting these minimum standards and requirements and in going beyond them at whatever point desired. Again, to the end that the health of all the children of the State shall be safeguarded, minimum requirements respecting school buildings, their lighting, their heating and ventilation, their sanitary provisions, their equipment could properly be required by the State; but, again, in all matters of detail in meeting such general requirements the cities of the State should be free to follow their own judgments. So in many other matters concerning the control of the schools the broad, general minimum standards which shall obtain could rightfully be set by the properly constituted State authorities; but the way in which these standards are met in the case of the cities of the State should be left to local authorities.

STATE INSPECTION AND PENALIZATION.

Furthermore, the supervision or inspection of city systems by State authorities should go no further than that which is needed to satisfy the latter that the minimum standards set for all schools are met. A supervision or inspection that goes beyond this, as a matter of legal right, becomes irritating and irksome and can do no good. On the other hand, where the office of State commissioner is staffed, as in many States, with recognized experts in various departments of educational activity, as in elementary school work, high-school work, vocational and industrial activities, and other specialized fields, the State officer can render much service to the school administrators of a city. But this relationship must be a voluntary and permissive one—one founded on mutual respect and good will and advisory in character, if good results are to come of it.

Again, in the matter of penalizing a city system for infraction of the law or because of failure to meet the rules and regulations laid down by a State board, the school laws of the country generally go no further than to require that the city's share of the State school fund, annually apportioned, be withheld until the requirements are met. The provisions in the 1919 school code of Delaware, empowering the State board to abolish the special district, automatically placing the schools under the county board, also, in such case, providing that all the property and assets shall pass to the county board, the legal title to all such property, the law reads, to be conveyed to the county board, is not only unnecessary but is altogether too drastic as applied to a city such as Wilmington.

Clearly, the school code of Delaware was written with the needs of backward and poorly managed rural schools in mind. Such districts need just such centralized, directing, and compelling authority as is provided for by the 1919 code. From the standpoint of this need the code is admirable in its essential features and should, in its structure, remain intact. But to make of it an instrument for Wilmington, stimulating and helpful rather than repressive, many changes should be introduced. These could, however, be introduced easily and naturally by inserting an article written to apply either to Wilmington alone or to cities of a given class.

WILMINGTON SHOULD BECOME AN INTEGRAL PART OF THE STATE SCHOOL SYSTEM.

Without any doubt the great strides made by this Nation during the past 50 years in the field of educational theory and practice have been due, in large part, to the remarkable growth and development of the school systems of the cities. Indeed, it is chiefly because of the contributions to this body of theory and practice made by our city school systems that this Nation now occupies the enviable place among nations in popular education that she holds. Moreover, it

must frankly be said, cities have been able to make the strides and the notable contributions to administrative and pedagogical practice that they have made very largely because they have been free from outside interference and, in consequence, able, within their financial limitations, to work out their own problems in their own way.

Until within the last few years the States have granted to the cities within their border almost any kind of an educational charter or an educational enactment which they desired. There is, however, a rapidly growing tendency among States to increase their control and supervision over all of their respective school units, including that of the city district. This tendency is the natural response to the theory that education is primarily a function not of an individual nor of a locality, but of the State, and that it is the State's business in the interest of citizenship to see to it that every child within its borders, wherever it may be, has a right to an opportunity to go as far in securing an education as his will and his ability permit. As long as this tendency to centralized control stops short of restricting and repressing the initiative of cities, it is thoroughly wise and sound.

Supervision, then, by the State board of education of Delaware, within the limitatons outlned and wth the safeguards mentioned, would help Wilmington very much. The following are some of the benefits which would accrue were such supervision wisely administered under the conditions set forth:

1. It would prevent the Wilmington schools from ever falling below a minimum level in respect to such matters as teacher qualifications, teacher salaries, sanitary school conditions, financial support, studies pursued, etc., because of local political flarebacks or because of the influence of local persons who might seek to exploit the schools for personal ends, on the one hand, or who might neglect them, on the other.

2. It would materially help in divorcing the department of education from the departments of municipal activity and freeing it from local competition and control. More and more, court decisions are upholding the theory that city departments of education are not municipal departments, but rather that they are instruments of the State. This theory when applied, as it now is in many cities, removes the school department from an embarrassing regulation of a restrictive and hampering character exercised by city councils or other municipal authorities which usually expresses itself in matters having to do with financing the schools. Furthermore, it relieves the school department of the necessity of coming into competition with the fire department, the police department, the street department, as well as with other departments of city government, in the matter of the distribution of an all-too-limited maintenance fund. It tends to give the local boards of education greater independence of

action by removing them from the subordinate relationship to the city mayor or to the city council which frequently obtains in cities and places upon them, subject to the general supervision of State authorities, all responsibility to the people for the conduct of the schools, which responsibility they, in duty, should assume. This is further discussed in Chapter II of this report.

3. Wilmington is part and parcel of the State of Delaware. To a large degree she is dependent upon the country around her for her growth and her prosperity. Her interests, commercially, industrially, politically, are inextricably interwoven with those of the State. Her schools are constantly receiving children from the country roundabout; in turn, Wilmington is constantly sending the children of her schools back into the country districts of the State. The educational problems of both the country of Delaware and the city of Wilmington, though different in character and type, should command the thoughtful and personal attention of every citizen whether residing in the country or in the city. The interests of Wilmington and of the rest of the State are not different; they are or ought to be identical.

One of the most unfortunate and discouraging aspects of the whole situation in Delaware, educationally speaking, is the feeling of antagonism which appears to exist between the country and the city. This expresses itself on the floor of the legislature often with particular asperity and acrimony and, of course, leads nowhere and accomplishes nothing except to block progress.

It is unthinkable that the general assembly of 1921 will be so blind to the interests of the children of Delaware as to abolish the progressive enactments of the 1919 session and revert to the old, outworn, antiquated plan of district schools. Without question, changes should be made in the code, but these changes, the commission is convinced, could well be made by better adapting the code to Delaware conditions. The structure of the code is sound; it needs to be modified only in details. Furthermore, an article should be inserted, written with the needs of Wilmington specifically in mind, guaranteeing to her schools the freedom from outside control in matters of detail which she should have. Then, when this has been accomplished, the commission is convinced, Wilmington can take no finer nor more progressive single step nor one which will be of greater significance in the education of the future citizenry of the State, nor, indeed, one which will bring to her own self greater advantages than to adopt it, thereby electing that her schools shall become an integral unity in the State system. Such a step would, it is confidently believed, go far toward healing the state of mind in which Delaware now finds herself because of the antagonism which has developed between Wilmington and the State outside.

Chapter II.

SCHOOL ORGANIZATION, SUPERVISION, AND FINANCE.

1. THE ORGANIZATION.

THE BOARD OF EDUCATION AND ITS POWERS.

An act of the General Assembly of Delaware of 1905 provides that the city of Wilmington, with the territory then within its limits, or which in the future may be included by additions thereto, shall constitute a consolidated school district and that the supervision and government of the schools and school property therein shall be vested in a board of education comprising 13 members. This board, the act declares, shall constitute a corporation which shall have perpetual existence and succession, with power to purchase, lease, receive, hold and sell property, real and personal, sue and be sued, and to do all the things that are necessary to accomplish all the purposes for which such a school district is organized.

Furthermore, the act provides the board shall have power—

1. To establish kindergartens, elementary schools, one or more high schools, normal training schools or classes, evening schools, special and truant schools, training schools or classes for teachers, and to discontinue or consolidate any such schools.

2. To establish or change the grades of all schools and to adapt and modify courses of study therefor.

3. To fix standards of minimum qualifications for superintendents, principals, and teachers, and to fix their salaries and to dismiss them at any time for cause.

4. To appoint a secretary of the board of education, and a superintendent of schools and one or more assistants.

5. To enact rules and regulations for the execution of all its duties and that of its appointees and employees, for regulating the disbursement of funds, and for the promotion and welfare of the system.

The act is thus seen to give to the board of education practically unlimited authority in respect to the management and control of the schools of the city. Furthermore, on the side of a relationship of the city with the State, because the act fails to provide for such contact, in practice it has been construed that the schools

of Wilmington are independent of the public-school system of the State and are not a part of it. On the side of a relationship with city authorities, other than those connected with the schools themselves, the act provides for no contact except at one point, that requiring that the board of education shall annually submit to the city council an estimate of moneys needed for each ensuing year, whereupon the latter determines what the appropriation for the year shall be. In short, except in the matter of appealing to the city council for funds, the board of education is independent of all city and State authorities and is vested with powers large enough to enable it to have any kind of a school system it desires. In this, then, the board is subject only to its financial limitations and its educational vision. (In the preceding chapter reasons are given why the city schools should become an integral part of the State school system.)

SIZE OF BOARD AND MANNER OF ELECTING MEMBERS.

The act provides that the board shall comprise 13 members, one of whom shall be elected from each ward of the city (there are 12 wards), and the remaining member, who shall be the president of the board, shall be elected at large. The term of office is four years. Elections of board members are held biennially, 6 retiring at one election and 7 at another.

The Wilmington Board of Education as it is now organized and as it conducts its work is out of line with the progressive thought and practice of the time in four important particulars: (1) It is too large to be effective; (2) its members represent wards and local constituencies rather than the entire city; (3) it is not independent of the city council as it should be in the matter of financing the schools; and (4) it does not confine itself, in relation to its control of the department, to legislative and judicial functions as it properly should, but spends much of its time in dealing with executive details which should properly be left with the board's executive officers. The commission's views on each of these points, briefly stated, follow.

THE BOARD IS TOO LARGE.

The experience of business firms is that small boards are the most effective. Likewise cities are finding in administering their schools that small boards are much more effective than large boards. There was a period in the development of city school systems when large boards prevailed. Indeed, boards of from 20 to 50 members were not uncommon a few years ago. Philadelphia probably held the record, with 559 members. In the last few years, however, most

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of the cities having these large, unwieldly boards have reorganized, substituting smaller boards, for the most part of 5, 7, or 9 members.

Cubberley [1] has succinctly stated the case for the small board as it is now viewed by progressive administrators:

> The small board is far less talkative, and hence handles the public business much more expeditiously; it is less able to shift responsibility for its actions; it can not so easily divide itself up into small committees, and works more efficiently and intelligently as a committee of the whole; and it can not and will not apportion out the patronage in the way that a large ward board can and will do. A large board is unwieldy and incoherent; it seldom transacts the public business quietly and quickly; it tends too frequently to become a public debating society, where small or politically inclined men talk loud and long and "play to the galleries" and to the press; while personal and party politics, and sometimes lodge and church politics, not infrequently determine its actions. It is almost always divided into factions, between whom there is continued strife and rivalry, and important matters are usually caucused in advance and "put through" by the majority at that moment in control. A reduction in size to a body small enough to meet around a single table and discuss matters in a simple, direct, and businesslike manner, under the guidance of a chairman who knows how to handle public business, and then take action as a whole, is very desirable.

The commission is of the opinion that a board of 7 members rather than one of 5 or of 9 is best suited to the needs of Wilmington. With a board of 5 it is too easy for 4 to pair off on questions of policy, leaving to the fifth the balance of power. With a board of 7 a uniform alignment of members which permits a single individual to determine the board's action is not so easy.

THE MEMBERS SHOULD BE ELECTED AT LARGE.

The ward method of electing school board members comes down from the time when city wards were independent school districts. The practice is very rapidly disappearing, for it has been found over and over again that no surer method can be devised for perpetuating in the management of the schools all the evils of personal and political control than to retain the system of electing school board members by wards. In 1902, 25 of 57 of the largest cities of the country elected or appointed school board members by wards or districts. In 1916, of these same 57 cities, all had changed except 9. Now, four years later, several of these have changed from a ward basis to that of election at large.

The evils growing out of ward representation are again well summarized by Cubberley: [2]

> The tendency of people of the same class or degree of success in life to settle in the same part of the city is a matter of common knowledge. The successful

[1] Cubberley, *Public School Administration*, Houghton Mifflin Co., 1916, p. 92.
[2] Cubberley, *Public School Administration*, Houghton Mifflin Co., 1916, pp. 93–95.

and the unsuccessful; the ones who like strong and good government, and the ones who like weak and poor government; the temperate and the intemperate elements; and the business and the laboring classes—these commonly are found in different parts of a city. Wards come to be known as "the fighting third," "the red-light fourth," "the socialistic ninth," or "the high-brow fifth"; and the characteristics of these wards are frequently evident in the composition of the board of education. The young and ambitious politician not infrequently moves into an "open ward" in the hope of securing an election there, and, when elected, makes the school board a stepping-stone to the council and higher political preferment. Not infrequently the school janitor, appointed in the first place as a reward for political services, becomes the ward boss in turn and dictates the nomination of the school board members.

One of the important results of the change from ward representation to election from the city at large in any city of average decency and intelligence is that the inevitable representation from these "poor wards" is eliminated, and the board as a whole comes to partake of the best characteristics of the city as a whole. The members represent the city as a whole, instead of wards; they become interested in the school system as a unit, instead of parts of it; and the continual strife in boards caused by men who represent a constituency instead of a cause, and whose efforts are constantly directed toward securing funds, teachers, and janitors for the school or schools "they represent" is largely eliminated.

Under the ward system of representation, too, it is a matter of common knowledge that men are nominated and elected from wards who could not be nominated, much less elected, from the city at large. Better men are almost always attracted to the educational service when election from the city at large, and for relatively long terms, is substituted for ward representation. A man of affairs, really competent to handle the education business of a city often can not be induced to accept membership on a large ward board because of the great waste of time and the small results attained. If the management of a school system is political, or personal, or petty, the best men tend to keep off the school board, which, in turn, accentuates the trouble and brings a constantly poorer quality of men to the service.

The commission is in no uncertainty of mind as to this: That Wilmington will never make much progress educationally until she abolishes the present method of electing her board of education by wards. All the evils of the ward system which other cities can point to in their own experience have at one time or another obtained in the administration of the schools of Wilmington and for the same reasons. The men who from time to time have represented their respective wards in the board of education should not individually be blamed for the narrow, partisan, ward point of view from which they have viewed the various school problems as they have arisen.

The system inevitably tends to place on the board men who are responsive to ward thought and ward influence. They would not, under the system, be on the board if they were not men who were willing to fight for ward interests as against the larger good if the two seemed to conflict. It is no fault of the men individually, for that is what the system tells them to do. There have been, of course, on every board in Wilmington men who, though elected by wards, have refused to be

swayed by the mind of the ward when the common good was in question, but these men, it should be pointed out, found place on the board not because of the system, but because of the fact that no system will always give a product that runs true to type. The ward system is bad, very bad. It must be thrown into the discard before Wilmington can take her place educationally among the front-line cities of the country.

THE BOARD OF EDUCATION SHOULD BE INDEPENDENT OF THE CITY COUNCIL.

Another change should be made in the enactments governing the schools of Wilmington, a change such that the board of education shall be empowered to levy taxes for the support of the schools. The board's limitation in this important respect means, of course, that it is not an independent body. It has neither full and final power nor full and final responsibility in its control of the schools, for its estimates of the amount needed for the support of the schools is passed in review by the city council, which may or may not grant the sum called for. Thus the power of the board of education to carry out its plans for the extension and improvement of the schools depends upon the action of an independent body, which can have no such intimate knowledge of the schools' needs as has the board of education. The board of education, therefore, is unable to formulate any definite policy with the certainty of being able to put it into operation, and as a consequence it can not properly be held completely responsible for any inefficiency in the school system which may develop.

More and more throughout the country it is recognized that the efficient administration of city schools demands that boards of education be given full control over the educational, business, and financial affairs of the school system. That is to say, the tendency in practice is to make city boards of education entirely independent of all other branches of city government; and this should be brought about in Wilmington. The board of education of Wilmington should be given the power to levy, within statutory limitations, a tax sufficient to maintain its schools on a plane of high efficiency.

More and more, too, the tendency among cities is to remove their school departments from local, municipal control and place them under the general oversight of State authorities, for it is found in practice that such control becomes less personal and restrictive, less subject to political vagaries, and more helpful and stimulating in its effect. This is one important reason why Wilmington should become an integral part of the Delaware school system when the school code is revised to safeguard her freedom. (See discussion of this point, Chapter I.)

THE BOARD'S METHOD OF SCHOOL CONTROL SHOULD BE CHANGED.

As now organized the board's work is very largely carried on by standing committees, of which there are 12, each board member being the chairman of one committee and the president of the board being ex-officio member of all, with power to vote in case of a tie. The chief objection to this procedure lies in the fact that the work of almost every committee takes it into a field which requires a degree of expert technical knowledge which the members of the committees can not be expected to have. Instead, experts competent to deal with all such matters should be employed and their opinions considered. A school board can be of greatest service if it confines its functions to determining policies, selecting experts, authorizing new projects, securing funds, and determining how these shall be distributed. The board should free itself from details of organization and administration, giving its time and attention to legislative and judicial matters. Executive functions should be delegated to the superintendent of schools and to his staff of experts. The plan of conducting the work of the board through standing committees does not lend itself to this distinction between the functions of the board on the one hand and those of the superintendent and his staff on the other.

Indeed, if this board consciously holds to this distinction in function, it will need few if any standing committees. Particularly if the board be a small one, the work can be carried on most efficiently if the board sits as a whole and any committees appointed, as is sometimes desirable, be temporary and detailed to the consideration of a specific matter only.

The board of Wilmington has even gone much further in devoting its attention to details than would be required merely by the work of standing committees, for each member acts as an agent for certain schools and is expected to bring to the attention of the board the particular needs of individual schools. It therefore comes about that at the regular monthly meetings of the board each member is expected formally to submit to the board his report on the condition and needs of the schools which have been assigned to him. It seemed curious to the commission to see board members rise and formally ask the board to supply their schools with a door mat, or with 25 feet of rubber hose, with 6 panes of window glass, or with this, that, or the other thing, according to the various needs. Indeed, it was said that one member has gravely asked the board on every meeting night for two years for a couch for the teachers' rest room of one of his schools and has not yet gotten it.

Clearly all such details should come to the attention of the board by way of a member of the executive staff of employees who should

organize, coordinate, and standardize all such needs. Thus the board would be relieved of the necessity of attending to such petty details; the needs of schools themselves would be more promptly and efficiently met; and doubtless considerable economies would be effected.

SUMMARY.

Obviously, if Wilmington reduces the size of her board to seven members and elects the members at large from among persons who are accustomed to think in city-wide terms, these conditions will in large degree be automatically rectified, and a great stride in efficient, businesslike administration will have been taken.

The experience of Detroit, Mich., in the results of such a reorganization as the commission recommends for Wilmington is in point. At the 1912 session of the Michigan Legislature the privilege was granted Detroit of submitting to its citizens the proposal of reducing its board of education from 18 members to 7 and of having them elected at large. In 1916 Detroit submitted the matter to a general election, where it was passed by a substantial majority. In 1917 a new seven-member board was chosen by a nonpartisan ballot. In the annual report of the board (1917–18) there is to be found an interesting statement concerning its work. An excerpt follows:

> The essential difference between the old and new boards is one of representation. The old board was elected by wards, and the inspectors were the personal representatives of minor administrative districts. The new board represents the community at large, without the partisan interests that necessarily influenced the larger body.
>
> The small board made fundamental changes in the rules. The division of administrative power was abolished, and responsibility for the conduct of the entire system was placed in the hands of the superintendent.
>
> The appointment of all administrative officers as well as teachers is now made by the superintendent and approved by the board of education. The control of the purely educational and the business functions are in the hands of technically trained experts. There is no outside interference with the working of these officers. Appointments, reappointments, promotions, and dismissals are based upon systematically organized and carefully supervised records.
>
> With these fundamental changes in policy the old committee system under which the ward-elected board worked has passed out of existence. The relation of the present board to the school system is like that of a board of directors to a large corporation.

THE SCHOOL SUPERVISORY STAFF.

In Wilmington the school supervisory staff consists of the superintendent, the assistant superintendent, the principals of schools, and the special supervisors of drawing, music, nature study, physical education, and sewing.

The teaching is directed by this staff by means of mimeographed directions and suggestions, issued from time to time from the central office; by personal visits to the classes; by personal conferences; and by teachers' meetings conducted by the principals.

The superintendent holds frequent meetings with principals and a limited number of general teachers' meetings a year; the assistant superintendent holds a considerable number of meetings with the teachers who have just been appointed, interprets to them the course of study and gives them instruction as to their work. The principals hold from one to two meetings a month with the teachers of their schools at which the study and discussion of an important book on education is the chief feature. A list of such books studied during last year shows that these meetings are of great value. The assistant superintendent occasionally conducts these meetings in place of the principal.

The supervisors of special studies hold each a limited number of meetings during the year. These methods of directing the teaching of the schools are all good as far as they go. But alone they are not as effective as supervision ought to be. There is abundant evidence of this in the schools, as described elsewhere in this survey.

Teachers of good ability are not always clear in their conception of the aims to be accomplished in the teaching of a particular study, and they not infrequently employ methods no longer employed in good schools. In short, observation of the actual teaching shows that in many cases teachers are better than their teaching. That is, more effective, suggestive, and not prescriptive supervision would very greatly help them and improve their teaching.

As elsewhere fully stated, there is altogether too much formal teaching in such subjects as language, drawing, arithmetic, etc., in the primary grades, and more than is desirable in the grammar grades. This is very marked in the schools, more so in the primary than in the grammar grades, where more use is made of the "socialized recitation." In many other respects observation shows the need of more effective supervision. What is needed is more supervision, such as can be effected only through frequent teachers' meetings, at which, as above stated, there is a systematic discussion, in a very practical way, of right aims in education in general, right aims in each study taught, right methods, and especially the reasons for such methods. Unless teachers comprehend the reasons, psychological and other, for the methods which are suggested to them, they follow them blindly and can not work them out intelligently. So far as method is concerned, supervision should not be arbitrarily prescriptive, but should be suggestive. It is too prescriptive in Wilmington without its being so intended. By clear discussion in the teachers'

meeting, teachers should be convinced that the method suggested is a good one. This produces unity of aims and of method; prescriptive supervision produces uniformity. Unity is consistent with life and with variety, uniformity is not; a living tree has unity; a telegraph pole has uniformity.

FUNCTIONS OF THE STAFF MEMBERS.

In a city of the size of Wilmington the superintendent is heavily burdened with administrative details and can not systematically visit schools. But he can hold more teachers' meetings and through these make his influence more strongly felt throughout the schools. If necessary, he should be given sufficient clerical help to enable him to do this.

The assistant superintendent should hold frequent meetings of all the teachers in a given grade, or in several grades, and systematically discuss the teaching in the so-called "regular studies"; and the special supervisors should hold more frequent meetings devoted to similar discussions of their respective subjects.

In visiting schools the supervisor of special studies should teach very frequently. Teaching the lesson and having the grade teacher observe is the most effective way of showing teachers how to teach. It is also quite effective as a means of discovering weak spots in the teaching.

The principals, some of whom are very efficient in supervising the teaching in their schools, but some are not, must be held responsible for the detailed help teachers need from day to day to make their teaching efficient. It is a part of their duty to make good teachers of poor ones, provided such teachers have the native ability and preliminary professional training to make this possible. Principals should spend their time in the various schoolrooms, aiding teachers with suggestions, more than is the case in many Wilmington schools.

MAKING WORK OF PRINCIPALS EFFECTIVE.

To make this possible three things are necessary:

1. An office hour should be fixed by the board, upon the recommendation of the superintendent after consultation with the principals. This office hour should be the same for all elementary schools and should be printed on all report cards sent periodically to parents, so as to become fixed in their minds; then principals should refuse to see people in their office except during the office hour.

2. Telephones to the schools should be connected only with the superintendent's office. The public ought not to have direct telephone communication with the schools. At present telephone messages come to the principal's office at all hours of the day, and they are frequently unimportant. This and the personal calls of parents

at all hours during the school session naturally lead principals to spend their time altogether too much in their offices instead of in the schools supervising the teaching.

3. It is further necessary that principals be relieved sufficiently of clerical work to enable them to devote more time to supervision.

As the chief function of the principal of a school is to supervise the teaching in her school, it is obvious that if she fails of success in this respect she ought to make room for a successor. Successful supervision by principals is of supreme importance. Without it the superintendent can not build up a superior system of schools. The greatest care should therefore be exercised by the board in the appointment of principals.

To insure the efficiency of principals, a higher minimum requirement, not only as to experience, but especially as to extent of professional training, should be required of them than for teachers. While the minimum requirement for teachers should be graduation from a high school in a four years' course and graduation from a two years' course in a normal school, no one ought to be eligible for a principalship who has not had at least three years of professional training in addition to a four years' high-school course, and who has not had experience in teaching in all the grades which she would have to supervise as principal. No exceptions to these requirements should be made.

THE TEACHING CORPS.

The corps of teachers in Wilmington, taken as a whole, is a good one, better than the taxpayers have a right to expect, considering the conditions under which they are obliged to work. Some are exceptionally capable. Many have at their own expense attended courses of lectures at the State College and at the University of Pennsylvania. This is true also of the corps of principals, three having attended the University of Pennsylvania and seven the Delaware College. The teachers are loyal, conscientious, and faithful. There are among them those who are inefficient, but they are being gradually eliminated.

MORE INFORMATION ABOUT THE SCHOOLS SHOULD BE IN SUPERINTENDENT'S OFFICE.

There are many things about the schools other than about the finances that the board, the superintendent, and the public need to know, if the schools are to be administered so that there will be a constant increase secured in their efficiency. In a school system that is steadily improving in the quality of its work one will find, among many others, that the following things are happening:

1. From year to year the school system will enroll a larger percentage of the children of school age and will carry them further along in the grades before they drop out.

2. The number of over-age pupils and of pupils who are making slow progress through school will decrease.

3. There will be fewer and fewer failures in promotion and fewer who drop out of school because they become discouraged and disheartened in their work.

4. There will be much greater regularity in school attendance and fewer absences.

5. There will be a decrease in the number of pupils per teacher until a reasonable limit has been reached.

6. Teachers' qualifications will be advancing steadily, and the conditions under which they live and work will increasingly make for a more stabilized teaching force.

7. When pupils do leave school it will be known why, and in the light of this information, the work of the schools will be shaped to meet their needs better.

8. Pupils will be followed up after they leave school in order to determine wherein their training could have been improved.

9. Information will be compiled systematically about what other school systems are doing in order that the system in question may profit by the experience of others elsewhere.

These are some of the things which characterize the system that is on the alert to improve. Statistical information, and information of nonstatistical character about the system necessary to this end, are secured in large school systems by a group of experts who give their whole time to compiling and interpreting such facts; in small systems this is handled by the superintendent through a carefully devised system of reports which he requires principals and teachers to file at stated intervals and which are tabulated and made available by a clerk working under his direction.

INFORMATION WHICH SHOULD BE IN THE SUPERINTENDENT'S OFFICE.

Among the facts that should always be at hand in the superintendent's office, in order that the school authorities of Wilmington may determine for themselves whether the system has been steadily improving or steadily declining, are the following:

1. The number of children at different ages in the city and the number in school, both public and private.

2. The number of compulsory attendance age in and out of school.

3. The number above compulsory attendance age in and out of school.

4. The ratio of pupils above compulsory attendance age to those of compulsory age. Changes in ratio.

5. Number of pupils for each 100 beginners dropping out of school at each age and at each grade; number of those leaving to enter school elsewhere; number leaving for other causes.

6. Per cent of those entering the first grade to complete the elementary school course; the high-school course.

7. Per cent of those completing the elementary schools to enter high school.

8. Per cent of those entering high school to complete the course.

9. Per cent of high-school graduates who enter college. Kind of work done in college.

10. The age-grade distribution of all pupils for each school and for the entire system, from which can be determined facts about retardation and acceleration of pupils.

11. Attendance. Average daily attendance based on number belonging, on school population; distribution showing number and per cent attending 1 to 10 days, 11 to 20, and so on.

12. What those who have graduated from high school within 4, 5, or 10 years are doing, those who have graduated from the grammar school, those who left the elementary grades without graduating, those who left high school without graduating.

13. Per cent of pupils who fail of promotion in each grade and in each subject.

14. Ability of pupils as determined by school grades, standard tests, and mental tests.

15. Various cost items.

16. Preparation, experience, and other significant facts regarding teachers.

17. Significant facts regarding schools in other cities.

There is in the superintendent's office at Wilmington information upon most of the foregoing points, but owing to a lack of clerical help it has not been put into shape for use by the board or the public. With the data collected but uncompiled and uninterpreted it is impossible for the board of education to know whether the school system has been steadily improving in efficiency or declining. In a large city like Wilmington it is a physical impossibility for the superintendent himself to collect, compile, and interpret the necessary data or even to direct the work of a clerk. The board should, therefore, employ some one trained in educational statistics to make a continuous statistical study of the Wilmington schools. He might well be made assistant superintendent to assist the superintendent and supervisors in diagnosing the school system. After such person

has been employed a complete filing system, several of which have been evolved, should be introduced.

The facts having been collected and compiled, the superintendent should use them in his monthly and annual reports to the board of education. The annual report should be so written that the public can understand it, published, and given wide circulation among the citizens.

2. THE FINANCING OF THE SCHOOL DEPARTMENT.

SCHOOLS MAINTAIN NO ACCOUNTING SYSTEM.

The public schools of the city of Wilmington maintain no accounting system in the sense of a double-entry set of books. Prior to the present fiscal year, other than a record of receipts and disbursements maintained in the city auditor's office, and memoranda information maintained in the office of the secretary of the board of public education, the accounting of school expenditures has consisted of a voucher file and lists of paid vouchers.

Beginning with the present fiscal year, July 1, 1920, the secretary of the board has adopted the New York State system of reporting school expenditures, which as a reporting system has been approved by the United States Bureau of Education. That system is not in itself and was not devised by the originators to be an accounting system in the technical sense of the word. It was evolved as a medium by which a centralized agency might obtain on a standardized basis annual statements of school expenditures. In its classification and distribution of expenditures it segregates administrative or general control and overhead expenses, instructional expenses, building operation and upkeep expenses, interest and bond payments, capital outlays, and the expenses of auxiliary agencies and other activities. Its adoption is commended, but, in addition, a regular system of double-entry accounts by which the financial activities and financial condition of the public schools may be reflected should also be put into effect.

SCHOOL EXPENDITURES IN EXCESS OF REVENUES.

By reason of the fact that the public schools have maintained no general ledger accounts they have been without the information necessary for presenting currently operation costs, fund statements, and balance sheets. Therefore in order to ascertain the financial condition of the schools it has been necessary to evolve from the existing data such statements with such accuracy as conditions permit; and these statements, a general fund statement, a new-building fund statement, and a combined fund statement are set forth as Exhibit I.

From this combined fund statement it will be seen that expenditures applicable to the school year 1919–20 are $20,581.56 in excess of the revenues for that year, i. e.:

Expenditures applicable to school year 1919–20	$654,606.35
Revenues applicable to school year 1919–20	631,725.29
Excess of expenditures over revenues	22,881.06
Less excess of cash over accounts payable, both brought forward from year 1918–19	2,299.50
Net deficit for 1919–20	20,581.56

CURRENT EXPENSES OF WILMINGTON PUBLIC SCHOOLS.

Eliminating capital expenditures, the current expenses of the public schools for the school year 1919–20, together with per capita cost of average daily attendance, are as follows:

Public school expenditures in 1919–20.

Purpose.	Amount.	Cost per capita average daily attendance.[1]
Total	$557,800.53	$51.99
General control	22,669.96	2.11
Instruction, day schools	408,613.03	38.08
Operation cost, all schools	54,349.56	5.07
Upkeep cost, all schools	44,419.85	4.14
Auxiliary agencies and other activities	4,301.60	.40
Fixed charges and interest	[2]23,446.53	2.19

[1] Average daily attendance of white schools, 9,590; colored schools, 1,140; total 10,730.
[2] Includes $3,000 appropriated by city council direct to teachers' retirement fund.

For the purpose of comparing on the same basis the expenditures of the Wilmington public schools with those of other schools, a statement similar to the above has also been prepared as follows for 1917–18, for which period the Bureau of Education at Washington has made an analysis of school expenditures of 45 cities of 30,000 to 100,000 population in different parts of the country. The average daily attendance for the Wilmington public schools for 1917–18 was 9,970.

Per capita costs in Wilmington and other cities.

Purpose.	Amount.	Costs per capita of average daily attendance.		
		Wilmington.	Average of 45 cities.	Per cent.
Total	$354,640.20	$35.57	$52.09	68
General	13,918.10	1.40	1.74	81
Instruction, day schools	276,204.69	27.70	38.06	73
Operation cost, all schools	30,414.33	3.05	6.70	45
Upkeep cost, all schools	14,289.69	1.43	2.72	53
Auxiliary agencies and other activities	2,256.92	.23	.80	29
Fixed charges and interest	17,556.50	1.76	4.07	43

It will be seen from the above that in 1917–18 Wilmington expended for school purposes but 68 per cent of the average; or, in other words, if Wilmington had expended 46 per cent more than she did she would have expended the average of that of the other cities listed. It will be seen also that Wilmington in 1919–20, three years later, has not reached the average of the other cities in 1917–18. On the aforesaid basis Wilmington ranked thirty-fourth in the group of 45 cities in 1917–18 as to comparable public-school expenditures.

SCHOOL EXPENDITURES COMPARED WITH OTHER CITIES.

A statement of the capital outlays for public schools, as shown by expenditures from the new building fund, is set forth in Exhibit II. Other outlays may have been made from the general fund, but in the absence of such information, it will be seen from the following statement that $41,126, which is the average amount Wilmington has thus expended, is but 58 per cent of the average that cities of 25,000 to 100,000 population have so expended.

School expenditures since 1911.[1]

Year.	Number of cities.	Total amount.	Average.
1911–12	164	$9,292,478	$56,661
1912–13	179	10,447,588	58,366
1913–14	185	13,531,152	73,141
1914–15	180	12,903,946	71,689
1915–16	179	13,913,426	77,723
1916–17[2]			
1917–18	[3] 141	12,843,013	91,085
1918–19[3]			
Total	1,028	72,931,603	70,944

[1] Information prior to 1911–12 not obtainable.
[2] In 1917 the Bureau of Education began collecting information biennially instead of annually.
[3] List of cities changed to those of 30,000 to 100,000 population.

The city of Wilmington had a net investment in its public schools at the beginning of the present fiscal year, July 1, 1920, of $1,180,000, as will be shown by the following balance sheet:

Statement of assets and liabilities as of June 30, 1920.[1]

ASSETS.		LIABILITIES.	
Land and improvements to land	$206,417.00	Bonds payable	$305,000.00
Buildings	1,971,623.35	Mortgages payable	36,500.00
Equipment	146,816.87	Accounts payable	21,339.51
Cash	[2] 20,054.49	Investment of school corporation	1,979,572.20
Accounts receivable	[3] 500.00		
Total	2,345,411.71	Total	2,345,411.71

[1] The value of land, buildings, and equipment in this balance sheet are taken from Exhibit III. Probably a revision of land values would increase the total investment to some extent.
[2] Excluding $100,000 levied in the school tax of 1919–20 for the construction of a school building in the district built up by the Housing Division of the United States Shipping Board Emergency Fleet Corporation, and the money collected but not as yet turned over by the city council to the board of public education.
[3] Estimated.

Disregarding the above liabilities it will be seen that the total value of Wilmington school property as of June 30, 1920, is $2,324,857. Deducting $88,096, outlays during 1918–19 and 1919–20 (see Exhibit II), the value of the school property at the end of the year 1917–18 is seen as $2,236,761. Compared with the analysis of school expenditures of the 45 cities of 30,000 to 100,000 population, heretofore referred to, Wilmington stands fifteenth, and has less than one-half the amount of school property that such cities as Akron, Ohio, and Springfield, Mass., have, and practically one-half what Des Moines, Iowa, and Duluth, Minn., possess, Springfield being equal in population and the other three cities of less population than Wilmington. (See Exhibit IV.)

EXPENDITURES OF CITY FOR ALL PURPOSES FOR PAST 10 YEARS.

During the past 10 years Wilmington has expended the following amounts for its various public activities, 22.8 per cent of which has gone to the public schools.

Appropriations of city council for the years 1910–11 to 1919–20, inclusive, as set forth in city ordinances.

	Amount.	Per cent.
Total	$14,348,516.06	100.0
Bond interest and sinking fund payments[1]	3,288,285.35	23.0
Streets and sewers	1,964,495.00	13.7
Water	1,603,699.52	11.2
Police[2]	1,429,500.00	9.9
Fire	751,920.00	5.2
Garbage removal	235,277.90	1.6
Parks	256,500.00	1.8
Library	173,321.21	1.2
Health[3]	138,500.00	1.0
Miscellaneous	1,236,784.41	8.6
Total for other than public schools	11,078,289.39	77.2
Public schools[4]	3,270,226.67	22.8

[1] Excluding school bonds, interest and principal, which are paid from the appropriations to public schools.
[2] Including appropriations to police committee and firemen's pension fund.
[3] Including appropriations to Delaware Anti-Tuberculosis Society.
[4] Including appropriations to teachers' retirement fund, and also appropriation of $100,000, levied in school tax for 1919–20 but which has not as yet been turned over to department of public schools.

It is to be noted, however, that bond, interest, and sinking-fund payments, applicable to other city activities, have not been charged to those activities. If the $100,000 expended by the board of public education during this period in the payment of bonds, and also $96,822.50 for interest, are submitted in like manner, the amount allotted to the operation and upkeep of the schools can be reduced to 21.4 per cent, the allotment to the public schools then appearing on the same basis as the allotment to the other departments. But accepting the portion for the public schools as 23 per cent (it was exactly 23 per cent for the public schools in 1917–18), and comparing it with the average in 1917 in 219 cities in the country of 100,000

population and over, which was 31 per cent, it is seen that the expenditures by Wilmington for school purposes is but 74 per cent of the average of the cities considered, and that Wilmington must increase her expenditures at least 35 per cent to equal the average.

ASSESSED VALUATION OF PROPERTY IN WILMINGTON.

A statement of the assessed valuation of property available for taxation in the city of Wilmington, together with the tax rates for the past 10 years, is set forth as Exhibit V.[1] The assessment is reported by the tax department of the city to be on a 100 per cent basis.

It is to be noted that the assessed valuation of property available for taxation in 1917–18 was $83,438,675. Compared with the analysis of the 45 cities of 30,000 to 100,000 population heretofore referred to, Wilmington stands eighteenth. (See Exhibit VI.) This amount of property is but two-fifths of the taxable property shown by the cities of Akron, Ohio, and Springfield, Mass., each of about the same population as Wilmington, and which cities are reported as also assessed on a 100 per cent basis. It is about the same amount as the assessed valuation of the taxable property, reduced to a 100 per cent basis, in Wheeling, W. Va., Little Rock, Ark., and Pasadena, Calif., which cities in 1917–18 were half the size of Wilmington.

The tax rate for Wilmington for school purposes during the past decade shows an average of 47 cents; for the year 1916–17 it was 46 cents. In comparison with these same 45 cities, Wilmington stands thirty-fourth. (See Exhibit VII.) This tax rate for school purposes is less than that of Akron, Ohio, and Springfield, Mass., which, as stated above, have more than twice the amount of taxable property; and furthermore, it is but a trifle over one-half the tax rate of Bayonne, N. J., which is smaller in population and has less taxable property than Wilmington.

DISTRIBUTION OF SCHOOL EXPENDITURES DURING 1919–20.

In reviewing the expenditures of the public schools of Wilmington an intensive analysis of those relevant to the school year 1919–20 has been made, all payments covering deficit of the previous year being set aside. In this analysis, while no change occurs in reporting the actual elements, they, on the other hand, are grouped on a somewhat different basis than has previously been the custom. But with expenditures for educational purposes increasing yearly, it is becoming increasingly more important that they, as well as other public expenditures, be presented in a form that will be as illuminating as

[1] It is reported that Wilmington raises additional revenues by various other means than by direct taxation, such as fees chargeable against business activities, special licenses, etc.

possible to the average citizen and presented also in sufficient detail to secure his intelligent review and criticism. This new arrangement, therefore, has been evolved to meet this need and in the belief that if a citizen can see more clearly the manner of school expenditures such expenditures will be stronger in their appeal for his support.

This analysis separates the expenditures of the Wilmington public schools, relevant to the school year of 1919–20, as follows:

	Amount.	Per cent.
Total	$654,606.35	100
Expenditures relating to the present	554,633.66	84.7
Expenditures relating to the past	18,002.50	2.8
Expenditures relating to the future	81,970.19	12.5

As thus outlined a general analysis is set forth as Exhibit VIII, and detailed analyses supporting the general analysis as Exhibits IX, X, XI, XII, XIII, XIV, XV, XVI, XVII, XVIII.

It should be said that this analysis had to be made within a time limit and from data existing in various forms and in a chaotic condition. The information has been taken from vouchers, pay rolls, statements, and other records in the secretary's office and the office of the superintendent of schools, supplemented with oral information. Acknowledgment is to be made of the use of the report of the audit of the school accounts made for the board of public education by the public accountants in the summer of 1920. In various instances it has not been clear whether certain expenditures belonged to 1918–19 or 1919–20. It is therefore possible that some of the detailed allocations may not be correct. In such cases, however, it is equally possible that an excess charge may be overshadowed by a charge which should have been included, or vice versa. But it is believed that in the main the analysis is approximately correct, or at least near enough so for all practical purposes.

THE FINANCIAL ADMINISTRATION AND ACCOUNTING PROCEDURE.

The financial administration of the public schools of the city of Wilmington, in the light of twentieth-century methods and scientific management, is subject to severe criticism. This criticism, however, is to be understood as applying to methods and not to individuals. It is assumed that the existing routine and procedure comes to the present members of the board of public education as a legacy. But be that as it may, the board is attempting the impossible in endeavoring collectively and individually to administer the financial details of the public schools. The budget, instead of being prepared on the basis of functions and representing a specific program, is more or less of a hodgepodge and means very little from the administrative point of view. It is the height of absurdity for the board to be

legislating formally on such things as the advisability of purchasing 25 feet of hose for a school building.

At the present time the board collectively authorizes expenditures first by budget appropriation and then currently by detailed items. Next, as committee members they attempt to audit and approve all pay rolls. A majority of the finance committee must sign all invoices and pay rolls—a purely pro forma proceeding which dissipates responsibility. What is needed is a surgeon as much as a survey to separate the board from much of the useless red tape with which it is tied. If relieved from much of the petty detail, the board could give more of its time to questions of policy which would have a tendency to effect economies, or at least effect greater accomplishments for the same amount of money. A change in the city charter which would require the city government to turn over to the schools when collected the full revenues from the school tax instead of doling out one-twelfth of it each month, would mean that the schools instead of the city government would receive the interest from the greater portion of the school funds on deposit. The retaining by the city government of $100,000 collected in the school tax in 1919–20 for a specific school building, for example, means a direct loss to the schools and to the school children of approximately $4,000 annually in interest, which, needless to say, could have been used to advantage.

The accounting procedure, or rather the lack of accounting procedure, has been criticized in a preceding paragraph. At present there is no knowledge in accounting form of the contingent liabilities of the schools; that is, the orders to vendors issued and unfilled, and invoices rendered and unpaid. Instead of the heads of various departments making their own purchases for supplies, such purchases should all clear through the secretary's office. This recommendation does not mean a hamstringing of the heads of departments, but a combination of centralized control with departmental administrative latitude.

It is recommended that the secretary's office open up a set of double entry books, in addition to the record of expenditures, and maintain some such accounts as the following:

Cash.	Revenues.
Accounts receivable.	Bonds payable.
Contingent liabilities.	Claims registered.
Undistributed expenditures.	
Expenses:	Vouchers payable.
Prior years.	
Current year.	
Outlays.	
Land.	Mortgages payable.
Buildings.	
Equipment.	

With such simple basic accounts as the above, the school would be in a position to show currently the financial statements common to any business concern of standing; and together with the form of expenditure analysis which has been adopted, be prepared also to give currently any detailed financial statistics that may be called for.

3. CHILD ACCOUNTING IN WILMINGTON.

As no accurate school census has been taken in Wilmington in recent years, the city board of education authorized the survey commission to have unpublished data in the Census Bureau tabulated. These tabulations follow:

Population of Wilmington, Del.

[Compiled by the Bureau of Census from the Census of 1920 not yet published. Submitted to the U. S. Bureau of Education, Nov. 23, 1920.]

Color or race.	Under 1 year.	1 year.	2 years.	3 years.	4 years.	5 years.	6 years.	7 years.	8 years.	9 years	10 years.
Total	2,449	2,399	2,327	2,282	2,045	2,111	2,058	1,937	1,930	1,750	1,795
White [1]	2,304	2,262	2,209	2,155	1,899	1,977	1,905	1,782	1,779	1,628	1,640
Male	1,110	1,122	1,119	1,070	946	1,006	938	848	891	801	791
Female	1,194	1,140	1,090	1,085	953	971	967	934	888	827	849
Black and Mulatto	145	137	118	127	146	134	153	155	151	122	155
Male	74	58	55	63	72	63	77	83	77	59	75
Female	71	79	63	64	74	71	76	72	74	63	80

Color or race.	11 years.	12 years.	13 years.	14 years.	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	Aggregate.
Total	1,825	1,902	1,650	1,588	1,534	1,723	1,652	1,749	1,968	1,909	40,583
White	1,704	1,724	1,507	1,461	1,385	1,577	1,487	1,557	1,747	1,655	37,354
Male	783	865	753	717	673	768	745	745	831	776	18,298
Female	921	859	754	744	712	809	742	812	916	880	19,056
Black and Mulatto	121	178	143	127	149	146	165	192	221	244	3,229
Male	55	91	67	65	66	60	87	66	99	122	1,534
Female	66	87	76	62	83	86	78	126	122	122	1,695

[1] Includes all colors or races except Black and Mulatto.

For purposes of discussion a regrouping of the census data follows:

Regrouping of census data.

	White.	Colored.	Total.
Children 6 years of age	1,905	153	2,058
Children 7 to 13, inclusive (compulsory period)	11,764	1,025	12,789
Children 14 to 18 (above compulsory period)	7,467	779	8,246
Total	21,136	1,957	23,093
Children 15 to 18 (high-school age)	6,006	652	6,658
Children 14 to 15 (work-permit age)	2,816	276	3,122

In order to learn what proportion of the population falling within the compulsory school period was enrolled in schools, the commission

secured a report of all children, according to age, enrolled in all public, private, and parochial schools in Wilmington. These data, arranged to correspond with the preceding table, follow:

Enrollment in all schools of Wilmington, 1920, distributed by age groups.

	Public schools.			Total in all private schools.	Total in all parochial schools.	Grand total.
	White.	Colored.	Total.			
Children 6 years of age	1,344	163	1,507	49	523	2,079
Children 7 to 13, inclusive	8,538	1,082	9,620	364	3,988	13,972
Children 14 to 18, inclusive	2,127	331	2,458	119	521	3,098
Total	12,009	1,576	13,585	532	4,032	19,149
Children 15 to 18, inclusive (high-school age)	1,221	190	1,411	88	240	1,739
Children 14 to 15 (work-permit age)	1,449	236	1,685	68	45	2,198

A comparison of the two tables shows certain discrepancies. According to the census report, there were 2,058 children 6 years of age, and according to the school registers there were 2,079, or 21 more enrolled than were accounted for by the census. For the age group 7–13, inclusive, there were by the census 12,789 children, and by the school registers 13,972 enrolled, or 1,183 more than were accounted for by the census. These discrepancies may be accounted for by the fact that the Federal Census Bureau included the children in Wilmington on a particular date, while the enrollment figures include all the different children enrolled during the year. Since the population of Wilmington was a shifting one, children having enrolled and having moved away before, and others having moved in after, the census was taken, the school enrollment naturally showed more children than would be in the city at the particular date when the Federal census was taken.

No such discrepancies occur in the age groups above 13 years. There were by the census 8,246 children 14 to 18 years of age, only 3,098 of these being in school. Thus it is evident that at least 5,148 children from this age group are out of school. All these are above the compulsory age limit. Some of this group, especially those 14 years of age, would belong to the elementary school. The majority of those above 14 belong to high school, but comparatively few are to be found there. The census gives 6,658 children 15 to 18, inclusive; the school registers of public, private, and parochial schools show only 1,739 belonging to this age group, leaving 4919 children of high-school age out of school. No doubt the number on the school register for this age group is too high, as in the case of other age groups, and for the same reason—that the data comprise all children enrolled for the year, while the census includes only children who were in Wilmington on a particular date.

IRREGULARITY OF ATTENDANCE IN PUBLIC SCHOOLS.

Although apparently nearly all the children of compulsory school age are enrolled in public, private, or parochial schools, the attendance is not what it should be in either the white or the colored public schools. The average number of days attended for the white schools was 144 days and for the colored schools 133 days. The schools were in session 183 days, so that each child in the white schools lost on an average 37 days and in the colored schools 50 days of the term. The average number of "days belonging," by white children was 160 and by the colored, 159, so, on an average each white child lost 16 days and each colored child 26 days of the time for which he was enrolled.

Stated in another way the actual working school year for white schools in Wilmington was only 144 days and for colored schools only 133 days, yet the schools were open more than 180 days. Since each white child lost 16 days and each colored child 26 days, there was a total loss of 232,440 days, which, translated into money loss on the basis of per capita operating cost, amounts to approximately $45,000.

In other words, if every child had been perfect in attendance the cost would have been no more than it actually was, but the educational returns would have been much greater.

In order to show how well the children attended school the following table was compiled, which shows the number attending from 1 to 10 days, 11 to 20, and so on:

Distribution of attendance in public schools.

Days attended.	Number of white children.		Number of colored children.	
1- 10	78		13	
11- 20	102		23	
21- 30	132		30	
31- 40	132		22	
41- 50	137		24	
51- 60	157	12.7 per cent attended less than half the term.	37	
61- 70	219		51	19 per cent attended less than one-half term.
71- 80	242		40	
81- 90	325		59	
91-100	214		48	
101-110	204		55	
111-120	232	25.6 per cent attended less than three-fourths the term.	66	41.8 per cent attended less than three-fourths the term.
121-130	371		88	
131-140	520		101	
141-150	820		143	
151-160	1,467		161	
161-170	2,512		258	
171-180	3,706		307	
181-190	419		44	
	11,989		1,570	

ENFORCEMENT OF THE ATTENDANCE LAW.

A first essential step in the enforcement of the compulsory attendance law is to learn how many children of school age there are in the city. This information can be secured only through the taking of a school census at definitely stated times. Such a census should show: (1) How many children there are who ought to be in school; (2) where they live; (3) how many are enrolled in the public, in private, and in parachial schools. Much other valuable information can likewise be obtained which when analyzed will provide the school authorities with dependable basis for drawing conclusions regarding many problems relating to the administration of the system.

Furthermore, if the school board had been having a census taken annually or even at less frequent intervals, and if they had analyzed the returns, they would have known better where to locate school buildings for they would have known where the school population was increasing most rapidly.

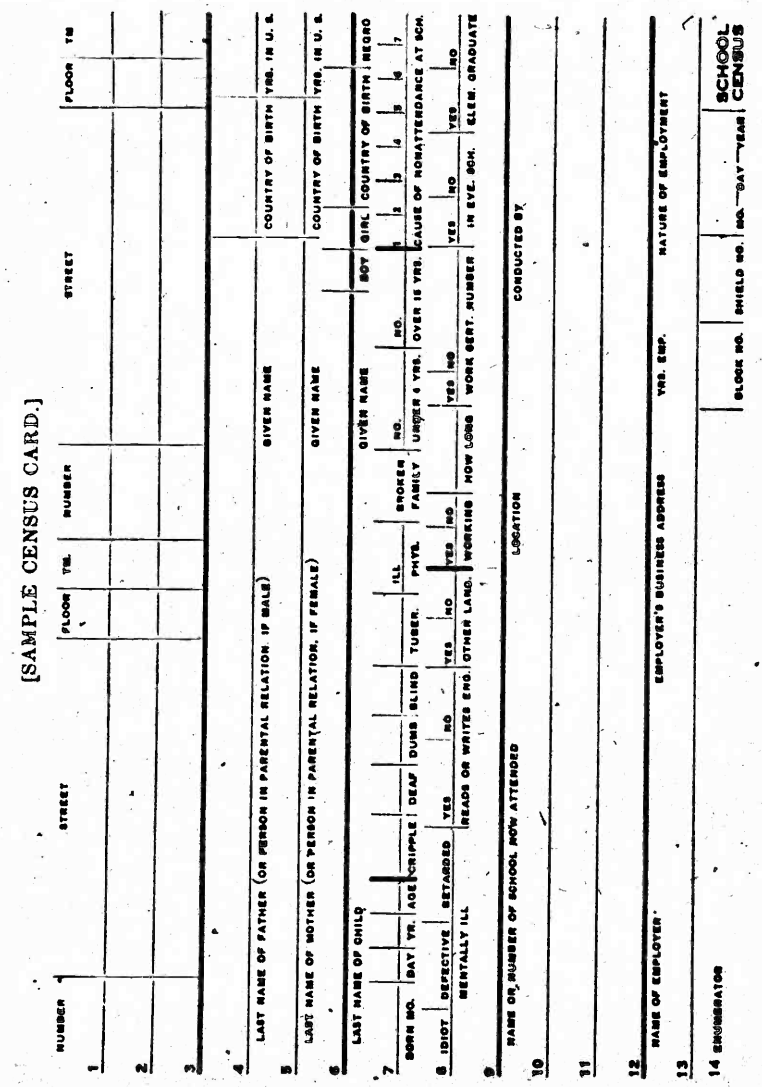
A CUMULATIVE CENSUS CARD.

Supplementary to a formal census canvas of the city made at given intervals the attendance department should make and keep up to date cumulative family record cards each of which should contain besides other social data the name, address, sex, age, nativity, whether attending public, private, or parochial school, class of such school; the reason for not attending school, if employed, where and how, and a brief statement of the school history of every child in the family. This family record card should be made in duplicate, one copy to be retained in the office of the chief of the attendance department and the other to be kept on file with the principal of the school attended by the children.

These cards should be kept up to date by adding the names of children moving into the city and entering school after the annual census has been taken. If this is done the whereabouts of every child of school age can be known at all times and the essential facts about each can be secured upon a moment's notice.

After the annual census has been taken it should, early in the school term, be checked against the enrollment in the public, private, and parochial schools to ascertain what children are out of school. This being known the attendance officers can visit the homes of these children to inquire why they have not entered school. As already mentioned, the census report, if kept in permanent form, is of inestimable value not only in enforcing laws having to do with compulsory attendance, with child labor, and with the granting of work

permits, but it will give valuable information regarding the growth of the city, the direction this growth is taking, and the changing and shifting character of the population—information which is essential if the board is to plan wisely far enough ahead to provide



the necessary school accommodations by the time they are needed—something the Wilmington board has not done, possibly because it did not know anything definite about the school population of the city.

THE WORK OF THE ATTENDANCE OFFICERS.

Up to March, 1919, in Wilmington, no real attempt was made to enforce the compulsory-attendance law which had been on the statute books for several years. In March, 1919, three truant, or attendance, officers were employed by the school department.

Each officer is assigned a district and required to visit each school twice a week and to telephone once a week. Principals may, however, call the attendance officers at any time. These officers visit the homes of children who are irregular in attendance and endeavor to persuade the parents to send their children to school regularly. A record and the result of each visit is kept by a card system. If the parent does not comply with the request, formal notice is served; and if no attention is paid to this notice, he is summoned before the justice of peace for a hearing.

Since the employment of the attendance officers school attendance has improved. During the year 1919–20 there were reported to these officers, 4,975 cases of irregular attendance. Of these, 4,399 were returned to the public schools and 62 to private schools. In addition, 418 truants were put in schools. Only 97 of these might be classed as habitual. That the attendance officers were busy is evident from the fact that they made 4,910 visits to homes, 1,359 to schools, 25 to the courts, and 161 miscellaneous, making a total of 6,459, or 2,153 for each officer, or an average of 12 visits a day, which is a large number in view of the fact that each district is large and usually much territory had to be traversed to visit the homes.

Legal notice was served upon 840 parents, 14 were prosecuted with costs and fines, and 2 were dismissed. From the foregoing it is evident that the compulsory attendance division has rendered a genuine service to the schools of Wilmington.

By referring to the Federal census and the school register data, and by taking into account the cause of the discrepancy found between the census and enrollment, it would seem probable that nearly all the children of compulsory attendance age in Wilmington enroll in some school. The Federal census data show, too, that only 96 children from 7 to 13 years of age, inclusive, are reported as not having enrolled in school some time within the school year, from September, 1919, to January, 1920.

SOME DIFFICULTIES IN ENFORCING THE LAW.

One great difficulty lies in the fact that the officers have no means of knowing what children do not enroll, except as they may discover them by inquiry among children in school who may know of some who are not in school. As elsewhere recommended, a school census would enable these officers to locate every child and place him in school if he has no good reason for being absent.

Another difficulty in the enforcement of the law is that there is no cooperation between the attendance officers and the private and parochial schools. Of course the Wilmington board of education has no administrative relation with these schools, but it is the duty of the board to see that every child of compulsory attendance age is in school somewhere and that he attends regularly.

The attendance department does not even know how many children are enrolled in private and parochial schools, much less how well they attend. There is no system of transfer from private to public schools. Children who leave the public schools to enter private or parochial schools are followed up to see that they enter these, but there is no such follow-up when a pupil leaves the private or parochial school since the attendance officers are not notified that it is the intention of the pupil to transfer.

Before it is possible to have all the children of compulsory school age in school and in regular attendance the Wilmington school board must provide a sufficient number of attendance officers to include the children in all private and parochial schools. It is inconceivable that any legislative body would pass a compulsory attendance law so that those parents who enroll their children in private or parochial schools may keep them out at any time and for any reason. It is inconceivable that John Smith, who sends his children to public school, is fined because he does not keep them in school the required time, while John Jones, who sends his children to a private school, may keep them at home as much as he pleases. For the Wilmington school board to compel all children of compulsory age to attend school according to the provision of the law would in no way interfere with the administration of the private and parochial schools. This fact must be remembered: That the law provides that every parent of children from 7 to 14 years of age must send them to some school. What school is not a matter that concerns the school board so long as the children are receiving instruction equivalent to that given in the public schools.

Another difficulty needs to be pointed out. The compulsory attendance law under which Wilmington is operating permits a child to leave school at 14 years of age, no matter what grade he has completed, even if it is only the first or no grade at all. The child-labor bureau, however, does not issue work permits to children 14 years of age unless they have completed the fifth grade. Thus children 14 years of age who have not completed the fifth grade and who have quit school are not permitted to work. Such children may roam the streets so far as the compulsory attendance department of the Wilmington schools is concerned.

The compulsory attendance law, under which Wilmington is operating, and the child labor law should be made to harmonize so that children from 14 to 16 years of age must be in school or at work.

HOLDING POWER OF THE SCHOOLS.

Most of the pupils enrolled remain in school until they become 14 years of age. The number in school is practically constant from 6 to 14 years of age. At the age of 14 there is a falling off; at 15 there are not half as many in school as at 13. Conditions in this respect in Wilmington are practically the same as in 42 other cities of more than 25,000 population, as may be seen in the following table:

Total net enrollment in Wilmington public schools, 1919–20, distributed by ages.

Ages.	Pupils.	Percentage of total enrollment.	Percentage in 42 cities.
5			1.6
6	1,497	11.0	10.2
7	1,438	10.6	10.8
8	1,346	10.0	10.6
9	1,250	9.2	10.6
10	1,324	9.7	10.4
11	1,446	10.7	9.9
12	1,406	10.4	9.7
13	1,411	10.4	9.4
14	1,047	7.7	7.1
15	633	4.6	4.5
16	366	2.7	2.6
17	214	1.6	1.6
18 and over	191	1.4	1.0
Total	13,575	100.0	100.0

ELIMINATION BY GRADES.

Children in Wilmington are staying in school until the seventh grade, when they begin to drop out rapidly, so that in the eighth grade almost half have gone, and in the fourth year high school only about one-sixth survive, as may be seen from the following table, which shows the number of pupils among each hundred beginners who are in school at each grade:

Number of pupils in each grade for every 100 pupils entering first grade.

Grades.	Wilmington.		42 other cities, 1919.
	1913–14	1919–20	
1	153	174	154
2	122	118	121
3	120	123	121
4	122	122	123
5	103	120	114
6	89	137	105
7	83	98	90
8	53	54	74
I	57	56	58
II	32	32	36
III	20	20	24
IV	13	16	19

For every 100 beginners there are 174 in the first grade, 54 in the eighth, and 16 in the fourth year high school. The number in excess of 100 in the lower grades represent the holdovers. This is not as good a showing as is made by 42 other cities, where there are, for every 100 beginners, 154 in the first grade, 74 in the eighth, and 19 in the fourth year high school. In Wilmington there is more of a clogging process in the first six grades, and then as soon as the children are 14 years of age the average ones begin to drop out. The schools are, however, holding the pupils one or two years longer than in 1913, when the eliminating process began in the fifth and sixth grades, while in 1919 it did not begin until the seventh grade.

This table shows that practically no greater proportion entered the eighth grade and all grades above in 1920 than in 1913, but that a larger proportion entered in the fifth, sixth, and seventh grades. In the primary grades the proportion of holdovers is about the same as in 1913; that is to say, the only point where the system has gained in the effectiveness of its holding power during the period from 1913 to 1920 is in the fifth, sixth, and seventh grades.

In comparing Wilmington with the average of 42 other cities of the country in respect to this matter, this is to be observed: That in the first grades the number of repeaters is about the same; that in the sixth and seventh grades the repeaters in Wilmington in 1920 ran higher than the average of the 42 cities; and that from the eighth grade up through the high school the schools hold proportionately fewer pupils than do the schools of the 42 cities with which Wilmington is compared.

4. THE PROGRESS OF CHILDREN THROUGH SCHOOL.

There are in Wilmington 384 whites and 313 colofed children 3 years or more years over age for their respective grades. If the same law were in force in Wilmington as in New Jersey, that all children 3 or more years over age be placed in special classes, about 30 such classes would be necessary. Under present conditions, with respect to school buildings and lack of classrooms, no provision can be made even for the mentally defective, not to mention pupils who have become over age for other reasons.

In the next few paragraphs attention is called more in detail to the amount of retardation in the Wilmington schools, its special significance, and the methods of reducing it.

Since the elementary school course of study is 8 years in length, a child entering at 6 years of age should complete the course at 15. In the compilation of the age-grade data for the Wilmington schools, children of the first grade who are 6 and 7 years of age are

considered normal, all 8 years of age and over, over age. In the second grade, children under 7 years of age are considered under age, all 7 and 8 years of age, normal, and all 9 or more years, over age, and so on through the grades, allowing two years for normal age, or 9 years for a child entering at 6 to complete the elementary school course. This is a liberal allowance for normality, but it is the basis upon which most age-grade studies have been made and is used in this report so that Wilmington may be compared with other cities in respect to the age of the children for their respective grades.

The following tables show the distribution of public school children by age and grade, also the number and per cent of children under age, of normal age, and over age for their respective grades:

Age-grade distribution of enrollment (white schools), 1919–20.

Grades.	Ages.													Total.
	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	1,254	559	146	43	12	6	3	2	2	.....	.....	.....	.....	2,027
2	79	627	379	160	60	23	17	4	3	1	.....	.....	.....	1,353
3	1	71	572	411	208	88	37	19	2	2	.....	.....	.....	1,411
4	.....	11	86	441	412	248	122	78	25	3	2	.....	.....	1,428
5	.....	1	2	55	389	437	207	159	76	14	.....	.....	.....	1,340
6	.....	.....	.....	1	68	456	439	344	167	39	8	.....	1	1,518
7	.....	.....	.....	.....	3	63	364	358	210	59	9	2	.....	1,008
8	.....	.....	.....	.....	.....	1	42	238	198	95	16	.....	.....	590
I	.....	.....	.....	.....	.....	.....	16	49	191	206	98	40	.....	609
II	.....	.....	.....	.....	.....	.....	.....	.....	29	114	90	55	19	316
III	.....	.....	.....	.....	.....	.....	.....	.....	3	14	63	61	41	182
IV	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	11	45	108	166
Total	1,334	1,269	1,185	1,111	1,153	1,322	1,247	1,251	906	543	306	208	169	11,969

Age-grade distribution of enrollment (colored schools), 1919–20

Grades.	Ages.													Total.
	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	151	106	59	37	26	6	4	4	.....	3	1	.....	.....	397
2	10	58	58	39	23	12	19	17	6	3	1	.....	.....	246
3	2	5	41	34	45	22	36	16	19	8	.....	.....	.....	228
4	.....	.....	2	19	36	21	24	27	20	5	3	.....	.....	157
5	.....	.....	.....	10	37	41	43	34	25	11	7	.....	.....	208
6	.....	.....	.....	.....	3	16	23	32	21	25	5	.....	.....	125
7	.....	.....	.....	.....	1	6	10	24	33	11	4	.....	.....	89
8	.....	.....	.....	.....	.....	.....	.....	.....	10	13	15	.....	.....	38
I	.....	.....	.....	.....	.....	.....	.....	6	5	6	11	.....	4	32
II	.....	.....	.....	.....	.....	.....	.....	.....	2	7	5	5	6	25
III	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	10	4	10	27
IV	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2	4
Total	163	169	160	139	171	124	159	160	141	95	62	11	22	1,576

Summary of age-grade distribution (white schools).

Grades.	Number.				Per cent.		
	Under age.	Normal age.	Over age.	Total.	Under age.	Normal age.	Over age.
1	.....	1,813	214	2,027	.....	89.44	10.56
2	79	1,006	268	1,353	5.83	74.35	19.82
3	72	983	356	1,411	5.10	69.66	25.24
4	97	853	478	1,428	6.79	59.73	33.48
5	58	896	486	1,440	4.22	61.64	34.04
6	70	905	553	1,518	4.61	58.95	36.44
7	66	722	280	1,068	6.17	67.60	26.23
8	43	436	111	590	7.28	73.89	18.83
I	65	397	138	600	10.83	66.16	23.01
II	29	213	74	316	9.17	67.40	23.43
III	17	124	41	182	9.34	68.13	22.53
IV	13	153	.....	166	7.84	92.16	.....
Total	609	8,421	2,999	11,999	5.07	70.18	24.75

Summary of age-grade distribution (colored schools).

Grades.	Number of pupils.				Per cent.		
	Under age.	Normal age.	Over age.	Total.	Under age.	Normal age.	Over age.
1	.....	257	140	397	.....	64.76	35.24
2	10	116	120	246	4.07	47.15	48.78
3	7	75	146	228	3.07	32.89	64.04
4	2	55	100	157	1.26	35.03	63.71
5	10	78	120	208	4.80	37.50	57.70
6	3	39	83	125	2.40	31.20	66.40
7	7	34	48	89	7.86	38.20	53.94
8	.....	10	28	38	.....	26.31	73.69
I	6	11	15	32	18.75	34.37	46.88
II	2	12	11	25	8.00	48.00	44.00
III	3	14	10	27	11.11	51.85	37.04
IV	.....	4	.....	4	.....	100.00	.....
Total	50	705	821	1,576	3.17	44.73	52.10

It may be noted that many children are over age, the average for the school system, including the high school, being 52.1 per cent. This, however, is somewhat above the average for cities of Wilmington's class, as may be seen in the accompanying chart.

If there were no children more than one or two years too old for their grades the situation in Wilmington would not be serious, but there are 384 white children and 313 colored children three or more years over age, distributed by grades as follows:

Number of children three or more years over age.

Grades.	Colored.		White.	
	Number.	Per cent.	Number.	Per cent.
1	44	11.0	25	1.2
2	58	23.5	45	3.5
3	79	34.9	60	4.2
4	55	35.0	108	7.5
5	43	20.6	90	6.7
6	30	24.0	42	2.7
7	4	4.5	11	1.0
8	0	.0	0	.0
Total	313	19.8	384	3.6

Number and per cent over age, by years.

	Years over age.				
	1	2	3	4	5 (or more)
Number, white	1,618	714	268	91	25
Per cent	13.5	5.9	2.2	.8	.2
Number, colored	283	187	155	77	73
Per cent	18.1	11.9	9.8	4.9	5.1
Total, white and colored	1,901	901	423	168	98
Per cent	14.0	6.6	3.1	1.2	.7
Per cent of retardation	12.7	5.3	1.9	.6	.3

The distribution for the white schools of Wilmington is practically the same as for the 80 cities, but the over-age colored children cause Wilmington to make a poorer showing than the 80 cities.

Expressed in another way, the seriousness of those three or more years over age may be seen in the following table, which shows the number of children 16 years of age who have not reached the eighth grade, the number 15 years of age who have not reached the seventh grade, and so on:

Children of given ages who have not reached given grades.

White.			Colored.		
Number of children.	Age.	Grade not reached.	Number of children.	Age.	Grade not reached.
22	16	Eighth.	21	16	Eighth.
59	15	Seventh.	55	15	Seventh.
108	14	Sixth.	70	14	Sixth.
103	13	Fifth.	64	13	Fifth.
57	12	Fourth.	59	12	Fourth.
20	11	Third.	18	11	Third.
12	10	Second.	26	10	Second.

It is safe to assert that none of these children will complete the eighth grade. None of the Wilmington children now in the eighth grade are more than two years over age. Indeed, very few in this grade are two years over age, most of the over-age children having dropped out before reaching the eighth grade.

SIGNIFICANCE OF RETARDATION.

An important factor in the consideration of the efficiency of the Wilmington school system, and in fact any school system, is the extent to which children are under age, of normal age, and over age for their respective grades. The seriousness of retardation is concerned chiefly with the results to the child himself, the educational loss to the city, the State, and the Nation, and the financial loss which comes from the added expense of carrying a pupil over the

same work two or more times. Of these, the first two are of the most importance. The child becomes discouraged and leaves school as soon as the compulsory attendance law will permit, while the community loses the possibility of adding to its population an educated citizen.

Children who leave school at the close of the first, second, or third year of school miss the larger part of the education which the city provides for its children, and they do not receive the minimum amount which is by general agreement considered necessary as preparation for intelligent citizenship. Many children in Wilmington do not advance far enough to acquire the permanent habits which the school aims to inculcate, and the little education acquired is not sufficient for ordinary needs.

The injury of retardation is not confined to the fact that the children leave school early and are therefore deprived of an education, but to the fact that while they do remain in school the instruction is not adapted to their abilities. They do not, therefore, receive full benefit for the time which they devote to school, and since they are improperly classified they are a burden to the teacher and a handicap to the pupils who are making normal progress. This classification means that the teacher either neglects the backward children, or else devotes to them the time needed for the proper advancement of the bright children.

CONDITIONS IMPROVING.

Simply to show present conditions with respect to retardation in Wilmington would be exceedingly unfair in view of the fact that the percentage of retardation is much less now than it was several years ago, as may be seen from the following table:

Showing retardation for a period of one year.

Ages.	1913–14		1917–18		1919–20	
	White.	Colored.	White.	Colored.	White.	Colored.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Under age	1.5	4.5	2.5	1.5	4.5	2.6
Normal age	58.7	43.0	67.0	38.9	70.2	44.7
Over age	39.8	52.5	30.5	59.6	25.3	52.7

In the white schools there is now a greater proportion of under age and normal age children and a smaller proportion of over age than in 1913. In the colored schools there has been practically no change. This is explained by the fact that during the war many Negro children who had never been in school, or at least only intermittently, moved to Wilmington. There being no special classes for children over age, they were placed in the grade to which their scholastic at-

tainments entitled them, with the result that many children 10, 11, 12, and 13 years of age were placed in the primary grades. If this condition had not arisen the amount of retardation in the colored schools would undoubtedly have been reduced as it was in the white schools.

METHODS FOR REDUCING AMOUNT OF RETARDATION.

There are now in Wilmington fewer over-age children than in 1913, because the promotion system has been made more flexible and more children are promoted, as may be noted in the section of this report treating of promotion.

Six elementary summer schools have been organized, to which children who fail in one or two subjects, who have passed but need strengthening, and who may be able with a little extra work to skip a grade, are admitted. During the summer of 1920 there were 463 children enrolled, the average attendance being 329. Of those enrolled 277 worked off conditions, 130 were strengthened, 16 were enabled to skip a grade, and 40 failed. The organization of these summer schools is a forward step, and they have done much to lower the amount of retardation. More should be established and the term gradually extended so that the school children of Wilmington may have the opportunity of attending school 48 weeks a year, as recommended in another part of this report.

Special classes should be provided so that children who are a burden to a room may be removed and given instruction suited to their abilities and needs. But special rooms are out of the question under present congested conditions. Not until after new buildings are erected can much be done to provide special classes for those children needing special help.

This much, however, can be done: The children in a room can be grouped so that the slow-moving older pupils need not be in the same class with the younger and brighter children. If there are, for instance, three first grades in a building, the children can be divided into six groups, thus making only about a six weeks' interval between groups. With such arrangement a child need not be held until the end of the term and be required to repeat a half year's work. He can be dropped back to the group just below when he shows that he can not keep up with the group that he is in, or if he shows special ability he can be advanced to the group above.

An experiment now under way in Wilmington promises much to diminish retardation. In two buildings the teachers are advanced with their classes for a period of two years. As yet no statistical facts are at hand to show whether a greater proportion of pupils are promoted under this plan than under that of having the teacher re-

main year after year in the same grade. The teachers who have been advanced with their classes speak enthusiastically of the plan, saying that they are now enabled to promote more children because of the fact that they know them better. These teachers say that they now often promote children who, if they had to be sent to a new teacher, would be held back. This is possible because teachers know the weakness of the children in question and know just what work is necessary to bring them up to the standard, whereas a new teacher would not. It is also claimed that much time is saved at the beginning of each term, because no review is needed to ascertain just what the children have studied. All the reviewing that is necessary is to refresh the minds of the pupils after a few months' vacation.

The plan of advancing the teacher with the class having proved successful in the two schools, it should be extended to other buildings as rapidly as possible, for it will without doubt assist in reducing the amount of retardation, in addition to the other advantages that come from a teacher's being with her class for several years. Teachers may well be promoted with the children through three or four years. Experience in many places has proven the value of this.

PROMOTIONS IN ELEMENTARY GRADES.

The promotion rate has been much increased in both the white and colored schools. In June, 1915, only 85 per cent of the white pupils were promoted; in June, 1920, the promotion rate reached 91 per cent, which is about as high an average as it is possible to secure, since there always will be some children in a graded school who must for one reason or another repeat a term's work. In June, 1915, only 72 per cent of the colored children were promoted; in 1920 the per cent promoted was 81.

The following table shows the promotions in the elementary schools distributed by grades in June, 1920:

Promotions in the elementary grades, June, 1920.

Grades.	White schools.				Colored schools.			
	Number belonging.	Number promoted.	Number failed.	Per cent of promotion.	Number belonging.	Number promoted.	Number failed.	Per cent of promotion.
First	1,384	1,268	116	92	241	213	28	88
Second	1,290	1,152	78	94	213	171	42	80
Third	1,251	1,165	84	93	192	158	34	82
Fourth	1,224	1,149	82	93	142	128	14	90
Fifth	1,262	1,169	93	93	146	129	17	88
Sixth	1,035	946	89	91	116	89	27	77
Seventh	730	605	125	83	83	57	26	67
Eighth	435	361	74	83	47	35	12	74
Total	8,561	7,815	741	91	1,180	980	200	83

A glance at the table reveals a much lower promotion rate in the seventh and eighth grades in both the white and the colored schools than in the first six grades. There is possibly no explanation for this except that the teachers in these two grades have too high standards for promotion, or possibly these grades are not supervised as carefully. Eighty-four per cent is too few to promote in any school. The average in the seventh and eighth grades should be at least 90 per cent, or as high as in the lower grades.

There is considerable variation among buildings in respect to promotions, ranging from 84 in one school to 97 per cent in another. The lower ratios are usually in the buildings where the grammar grades are housed.

CAUSES OF FAILURES.

Many things contribute to the failure of pupils, not the least of these being irregular attendance. Many of these failing in June attended only part of the term. The fact that poor attendance is the cause of many failures is self-evident. The following table made up from teachers' reports for several years on the cause of nonpromotion shows a number of causes, not the least being absence from school:

Nonpromotions and causes—Elementary schools.[1]

Causes.	1915	1916	1917	1918	1919
Absence	384	539	490	291	270
Change of schools	70	49	28	27	24
Outside interests or work	11	16	17	24	17
Late entrance	61	64	52	37	29
Indifference	149	186	202	176	234
Work of grade too difficult for mental capacity	476	431	355	360	383
Mental deficiency	37	38	31	46	36
Immaturity of pupils	34	0	15	18	13
Poor physical condition	20[illegible]	174	126	61	83
Other causes	[illegible]	59	10	47	20
Total	1,518	1,587	1,367	1,173	1,165

[1] As reported by teachers.

It may be noted that work which was too difficult for pupils who were not really mentally deficient but rather mentally retarded or were slow to grasp ideas caused many failures. These children need special attention in classes for children in what might be termed "opportunity classes." Indifference is another cause of nonpromotion. This no doubt means that the classroom instruction is not adapted to this group of children. Many of this group might, however, be classed with those who are weak physically. Condition of buildings and lack of modern equipment is another reason for indifference and "incapacity."

In brief, the foregoing report of the teachers giving causes of nonpromotion makes it evident that many children who fail could be

helped. This brings us back to recommendations made elsewhere in the report, that special rooms be provided. But again we are confronted with the question, "Where?"

METHODS OF PROMOTION.

Pupils in the elementary schools of Wilmington are not promoted on marks made in formal examinations, but upon the kind of work the pupil does from day to day. In brief, the teacher decides whether a pupil can do the next grade work. In doubtful cases the teacher and the principal confer and decide whether it is better for a pupil to be promoted or to be retained in the grade. Of course, occasional tests are given and are used in arriving at a decision in regard to a pupil's promotion, but they fortunately do not count three-fourths, a half, or a fourth, as is the custom in some school systems. The higher promotion rate is possibly due to the fact that formal examinations have been abolished and that a pupil's fitness for promotion is determined by his daily recitations and his ability to do the work of the next grade. It is, indeed, a commendable feature of the school system that promotional examinations have been abolished. These formerly consumed much time that could have been used for teaching purposes. It was a process of pulling up the plant to see whether it was growing.

5. TRAINING OF ELEMENTARY TEACHERS AND THEIR SALARY SCHEDULE.

The minimum educational requirements for entering the elementary teaching corps of the Wilmington schools consist of graduation from a four-year high school and two years of professional preparation. There are, however, many teachers in the corps who have not had this amount of preparation, for the standard now demanded is higher than it was several years ago. There are teachers in the Wilmington schools who had three years or less high school work and a year or less of professional training at the time they were employed by the Wilmington school board. These facts are set forth in the following table.

The tables following give the distribution of the number of years of education which teachers and principals receive above the eighth grade.

Education of elementary teachers when they entered the Wilmington schools.

Extent of training.	Principals, white and colored.		White teachers.		Colored teachers.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Less than 4-year high school	1	4.2	7	2.6	1	2.6
Four-year high school only	.....	.....	8	2.9	3	7.6
Less than 4-year high school plus some advanced work in normal or college	11	45.8	55	20.2	4	10.2
Four-year high school plus some advanced work in normal or college	3	12.5	20	7.5	0	0
Less than 4-year high school plus—						
1-year normal	6	25.0	22	8.2	3	7.6
2-year normal	.....	.....	18	6.6	3	7.6
3-year normal	.....	.....	16	5.9	.....	.....
4-year normal	.....	.....	7	2.6	.....	.....
Four-year high school plus—						
1-year normal	1	4.2	34	12.6	.....	.....
2-year normal	1	4.2	62	22.8	22	56.4
3-year normal	.....	.....	2	.7	1	2.5
Less than 4-year high school plus 2-year college	.....	.....	1	.4	.....	.....
Four-year high school plus—						
1-year college	.....	.....	1	.4	.....	.....
2-year college	.....	.....	4	1.4	.....	.....
3-year college	.....	.....	1	.4	.....	.....
4-year college	.....	.....	6	2.2	2	5.1
5-year college	1	4.1	.....	.....	.....	.....
Less than 4-year high school plus—						
1-year normal and 1-year college	.....	.....	3	1.1	.....	.....
2-year normal and 1-year college	.....	.....	2	.7	.....	.....
Four-year high school plus—						
1-year normal and 1-year college	.....	.....	1	.4	.....	.....
2-year normal and 2-year college	.....	.....	1	.4	.....	.....

Distribution of total number of years of schooling above eighth grade received to date by elementary teachers (white and colored).

Years of schooling.	White teachers.		Colored teachers.		White and colored combined.		Per cent other cities.[1]
	Number.	Per cent.	Number.	Per cent.	Total number.	Per cent of total.	
Less than 1 year	6	2.2	.....	.....	6	1.9	0.5
1 year	2	.7	.....	.....	2	.6	.9
2 years	6	2.2	1	2.6	7	2.2	2.1
3 years	46	16.9	4	10.2	50	16.1	3.3
4 years	53	19.5	10	25.6	63	20.4	12.8
5 years	58	21.5	3	7.7	61	19.8	11.4
6 years	86	31.8	18	46.1	104	33.6	52.9
7 years	6	2.2	1	2.7	7	2.2	8.8
8 years or more	8	3.0	2	5.1	10	3.2	7.3
Total	271	.....	39	.....	310	.....	.....

[1] From a study of 359 cities in, *Know and help your schools*, by National Committee for Chamber of Commerce, p 24.

Years of schooling, by quartiles.

Quartiles.	White teachers.	Colored teachers.	White and colored	Teachers in other cities.
Lower quartile	4.1	4.5	4.2	5.5
Median	5.4	6.1	5.5	6.4
Upper quartile	6.4	6.6	6.4	6.8

Total education above eighth grade of elementary school principals distributed by years.

Number of years.	Number of principals.	Percentage of all principals.
1	0	0.0
2	2	8.3
3	2	8.3
4	5	20.9
5	9	37.6
6	2	8.3
7	1	4.1
8 or more	3	12.5
	24	.....

Lower quartile, 4.4; median, 5.3; upper quartile, 6.0.

It may be noted that 4.7 per cent of all the elementary teachers have attended school less than three years beyond the eighth grade, including time so spent after beginning to teach in Washington. Only 39 per cent have had six or more years' schooling, while 69 per cent of the elementary teachers in other cities have attended school six or more years beyond the eighth grade. The median number of years that the Wilmington teachers have had is 5.5, while the median for 47,121 teachers in other cities is 6.4, or 0.9 years more than for the teachers in Wilmington.

The elementary-school principals have not attended school more years than the teachers they are supervising. This is accounted for by the fact that many of the principals entered the Wilmington schools as teachers some years ago, some before there was a 4-year high-school course, and when the city training course was a year or even less in length. Many of the teachers, on the other hand, have recently come into the schools with four years of high-school work and two years of normal training, which are now required for entrance.

By referring to the table it may be seen that only 8.3 per cent of the principals had graduated from a 4-year high school and a 2-year normal school, or from college, before entering the Wilmington schools. Many of the principals have, however, since entering the service in Wilmington, added a year or more to their schooling. The median number of years' education upon entrance was 3.8 years; now it is 5.6 years, or an increase of 1.6 years. In the following section, treating of experience, it will be found that the principals have had many more years' experience than the teachers, which may make up for the lack of professional preparation, but, as pointed out elsewhere, principals should have special preparation for their work as supervisors.

Without question, elementary-school principals should be educated especially for supervision as well as for teaching. They should

be college graduates or the equivalent, and should have had, during their college course, several years' work in education, with special emphasis upon the subject of elementary-school supervision. They should also have some teaching experience, so that they may know what problems the classroom teacher has to solve and what methods are applicable in their solution. The principal who can not go into a classroom and teach effectively soon loses the respect of the teachers under his or her supervision, but being able to teach in itself does not make a teacher a capable principal. He or she must know how to instruct others in the principles and art of teaching, how to arouse interest among teachers and parents, and how to do many other things that are not required of a teacher.

When the elementary school principals are judged by the standard of education and experience, they are "short" on educational qualifications and "long" on experience. The plan of promoting teachers to principalships is largely responsible for this situation. For some years it has been the custom to grant what are known as principal's certificates to teachers of some years' experience. Thus there is usually a list of teachers waiting to be promoted to principalships as vacancies occur.

There is no need of granting such certificates. A standard college graduation with courses in educational supervision and several years' teaching experience should be set and adhered to. If any of the teaching corps reaches the standard and has the other necessary qualifications for the principalship, he or she should be considered for the position. The superintendent should, however, feel free to go anywhere to select principals for the elementary schools, just as he may go anywhere for supervisors of special subjects. The principalship is the most important supervisory position in the elementary school system. It is through the principals that the superintendent must work.

If because of a lack of training they are not capable of understanding and of putting into operation the recommendations of the superintendent, the school system fails; a weak principal, a weak school.

Everything considered, the survey commission strongly recommends that the school board should hereafter demand higher educational and professional qualifications for the most important supervisory position in the Wilmington school system—the elementary school principalship—that the plan of prompting to this position teachers with no especial preparation for supervision be discontinued, and that principals be brought in from other places if no one in the school system has the necessary educational and professional qualifications.

IMPROVEMENT IN SERVICE.

Considering the salaries that have been paid the elementary teachers in Wilmington it is surprising to find that any have attended summer sessions at normal schools and colleges. Of the white elementary teachers, 32, and of the colored, 20 have attended one or more summer sessions since entering the service in Wilmington. The number is not large, but large for the amount of salary that has been paid.

Much attention is, however, given to the professional growth of teachers in the system. Each elementary school principal holds two meetings a month to discuss such problems as may arise and to study several books intensively. There are also the usual grade meetings called by supervisors and principals. Besides this there is a teachers' association in which practically all the teachers are enrolled. During the year the association is addressed by persons of reputation in their respective fields.

The teachers also employ a specialist in some particular subject to give a course extending through a semester or the entire year. The school board did a commendable thing this year by making an appropriation of $1,000 to assist in defraying the expenses of these special courses. The fund is divided so that the high school and elementary teachers may each have a third and the principals a third for the courses.

Since teachers may now attend summer sessions at Delaware College, with all expenses paid, one of the requirements for promotion should be that teachers attend a summer session at Delaware College or elsewhere every few years.

EXPERIENCE OF ELEMENTARY TEACHERS.

The elementary teachers, white and colored, are not inexperienced, only seven never having taught before this year. The number of years of experience ranges from none to 48, the median being 9.1. The amount of experience within the Wilmington schools is, however, much less; 47 are teaching for the first time in the city, or about one-sixth of the teachers are new to the system. The range is from no years to 48, the median being 5.1 years or 4 years less than the total amount. One hundred and sixty-six have never taught outside the city.

The table following gives the distribution of the number of years of experience of elementary teachers and principals in Wilmington and elementary teachers in other cities.

Experience of elementary teachers and principals of Wilmington compared with other cities.

Years.	Principals as teachers.	As principal or supervisor.	Total.	Per cent.	Teachers.		Other cities.
					Number.	Per cent.	Per cent.
Less than 1 year	1	1	1	4.2	7	2.2	0.01
1 year		2			16	5.1	5.2
2 years	1	2			23	7.6	6.9
3 years	1	1			22	7.3	6.7
4 years		1			25	8.1	6.3
5 years					19	6.1	6.7
6 years		4			19	6.1	5.5
7 years		1			10	3.2	5.6
8 years					13	4.2	4.7
9 years					7	2.2	3.9
10 years	2				10	3.2	5.4
11 to 14 years	3	2			33	10.6	12.1
15 to 19 years	10	2	5	20.8	38	12.2	10.7
20 years and over	5	8	18	75.0	68	21.9	20.3
Total	23	24	24		310	100.0	100.0

Years of experience, by quartiles.

	Teachers in Wilmington.	Teachers in other cities.	Wilmington principals.
Lower quartile	4.4	5.0	20.0
Median	9.1	9.5	27.6
Upper quartile	19.2	17.9	30.6

Although the median amount of experience of elementary teachers in Wilmington is practically the same as in other cities, the teaching corps of Wilmington is a shifting one. From 1917 to 1919, inclusive, 171 teachers left the corps for various reasons; 68 to work at another occupation, 37 to teach elsewhere, 48 to get married, and 18 because they were informed that they would not be reelected. This has meant an average of 57 new teachers a year, or almost a fifth of the teaching corps. No doubt some of these resignations could have been prevented if salaries had been greater.

WILMINGTON SALARY SCHEDULES, ELEMENTARY AND HIGH SCHOOLS.

Not until 1920–21 did the board of education of Wilmington make any great response to the unparalleled rise in living cost by increasing the salaries of elementary and high school teachers. But in 1920 a schedule was adopted that placed salaries much beyond what they had ever been in Wilmington.

The table following shows the distribution of salaries for the years 1913–14, 1918–19, 1919–20, and 1920–21.

Number of Wilmington teachers falling into various salary groups.

Salaries.	Elementary teachers.				High-school teachers.			
	1913–14	1918–19	1919–20	1920–21	1913–14	1918–19	1919–20	1920–21
$300– $399	28							
400– 499	23							
500– 599	150							
600– 699	22	66						
700– 799	50	91	67					
800– 899	2	66	17	3	6	1		
900– 999	7	51	58		22	2		
1,000–1,099		6	47	54	6	8	5	
1,100–1,199		7	5	8		22	3	
1,200–1,299		1	8	43	3	2	30	
1,300–1,399			1	15			1	1
1,400–1,499		1	1	32		8	4	5
1,500–1,599			1	151	1		6	6
1,600–1,699				1	6			7
1,700–1,799				1		1		1
1,800–1,899				7			3	21
1,900–1,999								3
2,000–2,400								3
2,500–2,999								5
Minimum	350	600	700	850	850	850	1,000	1,350
Lower quartile	500	700	800	1,150	900	1,025	1,200	1,650
Median	525	750	825	1,450	900	1,150	1,250	1,850
Upper quartile	650	850	950	1,500	1,000	1,200	1,300	1,850
Maximum	900	1,400	1,500	1,850	1,500	1,750	1,800	2,500

The 1920–21 increase came so late that many good teachers had left to engage in more remunerative employment, and until the increase it was becoming more and more difficult to obtain qualified teachers. Whether the present salary schedule is sufficiently high to obtain and hold the type of teacher Wilmington needs is doubtful.

In the following tabulations comparing salaries paid in Wilmington with those paid in other cities the schedule of the year 1919–20 is used because of the fact that 1920–21 data are not at hand for the list. In this comparison it is seen that Wilmington ranks lowest among the eastern cities and next to lowest among southern cities.

Median salaries paid elementary school teachers, 1919–20, in eastern and southern cities of 100,000 population and over, compared with those in Wilmington.

Eastern cities.		Southern cities.	
Buffalo, N. Y.	$1,599	Atlanta, Ga.	$1,254
Worcester, Mass.	1,523	New Orleans, La.	1,234
Bridgeport, Conn.	1,521	Baltimore, Md.	1,186
Fall River, Mass.	1,518	Richmond, Va.	1,071
Yonkers, N. Y.	1,423	San Antonio, Tex.	1,060
Newark, N. J.	1,420	Memphis, Tenn.	1,025
Springfield, Mass.	1,373	Louisville, Ky.	880
Jersey City, N. J.	1,255	*Wilmington, Del.*	*825*
Lynn, Mass.	1,235	Roanoke, Va.	695
Rochester, N. Y.	1,210		
Paterson, N. J.	1,202		
Providence, R. I.	1,140		
Camden, N. J.	1,048		
Erie, Pa.	1,038		
New Bedford, Mass.	1,037		
Scranton, Pa.	985		
Trenton, N. J.	962		
Wilmington, Del.	*825*		

If none of the other cities have increased salaries for the year 1920–21, Wilmington, with a median of $1,450 for elementary teachers, changes from lowest to seventh in rank among eastern cities and to highest rank among southern cities. Probably, however, most if not all the list increased during 1920–21. It is, however, not so much a question of what other cities pay as it is a question of what Wilmington should pay, so that it will no longer be compelled to employ teachers who have not had the necessary academic and professional preparation.

In order to accomplish this the minimum should be an amount upon which it is possible for a beginning teacher to live in some degree of comfort, and just as soon as she has shown evidence of strength she should be given an increase. The maximum amount should be such that teachers may be held and so that the salary dead line is not reached after a few years in service.

The Wilmington salary schedule now in operation meets requirements that there be considerable difference between the minimum and the maximum, but it is doubtful whether these amounts are high enough, the minimum being $1,000 for teachers of high school and normal school preparation and the maximum $1,800, which may be reached in eight years. A minimum of $1,200 and a maximum of at least $2,400 for elementary teachers would be a much better adjustment. By granting increases of $100 a year it would take 12 years to reach the maximum amount.

The minimum salary for high-school teachers is $1,350 and the maximum $2,250.

The minimum should be not less than $1,500 and the maximum not less than $3,000, if well-qualified teachers are to be had and retained in service. Elementary-grade teachers, with the same academic and professional preparation, should be on the same salary schedule as high-school teachers.

METHOD OF PROMOTING TEACHERS.

The teachers of the city are classified by a committee composed of the superintendent of schools, the assistant superintendent, and the principal of the school in which the teacher is teaching into three classes, known as A class, B class, and C class, the A class representing the highest degree of efficiency and the C class the lowest. The salary of a teacher classed as A or B is increased annually until the maximum is reached, the rate of increase for A class teachers being $100 a year and $50 a year for B class teachers, class C receiving no increase.

The committee on classification of teachers goes over the record of each teacher. The principal of the school first makes a written

report to the superintendent, in which is set forth the principal estimate of the teacher on the following points: Professional growth; efficiency, management, and instruction; general merit—English, attitude, cooperation, thought stimulation, insight into child welfare; results—general, specific; personality; special strength, special lack, special achievement; comparison. After the principal's report has been submitted to the superintendent, he and the assistant superintendent go over it with the principal and classify the teacher as A, B, or C.

This method, especially in view of the fact that the rating plan is simple and that each teacher knows on what points she is rated, is preferable to the method of promoting teachers on experience alone. It may be suggested that a super A class be formed for those who have reached the maximum, and that these be given an additional increase, based upon superior work and upon high qualifications, such as college graduation and professional work in addition.

It is worthy of note that few teachers are retained in class C. As teachers were classified at the close of the school term of 1919–20, 254 were in class A, 61 in class B, and 34 in class C. Of the 34 in class C, 18 were not reappointed, 9 were refused reelection, 4 agreed not to make application, and the other 5 were encouraged to go elsewhere. The 16 remaining were considered worthy of another year's trial. The following table gives the distribution of salaries for elementary school principals for 1913, 1918, 1919, and 1920:

Number of Wilmington elementary school principals falling into various salary groups.

	1913	1918	1919	1920		1913	1918	1919	1920
$800– $899	16				$1,600–$1,699			1	2
900– 999	6				1,800– 1,899				6
1,000–1,099	3	4	2		1,900– 1,999			1	4
1,100–1,199	1	7	2		2,000– 2,099				1
1,200–1,299		8	4		2,100– 2,199				8
1,300–1,399		3	7		2,300– 2,399				3
1,400–1,499		3	4	1	2,400– 2,499				1
1,500–1,599		1	4						

Minimum, median, and maximum salaries.

	1913	1918	1919	1920		1913	1918	1919	1920
Minimum	$800	$1,000	$1,050	$1,400	Upper quartile	$975	$1,275	$1,445	$2,150
Lower quartile	825	1,150	1,235	1,835	Maximum	1,175	1,550	1,925	2,430
Median	850	1,200	1,375	1,975					

The median for cities of 100,000 or more population 1919–20 was $2,130, or $155 more than for Wilmington in 1920–21, and $755 more than in 1919–20. As in the case of teachers, elementary school prin-

cipals in Wilmington have until recently been poorly paid, even now the salary is not such as to be attractive to the type of persons needed to supervise the elementary schools.

One of the commendable things recently done by the school board is the granting of 22 days' leave on full pay for illness, and for granting pay for one-fourth time if the illness is for more than 22 days. The teacher must, however, satisfy the school physician that absence was necessary.

THE PENSION PLAN.

Though the salaries of teachers in Wilmington have been so low that it has not been possible for a teacher to save for old age, a pension system has been inaugurated that in part at least helps dispel the thought of complete dependence after becoming too old to teach. After 35 years' service, 20 of which must have been in Wilmington, teachers may retire or be retired on an annuity of $400. There are now 25 annuitants. Without discussing the pension system in Wilmington it may be suggested that the annuity be made more than $400, so that the school officials will not hesitate to retire a teacher who has taught 35 years and who has ceased to be efficient. As salaries have run in Wilmington these teachers give the greater part of their lives to the schools on salaries of about $500 a year. Surely something is coming to them now. The city could well afford to increase the annuity to enough to maintain a teacher in comfort in her old age.

Chapter III.

A SCHOOL BUILDING PROGRAM FOR WILMINGTON.

1. A PRELIMINARY ANALYSIS OF THE PROBLEM.

The school-building program embodied in this report is uncompromising in its condemnation of all existing public-school buildings in Wilmington. It takes the stand that no patchwork methods will meet the situation. And it endeavors to point out plainly what has to be done in order to give modern education to all the children of Wilmington, and how much it will cost. The survey commission has written the report in this spirit because it believes that the people of Wilmington will be satisfied with nothing less than a clear, uncompromising statement of facts.

The commission has worked out the building program on the assumption that Wilmington wants the best in education for its children. In doing this, it has been necessary to point out conditions that are deplorable. But what the conditions have been up to the present time is not the important point. The very fact that a survey was asked for indicates that Wilmington is not interested in defending existing bad conditions, but is interested in changing them. And since no progress can be made until existing conditions are thoroughly understood, the commission has described these conditions fully, as well as shown a way to improve them.

A SCHOOL BUILDING PROGRAM IS AN ENGINEERING PROBLEM.

What Wilmington needs primarily, in order to solve her school housing problem is a realization of the fact that a school building program is an engineering problem that demands the same deliberation and scientific planning which is characteristic of much of the business life of the city.

Wilmington, in respect to its commercial life, its banks, its shops, its business and residence buildings, is a typical modern city. It is the home of one of the greatest business organizations in the United States; its hotel is one of the most complete and modern structures of the kind in the country. But within a stone's throw of that hotel are school buildings that belong to the days of horse cars instead of electric railways, hacks and "carry-alls," instead of taxicabs and motors, village taverns instead of city hotels, and the use of gas instead of electricity.

No patchwork or piecemeal methods will bring Wilmington's schools up to date. In fact, one of the reasons why Wilmington is facing the present impasse in school housing is that, in company with many other cities, she has pursued a hand-to-mouth policy in school building. The time has now come to take account of stock and make a scientific analysis of the present situation so that plans may be worked out which will not only meet the pressing needs of the present but also provide for the future growth of the school population over a period of years. Such an analysis involves obtaining answers to the following questions:

How many children of school age are there in the city? How many are attending public school? How many are attending private and parochial schools?

What has been the rate of increase in school population during the past 10 years? In what parts of the city is congestion greatest? In what direction is the tide of population moving.

How many buildings and what kind should be put up, and in what parts of the city, in order to provide for growth as well as for present enrollment?

How much playground space is needed for each building? What kind of activities should be provided in the school buildings in order that the children of Wilmington may grow in health, strength, intelligence, and self-reliance?

What funds will be needed to carry out a comprehensive building program? Is the city of Wilmington financially able to carry out such a program?

NO INFORMATION AS TO NUMBER OF CHILDREN IN THE CITY.

At the time of the survey Wilmington did not know how many children there were of school age or of any age in the city. No one knew whether all the children of compulsory school age were in school or what per cent of them were in school. There was no school census, and no school report had been issued since 1910. There was no record of how many children were attending private and parochial schools.

It was possible to get the increase in enrollment from the years 1909–10 to 1919–20, but this was not distributed according to grades, and consequently it was impossible to tell how many children of different ages there were in different parts of the city for the above periods. There were no maps showing where children actually lived in the city. Obviously, no city can hope to solve its school-housing problem if it does not know from month to month and year to year how many children there are in the city.

These facts are emphasized in the beginning, first, because the use of different totals for school enrollment which will be used in the report might otherwise be misleading, and, second, because the first step in carrying out the program outlined in this report must be the development of an adequate system of school statistics.

SCHOOL POPULATION AND SCHOOL ENROLLMENT.

Statistics which the survey was able to obtain from the United States Census of 1920 showed that there were in that year 40,582 children from under 1 to 20 years of age in Wilmington. Of this number, 37,354 were white children and 3,329 were negro. (See Chapter II.)

There were 15,130 white children between the ages of 6 and 14, inclusive. Of this number, 10,788 were enrolled in white public-elementary schools in the year 1919-20. *In other words, only two-thirds of all the children between the ages of 6 and 14 years in the city were enrolled in public schools.*

Data were also obtained from the private and parochial schools in regard to their enrollment. The report was given, however, as of November 1, 1920, whereas the census figures are for January 1, 1920. According to this report, there were 4,792 children in parochial schools, and 444 children in private schools from 6 to 14 years of age. (See Exhibit XIX.) These figures, together with the 10,788 in public schools, make a total of 16,024, or 894 more children of 6 to 14 years of age enrolled in school than there were in the city. Obviously, there must have been an unusual increase in enrollment in the autumn of 1920, or else there was some error in the returns from these parochial and private schools, or the census figures were not accurate.

There were only 1,402 children in the white high school, although there were 6,006 children from 15 to 18 years of age in the city. There were 240 children from 15 to 18 years of age in the city in parochial schools and 63 in private schools.

Eighty per cent of all negro children, 6 to 18 years of age, were parochial schools and 63 in private schools.

To sum up, of the 23,093 children of 6 to 18 years of age in the city, 19,149 in 1920 were enrolled in public, private, or parochial schools, 3,944, or 17 per cent, were not enrolled in any school.

SCHOOLS BADLY CONGESTED.

School congestion is so great that in 1920 there was a shortage of over 60 classrooms in elementary schools, that is, there were about 2,400 children without seating accommodations. (See Exhibit XX.)

The heart of the school-building problem in Wilmington is the elementary schools. There are only 1,402 children in the white-high school, and if the ninth grade is taken out of that school, and junior high schools developed, there will be no congestion in the high school for years to come. The chief question, therefore, in the building program, is what the present congestion is in elementary schools,

and the rate of increase in enrollment in these schools during the past 10 years.

In the year 1909–10 there were 8,864 children enrolled in 25 white elementary schools; in 1919–20 there were 10,708. The original seating capacity of these 25 schools, however, on the basis of 40 to a class, is only 8,320. (See Exhibit XX.) That is, there were fewer seats in 1910 than were pupils. In 1920 there were 2,388 pupils without school seats.

It is evident from these figures that there has been an increase in school population in the past 10 years of 20.8 per cent. It is impossible to estimate accurately the probable per cent of increase in school population during the next 10 years, because conditions arising from the war throw out all calculations for the preceding 10 years. For example, the increase from 1910 to 1915 was only 3.3 per cent, whereas the increase from 1915 to 1920 was 16.8 per cent. (See Exhibit XX.) It is estimated that with the return to normal conditions an allowance of an increase of 10 per cent will cover the growth in school population for the next 10 years.

WHAT CONGESTION MEANS.

The average citizen probably does not realize, certainly does not visualize, what school congestion means. It meant in the 25 white elementary schools that 71.3 per cent of the youngest children there enrolled were attending school less than 4 hours a day; that 32 per cent of all the children in the first two grades were attending school only 3 hours a day; and that 23.8 per cent of all children in the elementary schools were attending school less than 5 hours. Five hours is supposed to be the length of the regular school day. In other words, nearly one-fourth of the children in the elementary schools were getting less than the legal day of schooling.

But congestion means more than this. It means that the children in the first two grades have their day so divided that some come only in the morning, and some only in the afternoon. This means that some teachers teach from 8.30 to 12 and from 12.30 to 3.30 or 4 p. m., while others teach from 9 to 12 and from 1 to 3.

Furthermore, congestion means that even in the grades above the first two, where there is no part-time evil, the children are placed in overcrowded rooms, rooms with as many as 48 children and with only 40 seats. It means that sometimes they do not have any room at all. There were a number of schools where the children were being taught in the hall. In one case 30 children were packed into a hall so closely that they could not rise to recite.

CONGESTION MAKES SATISFACTORY TEACHING ALMOST IMPOSSIBLE.

Teaching even a normal number of children in rooms which are poorly ventilated and poorly lighted is sufficiently difficult, but when

an abnormal number of children are crowded into poorly ventilated and bady lighted rooms, the teaching process becomes almost impossible. Children whose heads are heavy with the bad air of an overcrowded room are in no condition to absorb knowledge. The chief problem of the school always is to get children into a condition in which they want to learn the things that the school has to teach. Studying in old, badly ventilated, poorly lighted, crowded rooms has exactly the opposite effect. If the children are healthy, the one thing they desire is to get away from school to fresh air and freedom; if they are not healthy they should not be in such rooms under any circumstances.

OLD INSANITARY BUILDINGS A MENACE TO HEALTH.

School congestion, in such buildings as exist in Wilmington, not only makes satisfactory teaching almost impossible, but it is also a positive menace to the health of the children.

The school buildings in Wilmington are by far the worst that the survey commission has yet seen. On the score of inadequate light, ventilation, and sanitation alone, the use of such school buildings as now constitute the school equipment for the children of the city of Wilmington would be prohibited by law in a number of States.

With the exception of one building, there has been no new school building for 14 years. Nineteen of the 25 buildings were erected 30 or more years ago. Additions were put up to eight of these buildings, but the old buildings are still used. Five buildings were built in the fifties, or over 65 years ago. (See Exhibit XX.) In two cases there was no sewerage system connected with the building, and one building is on such low ground that it is flooded each spring. Last year, so the commission was informed, the water came up to the blackboards in the first story, so that the books were floating about and the children had to be moved. They returned, however, to this school in three weeks. This school has no sewerage system. There are toilets in the yard. (For detailed description of buildings, see section 3 of this chapter.)

WASTE IN SCHOOL BUILDINGS.

Not only are these buildings a menace to the health of the school children, but their continued use is an economic waste to the city. They are so old and worn out that it is not worth while to spend a single dollar upon them, yet, during the year 1919-20, $112,960.31 was spent on operation, upkeep, and outlay for all elementary schools.

Moreover, the maintenance of 30 small buildings is as great an extravagance as would be the maintenance of 30 hotels in Wil-

mington. The larger the school plant within limits the more economical it becomes, and the greater the variety of facilities it can offer to the children. No school building should accommodate less than 1,200 children; and a building of 2,000 can provide far richer educational facilities for its children than one of 1,200. The average number of children in the 30 buildings in Wilmington was 356. A school system which has many small buildings spends in separate sites, equipment, janitorial service, maintenance, and upkeep what should be spent on auditoriums, shops, laboratories, and libraries. In other words, the city has something to learn from the country as to the social and financial advantages of the consolidated school. The very age and multiplicity of the buildings in Wilmington are the school system's greatest extravagance.

NO MODERN EDUCATIONAL FACILITIES IN ELEMENTARY SCHOOLS.

But not only is there great congestion in the elementary school buildings, not only does this congestion exist in old, insanitary buildings, which are run at a financial loss, but also there are practically no modern educational facilities in these buildings.

Modern schools now have not only classrooms but auditoriums, gymnasiums, shops, cooking rooms, sewing rooms, drawing rooms, music rooms, science laboratories, libraries, and playgrounds. In all the 25 white elementary schools in Wilmington, however, there are only 2 shops, 2 sewing rooms, and 3 drawing rooms—that is, 7 special facility rooms for 10,708 children, all of which are located in poorly lighted basement rooms. (Exhibit XX.) There are 10 rooms which are called auditoriums, but they are practically nothing but two classrooms thrown into one with a platform at one end. Four buildings have no principal's office or other administrative rooms. There are only two teachers' rest rooms in the 25 schools. There are no pupils' rest rooms or clinics. There are only 2 indoor playrooms, and these are located in basements. There is no adequate outdoor playground space at any of the buildings.

It is sufficiently deplorable that children should have to study in crowded, badly ventilated rooms, but when at the same time they have to stay in those rooms practically all the time that they are in school, with no opportunity for the healthful work and play which are so essential for children, the situation becomes a menace to the future citizenship of the city.

CHANGED SOCIAL AND INDUSTRIAL CONDITIONS DEMAND CHANGES IN SCHOOLS.

The average citizen probably does not realize how imperative it is that the school give to children opportunities for healthful work and play as well as study in classrooms. The difficulty is that men and

women who were brought up in the country are not likely to realize the effect that city life has had upon children and children's education in the past decade. They know that something is wrong, but they do not know what it is. They are prone to deplore the fact that "children in these days do not seem to know how to think"; "they don't know how to work"; "they have no initiative, no mechanical ability, nor resourcefulness." The implication is that there is some moral lack in the children. But the truth is that the city environment, whether at home or at school, does not tend to provide for children the practical, everyday problems to be solved which develop these qualities. Hours spent at a school desk do not develop either initiative or mechanical ability; and a love of good workmanship and resourcefulness in solving problems do not develop from reciting lessons merely, but from the opportunity to create things and to solve problems that have meaning. Furthermore, city life, with its cheap amusements and excitement and lack of healthy, normal recreation, does not provide a wholesome environment for children.

There is such a common tendency to identify "schools" with "education" that it is important to emphasize the fact that education has always consisted of work and study and play. Children can not be deprived of any of these three elements in their education if they are to grow in health and strength and develop initiative, intelligence, and the ability to think for themselves. Fifty years ago it made comparatively little difference that schools consisted of little more than classrooms for studying the 3 R's. The children in those days had plenty of opportunities outside of school for the wholesome work and play, which, educationally, was just as important to them as study.

During the past half century, however, has come the growth of the modern city, until now half the population of the country is concentrated in them. And the city, with its overcrowding, its factories, its office buildings, apartment houses, and tenements which go up on all available vacant lots is depriving children of the opportunity for the healthy, wholesome work and play which are essential elements in their education. The city home or apartment can offer few educational opportunities in the way of healthful work which develops the ability to think by attacking problems to be solved. There is no planting and harvesting to be done; few, if any, animals to be taken care of; and it is a rare city home that has a workshop or laboratory. Yet, children, until recently, have received much of their education through the opportunity to handle tools, to take care of animals, and to experiment in making and using things. But the city not only fails to educate children in the right direction; it educates them in the wrong direction, for the street, with its

dangers to the physical and moral life of children, too often becomes their only playground; and street play means education not in health and strength and wholesome living, but precocious education in all the vicious side of a city's life.

SCHOOL MUST GIVE OPPORTUNITY FOR WORK AND PLAY AS WELL AS STUDY.

For these reasons it has come to be recognized that the city school must not only supply the opportunity for study in good classrooms under wholesome conditions, but it must also return to the children the opportunity for the healthful work and play which the home can no longer supply.

Play, an opportunity to develop mechanical ability and initiative, a practical knowledge of science, a wholesome social life and recreation—these have always been part and parcel of an all-round education; and these are the things which Wilmington, like many other cities, is not giving to her children. The children in the public schools of Wilmington do not have the modern buildings and equipment which children in private schools enjoy; and because the public schools lack shops and laboratories and drawing and music rooms and auditoriums, all children in Wilmington are not getting the variety of opportunity necessary for developing their individual gifts. If Wilmington does not give this variety of opportunity in work and study and play to the children of all its people, then it is failing to tap the reservoirs of power for its coming citizenship. Moreover, it is laying up trouble for itself in the future, for nothing is more serious to any community than to have the great mass of people feel balked in their power of self-expression and attainment.

THE BALANCED LOAD PLAN VERSUS THE PEAK LOAD.

But how is Wilmington to develop a building program which will not only furnish sufficient classrooms, but also provide the modern educational facilities which are necessary for the children of the city?

There are two chief methods of accomplishing this. One is by the traditional type of school organization, or the peak-load type; and the other is the work-study-plan plan, or balanced-load plan.

The traditional type of school organization attempts to solve the situation by the usual custom of providing a seat in a classroom for every pupil which that pupil has for his exclusive use. All children are expected to be in school seats at the same time, and if provision is made for such special facilities as auditoriums, gymnasiums, laboratories, and workshops, they have to be erected in addition to a classroom for every class, and when the pupils go to the special rooms the classrooms are vacant. This means that the

addition of these special facilities which are essential in a modern school plant add, under the traditional plan, fully 60 per cent to the cubical content of the building.

This is what is commonly known in business as the "peak-load type" of organization because the load is not distributed, but, on the contrary, tends to concentrate at any moment in one part of the building, e. g., the classrooms, and when the children leave the classrooms to go into the special facilities, the load is transferred, leaving the classrooms vacant. Obviously, if Wilmington has to supply not only these special modern educational facilities, but a school seat for every child, the expense will be prohibitive. The question for Wilmington then is how can the school system be rehabilitated to furnish larger educational opportunities and at the same time effect the economies which will bring the building program within the financial resources of the city?

It is evident that the solution of the problem must be found in the increased use of school accommodations and more skillful school planning. Both are possible by skillful organization and administration. Fortunately, there is a method of school organization which has demonstrated its ability to effect these results—that is, the work-study-play plan, or balanced-load type.

This plan developed in an attempt to solve the peculiar school problems created by the modern city, and it is now in operation in the public schools in some 30 or 40 cities in the country.[1] It grew out of a recognition of the fact that, as is the case in Wilmington, the growth of city conditions makes the educational problem far more difficult than formerly; in fact, has created a new school problem. The plan represents an attempt to make it practicable, both administratively and financially, for school administrators to provide not only classroom accommodations, but also such modern educational facilities as gymnasiums, auditoriums, shops, and laboratories where children may be kept wholesomely occupied in study and work and play.

THE WORK-STUDY-PLAY OR BALANCED-LOAD PLAN.

Under the work-study-play plan the load is balanced so that half the children are in classrooms while the other half are at work and play. For example, a school is divided into two parts, each having the same number of classes, and each containing all the eight or nine grades. The first part, which we will call the "A School," comes to school in the morning, say, at 8.30, and goes to classrooms for aca-

[1] For example, Detroit, Mich., has 16 schools on the work-study-play plan, and plans to have 30 next year; Pittsburgh, Pa., has 6 schools on the plan; Passaic, N. J., has 2; Newark, N. J., has 9; Troy, N. Y., has 1; Newcastle, Pa., has 4; Winetka, Ill., Kalamazoo, Mich., Sewickley, Pa., and Swarthmore, Pa., are running all their schools on the plan. For information regarding attitude of school superintendents in these cities toward the plan, see Exhibit XXI.

demic work. While this school is in the classrooms it obviously can not use any of the special facilities; therefore the other school—B School—goes to the special activities, one-third to the auditorium, one-third to the playground, and one-third is divided among such activities as the shops, laboratories, drawing and music studios. At the end of one or two periods; that is, when the first group of children has remained, according to the judgment of the school authorities, in school seats as long as is good for them at one time, the A School goes to the playground, auditorium, and other special facilities, while the B School goes to the classrooms.

The following is one type of program that may be used. In this program each school (A and B) is divided into three divisions: Division 1, upper grades; division 2, intermediate grades; division 3, primary grades.

THE "A SCHOOL."

School hours.	Regular activities.	Special activities.		
	Academic instruction.	Auditorium.	Play and physical training.	Cooking, shop, science, etc.
8.30– 9.20	Arithmetic—Divisions 1, 2, 3.			
9.20–10.10	Language—Divisions 1, 2, 3.			
10.10–11.00		Division 1	Division 3	Division 2.
11.00–12.00		Entire "A School" at luncheon.		
12.00– 1.00	Reading—Divisions 1, 2, 3.			
1.00– 1.50	History and geography—Divisions 1, 2, 3.			
1.50– 2.40		Division 3	Division 2	Division 1.
2.40– 3.30		Division 2	Division 3	Division 1.

THE "B SCHOOL."

8.30– 9.20		Division 2	Division 3	Division 1.
9.20–10.10		Division 3	Division 2	Division 1.
10.10–11.00	Arithmetic—Divisions 1, 2, 3.			
11.00–12.00	Language—Divisions 1, 2, 3.			
12.00– 1.00		Entire "B School" at luncheon.		
1.00– 1.50		Division 1	Division 3	Division 2.
1.50– 2.40	Reading—Divisions 1, 2, 3.			
2.40– 3.30	History and geography—Divisions 1, 2, 3.			

In other words, the work-study-play plan applies to the public school the principle on which all other public service institutions attempt to run—i. e., the principle of multiple use of facilities. The whole tendency in modern public utilities is to eliminate the peak load by using all facilities all the time; and the utility becomes more efficient and accommodates a larger number of people at less cost to the extent to which it balances its load. For example, it is evident that our transportation system is made possible because all people do not have to ride at exactly the same time. Public parks can be maintained by the city because they are not reserved for the exclusive use of any individual or group; the larger the city, and therefore, the larger the number of people supporting them, the more extensive

and beautiful the parks can be made. Hotels can accommodate thousands of people because they are not run on the principle of reserving each room for the exclusive use of a single individual during the entire year.

On the contrary, our public school system up to the present time has been run on the principle of reserving a school seat for the exclusive use of one child during the entire year. All children have to be in school seats from 9 a. m. to 12 and from 1 to 3, and at 3 o'clock all of them are dismissed and turned out to play. The result is that there are never enough seats for all the children to study in, nor enough playgrounds for them to play in. And yet large sums of money are invested in these facilities, which the children can have the use of for only a fraction of the day. For example, thousands of dollars are invested in school auditoriums, and yet the average school auditorium is used regularly only 15 minutes a day. Thousands of dollars are invested in playgrounds, and yet these playgrounds are empty of children all day until 3 o'clock in the afternoon. In fact, if a child is found on the playground before 3 o'clock he is driven off because he is playing truant. Obviously, the playgrounds exist for the use of children, and yet children have the opportunity to use them only a few hours a day, because they must be in school seats from 9 to 12 and 1 to 3. Thousands of dollars are invested in school shops and science laboratories, and yet practically no child in the elementary schools has the opportunity to enter them until the seventh grade, and then for only a few minutes a week. Half the children in the country leave school before they reach the seventh grade.

There would, after all, seem to be no good reason why the principle of other public service institutions, i. e., multiple use of facilities all the time, should not apply to the school, nor any reason why all children should be in classrooms at the same time, nor why the special facilities should be used only a fraction of the day, provided, of course, that the children receive during the day the required amount of academic work. In fact, it is difficult to see how the problem of providing enough classrooms or playgrounds or auditoriums for the mass of children is ever to be met if all children have to be in classrooms at the same time and if all children have to play at once. Moreover, there seems to be no good reason from an educational standpoint why children should all have to do the same thing at the same time.

PRINCIPLE OF MULTIPLE USE MAKES MODERN EDUCATIONAL FACILITIES FINANCIALLY PRACTICABLE.

Fortunately, if the principle of multiple use is applied to public-school facilities it is financially possible to provide not only adequate

classroom accommodations, but also auditoriums, gymnasiums, laboratories, and shops for the mass of children. In fact, accommodations may be provided in all facilities, if they are in use constantly by alternating groups, at less cost than regular classrooms may be provided on the basis of a reserved seat for every child. For example, in a 50-class school, under the traditional plan, 50 classrooms are needed in addition to all other special facilities. Under the work-study-play plan only 25 classrooms are needed. Therefore, under this plan the cost of 25 additional classrooms is eliminated. The average cost of a classroom at the present time is $16,000. Since only half of the usual number of classrooms is required under the work-study-play plan, i. e., 25 classrooms in a 50-class school, the cost of the remainder is released for all the other special facilities.

EDUCATIONAL ADVANTAGES OF THE PLAN—AN ENRICHED CURRICULUM.

The important point about the balanced-load plan, however, is not its economy, but the fact that it makes possible an enriched education for children. Under this plan the children have not only the same amount of time for reading, writing, arithmetic, geography, and history as formerly, 210 minutes, but also 50 minutes of play every day, 50 minutes a day of auditorium, and 50 minutes a day of shop work every day in the week for a third of the year; science every day for a third of a year; and drawing and music every day for a third of the year. At present, children get in most schools a 10-minute recess period for play, a few minutes for opening exercises in the auditorium, and little or no time for special activities.

FLEXIBILITY OF THE PROGRAM MEETS INDIVIDUAL NEEDS OF CHILDREN.

A program based upon the multiple use of facilities also makes it possible to have a flexible program. After all, schools were created for children and not children for the schools, and it should be possible to adapt the program to meet the needs of individual children instead of making children conform to the program, as is too often the case. A study of the different types of work-study-play schools in different parts of the country shows that it is possible to adapt the program to the needs of different types of children and different types or communities.

For example, a child who is backward in a special subject, such as arithmetic, and is being held back in a grade because he can not master that subject, and is growing discouraged because he has to repeat the whole year's work, can double up in arithmetic for a number of weeks by omitting the auditorium period until he has made up the work and is ready to go on with his grade in that subject. In the meantime he has not been held back in other subjects, but has progressed as rapidly in them as he is able to. Or if a

child has a particular talent in some subject, he can under this program double his time in that subject by omitting his auditorium period a number of times a week and yet not lose any time from his regular work.

Again, it is possible to adjust the time of beginning or leaving school to meet the desires of parents. For example, it is possible to arrange to have the school begin at 8.30, 8.45, or 9 a. m., or any other hour desired. Or if the school begins at 8.30 and certain parents object to having their children leave for school so early, it is possible to put these children in the "B School," which begins the day with special activities; in this case the children can omit the play period or auditorium from 8.30 to 9.20 and arrive at school at 9.20. Or, again, many parents prefer to have their children take special music lessons after school. It often happens that home work or staying after school interferes with these lessons. Under the work-study-play plan it is possible to put such children in the "A School" and let them omit the play period or the auditorium in the afternoon from 2.40 to 3.30 p. m. There is, of course, no reason why children should not be given credit for these out-of-school activities if so desired. As for the special facilities in school, each community and each section of the city can have the special facilities which the school authorities and parents desire.

THE SCHOOL TAKES OVER THE STREET TIME OF THE CHILD.

As has been pointed out, one of the most undesirable elements in the life of city children is the street life in which they have hitherto spent so large a part of their time. The average city school is in session about 180 days in the year. This means that even though all the children attend the entire time, they would still be out of school 185 days in the year. Obviously, because of the conditions of modern city life, it is necessary that the school take over some of the time now spent by the child on the city streets, especially during the school year. At present if 10 hours of the 24 are allowed for sleep, and 6 for meals and home duties, there still remain 8 hours to be accounted for. Even if the children were in school 5 hours every day there would still be 3 hours left, and as is well known these hours are spent on the city streets, and not always to the child's advantage. At least one or two of these should be taken over by the school, and wholesome activity in work and play provided.

The work-study-play plan does this by lengthening the school day an hour or two, as each community may desire, and by offering to the children the wholesome activity in shops and laboratories and on the playgrounds, which is so essential for them. It should be borne in mind, however, that this lengthening of the school day does not necessarily lengthen the number of teaching hours of any teacher.

It is necessary that she be at the school 6 hours, but she need not teach more than 5 hours.

MAKES POSSIBLE WIDER DEVELOPMENT OF JUNIOR HIGH SCHOOLS.

There is at present in many communities a desire for the development of junior high schools, or what is commonly known as the 6–3–3 plan, i. e., 6 grades of elementary school, 3 grades of junior high school, seventh, eighth, and ninth, and 3 grades of high school. The custom often is to house the junior high schools in separate buildings, but as that means that there also have to be separate buildings for the grade pupils, the cost often becomes so great that a city is not able to afford as many junior high schools as it wishes to maintain. Under the work-study-play plan, however, it is possible, as is shown later in this report, to house all 9 grades in a building so arranged that a definite part of the building is set aside for the junior high school. Under such an arrangement the junior high school may be maintained as a unit, and yet the whole school has the opportunity to use the shops and laboratories and gymnasiums and auditoriums. In that way the cost of maintaining three separate buildings (one junior high school and two grade buildings) is eliminated.

On the other hand, if the authorities feel that it is important to have the junior high school pupils under a separate roof, a separate junior high school and separate grade buildings can be operated at far less expense under the work-study-play plan than under the traditional plan. As is shown in the table of costs, Plan II, the 6–3–3 plan on the work-study-play type of organization, costs $1,000,000 less than the 6–3–3 plan on the basis of the traditional type of school organization.

WHAT IS PROPOSED UNDER THE BUILDING PROGRAM.

The school-building program for Wilmington, which is fully described in section 2 of this report, is designed to do three things—relieve existing congestion, provide for growth for a period of 10 years, and consolidate a great number of inefficient and inadequate plants into a small number of modern up-to-date school buildings with adequate playgrounds, thus providing for the maximum educational opportunities for children as well as for community uses of the plant.

COST OF BUILDING PROGRAM.

Three different plans for a building program are submitted. In each case the cost under the traditional type of school organization and under the work-study-play plan are presented. In all cases the program and estimate of cost have been worked out on the basis of

actual tentative building plans. Photographs of the types of the buildings are also submitted.

Plan I is worked out on the basis of erecting five complete schools with grades from the first through the ninth. This plan is by far the most economical.

Plan II is worked out on the basis of the 6–3–3 plan and provides for four separate junior high schools and eight sixth-grade buildings. This has been done because of the possibility that the school authorities may wish to house the junior high schools in separate buildings.

Plan III is also worked out on the basis of the 6–3– plan, but provides for retaining four old buildings. This has been done in order to show conclusively what it would cost to maintain the old buildings. This plan is the least satisfactory and most expensive of the three.

Section 2 of this chapter gives the specific recommendations in regard to the building program, together with descriptions of the buildings. Section 3 contains detailed tables of cost under the three plans. Section 4 contains a detailed description of the condition of the old buildings. The tables referred to in the text will be found in the appendix.

2. THREE BUILDING PLANS PROPOSED.

The Wilmington public school system has an enrollment of approximately 12,000 children in its elementary grades. There are two situations to be met in regard to the building program for these children, (1) adequate housing, (2) provision for the educational requirements of present day demands. There are three proposed plans that will effect a solution to these two problems. A discussion of these plans with reference to the two situations just mentioned, follows:

WHITE ELEMENTARY SCHOOLS.

PLAN NO. 1.—FIVE COMPLETE SCHOOLS.

Scrapping all the existing buildings, and substituting five complete school plants with a housing capacity of 2,000 pupils each, together with one smaller unit with a capacity of 1,200 pupils, and a small building for No. 14 school, across the Christiana, solves the housing problem, and in addition meets the requirements of an enriched curriculum demanded by present-day education.[1]

According to plan 1, the total housing will approximate 12,000 pupils. Although the general plan recommended for each of the large schools is practically the same, its elasticity makes possible any

[1] In each of the three plans submitted No. 14 school has been treated as a separate unit, since it is across the Christiana and can not be combined with any other school.

desired variation in each plant in order that specific needs and desires in the various communities surrounding the schools may be served. In other words, no two units need be exactly alike. There will be abundant opportunity to make of each school an individual problem.

Of course, changing a school building situation of many small units to one of larger and fewer units, will call for a re-zoning of the city for school purposes and care must be exercised in the selection of sites in order that distances may be equalized as far as possible. Density of population and the direction of the city's growth are two factors which must always be considered in the location of new school plants.

Seven sites, a minimum of 300 by 300 feet each, together with a playground for No. 23,[1] will be required, although larger sites are desirable. Ten or twelve acre school sites are not unusual at the present time, except in our largest cities, and if adequate playground, garden, and lawn are to be secured, the large site is really necessary. If the school is located in close proximity to a city playground or recreational center, however, a site restricted to the requirements of lawn and garden spaces will suffice. The cost of the sites is a matter so variable that even an estimate can not be made in this report at the present time.

THE MOST EFFICIENT TYPE OF ORGANIZATION FOR THE COMPLETE SCHOOLS—THE WORK-STUDY-PLAY PROGRAM.

To summarize the factors necessary to an ideal building program for any community is not a problem. The real problem consists in making the right kind of school building financially possible. If we must build sufficient classrooms for all the children to be in classrooms at the same time, and then supply the special facilities enumerated herein, in addition to these, the cost will become prohibitive. But this is not necessary. The special quarters can and

[1] In the section of the city north of the Brandywine there is a tendency toward growth in population in the vicinity of No. 23 school, but that growth is not sufficiently great at present to justify the erection of a new building. On the chance, however, that this section may grow considerably, and that consequently it is not desirable at present to transfer these children to the new complete school in this part of the city, it is recommended that No. 23 school be kept for the present and portables erected to take care of 600 pupils. Portables as a permanent part of the public-school system are not recommended, but there are always parts of the city where the school population is growing, but not to an extent that justifies investing in an entire new school plant. Under such circumstances, portables should be used until it is clear whether there is going to be a sufficiently large enrollment in the new section to justify the erection of a new building. If the school population in the vicinity of No. 23 school does not increase in the next 2 years, then the children should be transferred to the new complete school north of the Brandywine and No. 23 given up. It is possible to secure movable buildings of a modern type—an auditorium, a gymnasium, shop, and nature study room as well as classrooms. For an estimate of the number and kind of portables for No. 23, together with cost, see detailed statement of budget for plan 1.

should count in housing just as much as classrooms, and in planning buildings this is an important matter to consider.

It must be understood of course that special quarters can not be used by the same children all day, nor should classrooms be used by the same group of children all day. A different type of organization and a different plan of operation from the traditional will be required if the building is to give maximum use and if the educational possibilities are to be realized. An organization making use of all space all the time and an operating program which will give to all children a balanced school day of work, study, and wholesome recreation will be necessary to the ultimate success of these complete units. Furthermore, such type of organization and operating plan should guide the development of the building plan. Unless all these factors are developed harmoniously, the maximum housing capacity and the balanced daily program of school activities can not be realized.

COST UNDER WORK-STUDY-PLAY PLAN.

Under the work-study-play type of organization in plan 1 for the Wilmington schools, therefore, it is not proposed to have a classroom for every class, but a group of classrooms that will accommodate at least one-half of the pupils at one time; the special quarters divided into gymnasiums, auditoriums, laboratories, and workshops will care for the other half. Owing to the fact that all school facilities count in housing under such a plan, the complete school described in this program offers maximum economies. According to the table of costs each of the larger schools will approximate $600,000 in costs, the smaller school $450,000. The total cost of the five schools and the one small plant, together with the building for No. 14, and additions for No. 23, will be $3,716,000. The equipment would come to $582,000, making a total cost of $4,298,000, exclusive of sites.[5]

DESCRIPTIONS OF BUILDINGS.

The classrooms.—The interior arrangement of the building calls first of all for classrooms sufficient in number to house 50 per cent of the pupils at any one time. This would approximate 1,000 pupils for each of the larger units, 600 for the smaller building and 200

[5] The estimates for the proposed buildings under this program are based upon tentative plans of buildings prepared for the purpose, and are therefore comparable. Where it was possible under prewar conditions to erect modern fireproof school buildings at from 15 to 20 cents per cubic foot, school-building costs have steadily increased to the point where 40, 50, and even 60 cents per cubic foot are not uncommon costs for school buildings in the eastern sections of the country. As this report is drawing to a close, however, there are unmistakable indications that the cost peak has been reached and that costs are declining. How far this decline will go it is impossible to predict and for this reason it has been deemed advisable not to estimate the buildings below 40 cents per cubic foot. The estimates herein given, therefore, have been made upon that basis.

for No. 14 school. With an average enrollment of 40 pupils to a class, 25 classrooms will be required for the schools accommodating 2,000 pupils and 15 for the smaller school accommodating 1,200.

Usually the subjects of reading, writing, arithmetic, English, and spelling are taught in these classrooms and normally at least half of the children's school day is devoted to these subjects. If the school day is six hours in length, about three hours daily will be spent in classrooms. Of course, the length of the day can vary as much as is desirable. The above merely states what the usual arrangement and balance is, where the plan is used successfully.

Geography, history, and civics are sometimes classified as regular classroom subjects, but generally in the complete schools these are considered special or laboratory subjects. Although only half the children's time is spent in the classrooms, the other subjects supplement in various ways the drill subjects in the classrooms; so in reality children may spend more than half the time in the fundamental subjects. Comparing this time with the time in the traditional school, we find that no time is taken from the fundamental subjects by changing the type of organization and plan of operation from a traditional one to one which gives adequate recognition to all vital considerations in education, viz, health, the fundamental operations, manual skill, wholesome recreation, and ethical character.

On the other hand, if school authorities wish to classify as classroom subjects geography and history as well as reading, writing, and arithmetic, it is possible to so classify them in the complete work-study-play school, and give the same amount of time to them—210 minutes—as in the traditional school.

Gymnasiums.—Two gymnasiums are provided for the plan, one for girls and one for boys. These include dressing and shower rooms as well as offices for the instructors, physician, and nurse, and space for clinics. Located at the rear of the building, they open directly to the playground. A roof playground could be added, to be used for play classes during the inclement weather as well as for open-air classes. A total of from 6 to 8 classes could be handled during each period by the gymnasium and playgrounds without congestion.

Shops.—The workshops for boys include woodwork, staining and finishing, mechanical drawing, and may include printing, metal work, or other shop activities. The activities for girls include home economics and the arts and crafts, although, of course, girls as well as boys may elect to do the work in mechanical drawing, printing, metal work, and other shop activities. Four classes (160 pupils) can be accommodated in these prevocational quarters. This approximates about 80 students in the shops and 80 in the home economics quarters.

Auditorium.—An auditorium with a seating capacity of 800 would naturally provide for that number, but it is scarcely possible to get that number of children in one school into a homogeneous group. Seven or eight classes for each period would be a normal group for a 50-class school. Then if the auditorium day is six periods, all the classes will enjoy the advantages of the auditorium activities in the course of the day. Undoubtedly, the auditorium activities have passed the experimental stage. It is obvious that chorus singing, visual instruction, appreciation lessons in music, art, and achievement can not be developed as well in classrooms as in the auditorium, because auditorium equipment is best suited to that type of instruction. Furthermore, the auditorium is the best place for definite instruction on such topics as thrift, citizenship, community, and current topics of all kinds.

Auditoriums will serve community uses, of course, and it is for this purpose as well as those enumerated above that they are usually included in a complete school. Many school people make the mistake of planning auditoriums that are overlarge. Medium-sized auditoriums are better for daily use, and it is only on rare occasions that an auditorium large enough to accommodate the whole school is needed. The smaller assembly room is more practical for daily school uses, but where several schools are being planned at the same time, it is advisable to plan the largest auditorium in the one school that is the most central.

Laboratories.—Four laboratories are included, two for the younger children and two for the older. Two of these have greenhouses and can be specialized for nature study and horticulture. Nature study is science taught by observation and by contact with natural and living phenomena. Every normal child is a natural scientist, curious to know all about the natural phenomena about him. Only a small per cent of our children have opportunities for plant culture and animal nurture at their homes. The school must provide these life experiences in most cases. Gardening is usually considered a part of this elementary science, and it is a good plan for the greenhouses to open out on the gardens. These rooms may also be used for handwork rooms for the younger pupils, since much of their handwork will or should be a direct outgrowth of the nature study.

General science is a term applied to more advanced and specific instruction than that just mentioned above, for example, botany, zoology, chemistry, and physics in elementary schools. The aim in all this science instruction is really to develop a usable fund of knowledge about common things.

It has been advisable to thus describe at some length the plan, scope, and advantages of the complete school for the reason that it is the most direct and economical means of providing adequate housing

and maximum educational advantages for the children of Wilmington. In this case there is an adequate site permitting the proper setting of the building, generous garden, and recreational spaces, all correlating in a proper manner with like functions within the building. A study of the plan will make apparent the balance between class and special room, and the rich educational advantages which would be impossible in buildings of the older or traditional type.

The small units.—The small school building unit proposed under this plan will vary from the larger buildings only in the number of class and special rooms provided, as it is proposed to house only 1,200 instead of 2,000 pupils therein: these units, however, should be planned so that they may be expanded to accommodate a greater number of pupils should the growth of the city demand it.

The traditional plan in a complete school and costs.—If, however, the matter of maximum use of facilities need not be a consideration, and if it is desired to retain the traditional plan of school organization, five large units and one smaller unit, together with a new building for No. 14 school, will still be sufficient for housing and educational requirements in a complete school of nine grades. But the building will need to be enlarged by the addition of a second set of classrooms, or by the addition of another story, since in the large units 25 additional classrooms will have to be provided under the traditional plan, and in the smaller unit 15 additional classrooms. This would make it possible for practically all pupils to be in classrooms at one and the same time. The number and arrangement of special quarters remain the same as in the complete school. This plan, however, will add materially to the cost. Instead of $600,000, each one of the larger schools will cost $750,000, a total of $3,750,000; the smaller one $530,000, instead of $450,000. The total cost of the seven buildings will aggregate $4,589,000, as against $3,716,000. The equipment, however, under the traditional plan will come to $624,500, instead of $582,000 under the work-study-play plan, making a total of $5,213,500, as against a total of $4,298,000 under the work-study-play plan. It is evident, then, that there is a saving of $915,500 under the work-study-play plan. The same number of sites are required, and there is really nothing gained in facilities except that all children may get their academic work at the same time.

PLAN NO. 2.

Plan No. 2 calls for four separate junior high schools; eight six-grade buildings; and one new building for school No. 14.

The buildings necessary to house the junior high schools will not vary greatly in their facilities from the complete schools or larger

units just described in plan 1. They will provide accommodation for 700 pupils, who will be housed in 12 classrooms planned for classes of 30 pupils each, and 12 special rooms planned for the same number. In addition to the above, the buildings will provide the same auditorium, health and recreation facilities as are proposed for the complete schools. The type of building recommended for the junior high schools is illustrated in the accompanying plans, and is typical of the buildings being erected in many other communities as the best means of meeting housing conditions and providing better school facilities. The grade buildings will each accommodate 1,200 children, or 30 classes, demanding, therefore, under the work-study-play plan, 15 classrooms, or under the traditional plan 30 classrooms, as well as an auditorium, gymnasiums, and 10 special rooms.

COST UNDER THE 6-3-3 PLAN.

Under this plan the total number of buildings required would be 13 instead of 7, and there would have to be 13 sites instead of 7. The cost under the work-study-play plan in the 6-3-3 organization would be, including equipment, $6,574,000, and under the traditional plan, including equipment, $7,458,500, exclusive of the 13 sites, as against a total under plan 1 of $4,298,000 (work-study-play) and $5,213,500 (traditional).

PLAN NO. 3.

Plan 3 follows the organization proposed in plan 2, namely, the 6-3-3 plan, except that it is proposed to make use of certain old school buildings. Inasmuch, however, as these buildings are inadequate to house all the pupils in them, additions will have to be erected. Old buildings of the traditional type are rarely adapted for alteration and additions fitting them to modern educational needs without excessive cost, and although under this plan it is proposed to make use of four of them the total estimated cost remains practically the same as in plan 2, which scraps all existing buildings. That is, the cost under plan 3, including equipment, is $6,422,000 (work-study-play plan) and $7,409,000 (traditional plan). But plan 3 demands 15 additional sites instead of 13 under plan 2. Consequently, plan 3, which retains 4 old buildings, is actually the most expensive of any of the plans proposed.

It is, of course, impossible to give any estimate of the cost of sites, but assuming, for the sake of comparison, that the average cost of sites was $25,000, the cost for the seven sites under plan 1 would be $175,000; under plan 2 with 13 sites, $325,000, and under plan 3 with 15 sites, $375,000.

NEGRO SCHOOLS.

There are five Negro schools in the city, Nos. 18, 21, 22, 29, and 16. The latter is a combination elementary and high school. The total enrollment in the Negro schools is 1,525, and there has been an increase in 10 years of 27.5 per cent.

No. 22 is a small special school doing very excellent work in a poor section of the city. It is as much a social settlement as a school, and does not need a new building, as it is already housed in an excellent one. It needs only equipment for a shop and a cooking room and space for playground.

No. 18 is in the section across the Christiana and consequently has to be treated as a separate unit. A new building should be provided for this school.

Nos. 16, 21 and 29 should be housed in one building to be situated about midway between 21 and 16. All three schools taken together would make an enrollment of 1,368. No. 16 is now in an old building, which is nothing short of a fire trap. No. 29 is a fairly good building, but it is surrounded on three sides by leather factories, and the odor from these factories is such that children should not be permitted to go to school in that neighborhood. No. 21 is a fairly good building and it is not crowded at all. It would, however, be more economical to give up this building and house all three schools in one building. As the bulk of the Negro population is in the center of the town, the building should be erected in that vicinity.

If there is an objection to giving up No. 21, then it could be left as it is, which would reduce the enrollment in the new building for No. 16 and No. 29 to 1,133 pupils. It should be remembered, however, that the city will then have to sustain the overhead cost of two buildings instead of one. The cost of instruction, operation, and maintenance for No. 21 during the past year was $8,260.25, or a per capita cost, on a basis of enrollment, of $63.14. In fact, the per capita cost of operating these old buildings for the Negro schools is appallingly extravagant, and yet necessarily so if these old, small buildings are to be retained. In 1919-20 for No. 16 it was $61.45; for No. 18, $69.78; for No. 21, $63.14; No. 22, $109.64; No. 29, $47.97. The cost of instruction, building operation, maintenance, and overhead for the three buildings which it is now proposed to combine—Nos. 16, 21, and 29—was during the past year $38,534.39. This money would far better be spent in maintaining a new building of a modern type than in keeping up old buildings that are not worth a dollar of investment.

Recommendations for Negro schools.—It is proposed for the Negro schools that one complete school with grades from the first to the twelfth be erected for Nos. 16, 21, and 29, and one new building for No. 18.

The complete school under the work-study-play plan would have 20 classrooms, 10 special rooms, 1 auditorium, and 2 gymnasiums, and would cost with equipment $545,000. The new building for No. 18 would have 2 classrooms, 4 special rooms, 1 auditorium, and 1 gymnasium, and would cost with equipment $110,000. The equipment for No. 22, for the shop and cooking room, would cost $5,000. The total cost, then, for the Negro schools would be $660,000.

Under the traditional plan the complete school would have to have 36 classrooms, 10 special rooms, 1 auditorium, and 2 gymnasiums, and would cost $631,500. The new building for No. 18 would have 4 classrooms, 4 special rooms, 1 auditorium, and 1 gymnasium, and would cost $130,800. The equipment for the two shops in No. 22 would be $5,000. This makes a total of $767,300, or about $100,000 more than under the work-study-play plan.

Under either plan, the children enrolled in school would have, in place of old buildings which are unfit for use, two new modern buildings with shops, laboratories, auditoriums, and gymnasiums as well as classrooms.

Total cost for both white and Negro schools, exclusive of sites, under the three plans.

Plans.	White schools.	Negro schools.	Total.	Sites required.
Plan I:				
Under work-study-play plan	$4,298,000	$660,000	$4,958,000	7
Traditional plan	5,215,500	767,300	5,982,800	7
Plan II:				
Under work-study-play plan	6,574,000	660,000	7,234,000	13
Traditional plan	7,458,500	767,300	8,225,800	13
Plan III:				
Under work-study-play plan	6,422,000	660,000	7,082,000	16
Traditional plan	7,409,000	767,300	8,176,300	16

SUMMARY.

To sum up, plan 1, which provides for five complete schools under the work-study-play plan, is the most economical. It would cost $4,958,000, and require seven sites. Under the traditional type of school organization, plan 1 would cost $1,000,000 more, or $5,982,800.

Plan 2, which provides for four separate junior high-schools and eight sixth-grade buildings, together with one new school at No. 14, would cost under the work-study-play plan $7,234,000, or $2,276,000 more than plan 1. Under the traditional type of organization it would cost $8,225,800, or nearly twice as much as the first estimate. Moreover, 13 sites instead of 7 would be required under plan 2, and 13 buildings instead of 7.

Plan 3, although it retains four old buildings, is practically as expensive as plan 2, and far more expensive than plan 1. This plan requires 16 sites.

If Wilmington should choose to retain four old buildings and run a school on the traditional type of school organization, it will cost the city practically twice as much ($8,176,300) as it would to erect five complete schools with two small units under the work-study-play plan.

The work-study-play plan, though not the traditional school plan, has had sufficient trial to show that it is sound, not only from an economical but an educational standpoint. Therefore it is recommended that whether plans 1 or 2 be adopted, the schools should be organized on the work-study-play plan, not merely because it is the most economical type, but because it makes possible a greatly enriched education for the children of Wilmington.

3. DETAILED STATEMENT OF BUILDING PROGRAM SHOWING CAPACITY AND COST UNDER THREE ALTERNATE PLANS.

WHITE SCHOOLS.

PLAN I.—*On the basis of five complete schools, discarding all old buildings.*

a. WORK-STUDY-PLAY PLAN—CAPACITY AND COSTS.[1]

Buildings.	Number of pupils accommodated.	Cost of equipment.	Cost of buildings.	Total cost.
Five new buildings at $600,000..... 2,000 pupils per building. 50 classes. 25 classrooms. 14 special rooms. 1 auditorium. 2 gymnasiums.	10,000	$500,000	$3,000,000	$3,500,000
One new building at $450,000..... 1,200 pupils per building. 30 classes. 15 classrooms. 10 special rooms. 1 auditorium. 2 gymnasiums.	1,200	60,000	450,000	510,000
One new building for No. 14, at $250,000..... 400 pupils per building. 10 classes. 5 classrooms. 3 special rooms. 1 auditorium. 2 gymnasiums.	400	20,000	250,000	270,000
Portables for No. 23..... 600 pupils per building. 16 classes. 1 auditorium..... $3,500 1 gymnasium..... 3,500 1 cooking room..... 3,000 1 nature-study room..... 1,000 1 drawing room..... 1,000 Equipment for shop..... 2,000 Repairs..... 2,000 16,000	600	2,000	16,000	18,000
Total.....	12,200	582,000	3,716,000	4,298,000

b. TRADITIONAL PLAN—CAPACITY AND COSTS.[1]

Five new buildings, at $750,000..... 2,000 pupils per building 50 classes. 50 classrooms. 14 special rooms. 1 auditorium. 2 gymnasiums.	10,000	$538,000	$3,750,000	$4,288,000

[1] Sites required, 7 for new buildings, 300 by 300 feet; 1 playground for No. 23.

PLAN I.—*On the basis of five complete schools, etc.*—Continued.

b. FRACTIONAL PLAN—CAPACITY AND COSTS—Continued.

Buildings.		Number of pupils accommodated.	Cost of equipment.	Cost of buildings.	Total Cost.
One new building, at $530,000		1,200	$65,000	$530,000	$595,000
1,200 pupils.					
30 classes.					
30 classrooms.					
10 special rooms.					
4 auditorium.					
2 gymnasiums.					
One new building for No. 14, at $285,000		400	21,500	285,000	306,000
400 pupils.					
10 classes.					
10 classrooms.					
3 special rooms.					
1 auditorium.					
2 gymnasium.					
Portables for No. 23		600	2,000	24,000	26,000
600 pupils.					
16 classes.					
8 classrooms	$8,000				
1 auditorium	3,500				
1 gymnasium	3,500				
1 cooking room	3,000				
1 nature-study room	1,000				
1 drawing room	1,000				
Equipment for shop	2,000				
Repairs	2,000				
	24,000				
Total		12,200	626,500	4,589,000	5,215,000

Basis for estimate of enrollment.—The number of pupils enrolled in the Wilmington white schools as of June 30, 1920, exclusive of the high school, was as follows: Enrollment in white schools, June 30, 1920, grades 1 to 8, 10,353; grade 9, 621; total, 10,974.

But any adequate building program must provide for growth for at least 10 years. It is estimated, however, that with the return to normal conditions an allowance of an increase of 10 per cent will cover the growth in school population for the next 10 years. A 10 per cent increase in the nine grades would be 1,097. Therefore the total enrollment to be provided for would be 12,071.

Net enrollment in elementary schools, white and colored, as of June 30, 1920.

Schools.	Grades.								Total.
	First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	
White elementary:									
1						177	260	125	562
2	91	85	80	98	92	46			492
3	98	92	79	93	79				441
4						267	206	111	584
5	59	41	37	41	37				215
6	80	58	49	46	44				277
7 and 8	139	91	95	98	98	76			597
9	98	80	121	89	121	88			597
10	91	39	61	48	44				273
11	124	99	97	86	83	34			523
12	81	68	75	93	48				365
13 and 27	86	89	71	75	88	77			486
14	68	65	73	47	80	36			339
15	77	69	83	76	93				398
17 and 26	109	84	77	72	84	32			438

Net enrollment in elementary schools, etc.—Continued.

Schools.	Grades.								Total.
	First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	
White elementary:									
19	72	51	41	85	88	36			373
20	80	59	62	64	86				351
23	57	68	19	75	60	66			345
24						150	314	293	757
25	161	130	123	107	118	22			661
28						195	347	222	764
30	91	85	85	91	81	82			515
Total	1,652	1,353	1,328	1,384	1,374	1,384	1,127	751	10,353
Ninth grade (high school)									621
									10,974
Colored elementary:									
16	55	35	41	15	20	103	103	52	424
18	49	33	28	22					132
21	41	24	34	31	35	27			192
22	41	35	20	5	16				117
29	108	127	100	94	99				528
Total	294	254	293	167	170	130	103	52	1,393
Grand total	1,946	1,607	1,551	1,551	1,544	1,514	1,230	803	12,367

Zoning of school population.—As is pointed out in the summary of plan 1, five complete schools of 2,000 each are to be erected. These schools are to have nine grades. They will take care of 10,000 children. The objection might be made that the children are not distributed in the city in groups of 2,000 each in five different parts of the city, but as a matter of fact that is exactly the way they are distributed, if the actual location of the children's homes is considered, and not the enrollment in the schools. At the present time, Wilmington has no district lines, but the school population naturally divides itself into five zones. The boundaries are flexible, of course, but in general these zones might be called the North End, including that part of the city north of the Brandywine; the East of Market Street Section, including the section of the city south of Brandywine and east of Market Street; the West of Market Street Section, including that section of the city west of Market Street, south of Fourth Street, and east of Dupont Street; the Central Section, west of Market Street, north of Fourth, south of the Brandywine, and east of Dupont Street; and the Western Section, consisting of the section of the city west of Dupont Street. A study of the actual location of the residences of the children will show that there are about 2,000 children each in these sections, with the exception of the North End and the Western Section; consequently, smaller units are suggested for these sections in addition to a complete school for each.

The new building for 1,200 should be located in the Western Section, a little north of No. 11 school. The upper-grade children should go to the complete school in that section. In the North End there is a tendency toward growth in population in the vicinity of

No. 23 school, but that growth is not sufficiently great at present to justify the erection of a new building; therefore until it becomes clear to what extent this section will grow it is recommended that portables be put up to take care of 600 pupils. Inasmuch as there are already eight classrooms in the building, it would be necessary under the work-study-play plan to put up only one auditorium, one gymnasium, and three special rooms. There is a room in the basement that could be fitted up as a shop. Under the traditional plan of school organization, however, it would be necessary to provide eight more classrooms, since the total number of classes is 16. As was pointed out earlier in the report, No. 14 school has to be treated as a separate unit, since it is across the Christiana River. Such a building would cost, for only 10 classes, $250,000, whereas the complete school for 50 classes (2,000 pupils) would only cost $500,000. This is an excellent example of the extravagance of the small school building.

Equipment.—Full equipment for the complete school buildings can be installed at a cost of $50 per pupil, and upon this basis the equipment for the large units can be estimated at $100,000 each, and for the small units (1,200) at $60,000.

PLAN II.—*On the basis of the 6-3-3 plan—Discarding all old buildings.*[1]

a. WORK-STUDY-PLAY PLAN—CAPACITY AND COSTS.

Buildings.	Number of pupils accommodated.	Cost of equipment.	Cost of buildings.	Total cost.
Four junior high schools, at $500,000. 700 pupils per building.	2,800	$224,000	$2,000,000	$2,224,000
Eight 6-grade new buildings, at $450,000. 1,200 pupils per building. 30 classes. 15 classrooms. 10 special rooms. 1 auditorium. 2 gymnasiums.	9,600	480,000	3,600,000	4,080,000
One new building for No. 14, at $250,000. 400 pupils. 10 classes.	400	20,000	250,000	270,000
Total	12,800	724,000	5,850,000	6,574,000

NOTE.—It will be noted that the total enrollment provided for under this estimate is 12,800 which is 800 more than is necessary to provide for growth for 10 years, but as this means only 400 pupils per building the estimated cost is not materially affected. The reason is that under the 6-3-3 plan there has to be a 6-grade school in each section of the city, even though the enrollment in each section is not up to 1,200.

b. TRADITIONAL PLAN—CAPACITY AND COSTS.[1]

Four junior high schools, at $500,000. 700 pupils per building.	2,800	$224,000	$2,000,000	$2,224,000
Eight 6-grade new buildings, at $530,000. 1,200 pupils per building. 30 classes. 30 classrooms. 10 special rooms. 1 auditorium. 2 gymnasiums.	9,600	688,000	4,240,000	4,928,000
One new grade building for No. 14, at $285,000. 400 pupils. 10 classes.	400	21,500	285,000	306,500
Total	12,800	933,500	6,525,000	7,458,500

[1] Sites required, 13 for new buildings, 300 by 300 feet.

Distribution of enrollment under Plan II.—There are 2,499 children in the seventh, eighth, and ninth grades in the Wilmington white elementary schools, and 8,475 children in grades 1 to 6, inclusive. Providing for a 10 per cent increase brings the total to about 12,000. Under Plan II there would be four junior high schools of 700 pupils each, and eight 6-grade buildings of 1,200 pupils each. This gives, with No. 14 school, an enrollment of 12,900, or a provision of about 900 more pupils than it is necessary to provide for. This is done, however, because it would be uneconomical to have a building for less than 1,200 pupils, and it adds only 100 pupils per building.

Equipment.—In the junior high schools, where the special features of the complete school are retained and yet the capacity of the school reduced to 700 pupils, it will be necessary to estimate the full equipment at $80 per pupil. That makes the complete equipment for the junior high school $56,000. The equipment for the grade units would be $60,000 each, under the work-study-play plan. Under the traditional plan the cost of the grade units would be $86,000.

PLAN III.—*On the basis of the 6-3-3 plan—Using four old buildings.*

a. WORK-STUDY-PLAY PLAN—CAPACITY AND COSTS.

Buildings.	No. of pupils accommodated.	Cost of new equipment.	Cost of new buildings and additions.	Total cost.
Four junior high schools, at $500,000..... 700 pupils per building.	2,800	$224,000	$2,000,000	$2,224,000
NEW BUILDINGS.				
Six 6-grade buildings, at $150,000..... 1,200 pupils per building. 30 classes.	7,200	360,000	2,700,000	3,060,000
One new building for No. 14, at $250,000..... 400 pupils. 10 classes.	400	20,000	250,000	270,000
ADDITIONS TO OLD BUILDINGS.				
School [illegible] 30..... 1 playground.	610			
School No. 19..... Addition with— 1 auditorium. 1 gymnasium. 7 special rooms.	620	31,000	250,000	281,000
School No. 13 (and 27)..... Addition with— 1 auditorium. 1 gymnasium. 7 special rooms.	637	31,000	250,000	281,000
School No. 24..... Addition with— 1 gymnasium. 2 special rooms.	633	31,000	75,000	106,000
New heating and ventilating systems for schools No. 30, 19, 13, and 21.....			200,000	200,000
Total.....	12,930	697,000	5,725,000	6,422,000

PLAN III.—*On the basis of the 6–3–3 plan—Using four old buildings*—Continued.

b. TRADITIONAL PLAN—CAPACITY AND COSTS.

Buildings.	No. of pupils accommodated.	Cost of new equipment.	Cost of new buildings and additions.	Total cost.
NEW BUILDINGS.				
Four junior high schools, at $500,000. 700 pupils per building.	2,800	$224,000	$2,000,000	$2,224,000
Six 6-grade buildings, at $530,000 1,200 pupils per building. 30 classes.	7,200	516,000	3,180,000	3,696,000
One new building for No. 14, at $285,000 400 pupils. 10 classes.	400	21,500	285,000	306,500
ADDITIONS TO OLD BUILDINGS.				
School No. 30 Addition with— 4 classrooms. 4 special rooms.	640	12,000	90,000	102,000
School No. 19 Addition with— 1 auditorium. 8 classrooms. 7 special rooms.	620	33,500	305,000	338,500
School No. 13 Addition with— 1 auditorium. 1 gymnasium. 8 classrooms. 7 special rooms.	637	33,500	305,000	338,500
School No. 24 Addition with— 1 gymnasium. 4 classrooms. 6 special rooms.	633	33,500	120,000	153,500
New heating and ventilating systems for schools No. 30, 19, 13, and 24			250,000	250,000
Total	12,930	874,000	6,535,000	7,409,000

Notes on Schools Nos. 30, 19, 13, and 24, showing basis of the estimate of the number of classrooms and special activity rooms needed in these buildings in Building Program III.

No. 30—North End.—Present enrollment, 515; enrollment to be provided for, 600, or 16 classes.

This school has 12 classrooms, 1 room in the basement, 2 playrooms in the basement, 1 auditorium on the top floor.

If reorganized on the work-study-play plan, 8 of the 12 rooms should be used as classrooms, leaving 4 for special activities, and 1 in the basement, or 5 special rooms. If organized on the traditional plan, it would be necessary to have 16 classrooms. Therefore, an addition would have to be erected containing 4 classrooms and 6 special rooms.

No. 19—West of Market Street.—Present enrollment, 373; enrollment to be provided for, 620, or 16 classes.

This school has 8 classrooms, no auditorium, no gymnasium, no room in the basement.

If reorganized on the work-study-play plan, all the 8 rooms would have to be used as classrooms and an addition erected containing 1 auditorium, 1 gymnasium, and 7 special activity rooms.

If organized on the traditional plan, all the 8 rooms would have to be used as classrooms and an addition erected containing 1 auditorium, 1 gymnasium, 8 classrooms, and 7 special activity rooms.

Nos. 13 and 27—Western Section.—Present enrollment, 438; enrollment to be provided for, 637, or 16 classes.

No. 13 school has 8 classrooms, no auditorium, no gymnasium, and no adequate room in the basement.

If reorganized on the work-study-play plan, all the 8 rooms would have to be used as classrooms, and an addition erected containing 1 auditorium, 1 gymnasium, and 7 special activity rooms.

If organized on the traditional plan, all the 8 rooms would have to be used as classrooms and an addition erected containing 1 auditorium, 1 gymnasium, 8 classrooms and 7 special activity rooms.

No. 24—Central Section.—Present enrollment. No. 24 south of the Brandywine, 141; No. 2, 492; total, 633.

Enrollment to be provided for, 633.

This school has 12 classrooms, an auditorium and 1 adequate room in the basement.

If reorganized on the work-study-play plan, 8 of the 12 classrooms should be used as classrooms leaving 4 regular rooms and 1 room in the basement for special activities. An addition would have to be erected containing 1 gymnasium and 2 special rooms.

If organized on the traditional plan, all 12 rooms would have to be used as classrooms. An addition would have to be erected, containing 1 gymnasium, 4 classrooms and 6 special activity rooms.

Number of sites required under Plan III.

[Same for the work-study-play plan or traditional plan.]

	No.	Size.
Sites required for junior high school	4	300 by 300
Sites required for six 6-grade buildings	6	300 by 300
Site required for new No. 14 building	1	300 by 300
No. 30—1 playground and 1 site for addition	1	100 by 300
No. 19—1 site for addition	1	200 by 300
No. 13—1 site for addition	1	200 by 225
No. 24—1 site for addition	1	(1)
Total sites	15	

NEGRO SCHOOLS.

PLAN III.—*On the basis of one complete school and one new building for No. 18.*

a. WORK-STUDY-PLAY PLAN—CAPACITY AND COST.[2]

Buildings.	Number of pupils accommodated.	Cost of equipment.	Cost of new buildings.	Total cost.
One complete school for Nos. 16, 21, and 29, at $485,000..... 1,440 pupils. 20 classrooms. 10 special rooms. 1 auditorium, 2 gymnasiums.	1,440	$60,000	$485,000	$545,000

[1] Space is available on present lot for either an addition or a playground but not for both.

[2] Sites required, 2 for new buildings, 300 by 300 feet; 1 for playground, 100 by 300 feet.

PLAN III.—*On the basis of one complete school, etc.*—Continued.

a. WORK-STUDY-PLAY PLAN—CAPACITY AND COST—Continued.

Buildings.	Number of pupils accommodated.	Cost of equipment.	Cost of new buildings.	Total cost.
One new building for No. 18, at $100,000	160	$10,000	$100,000	$110,000
160 pupils.				
4 classes.				
2 classrooms.				
4 special rooms.				
1 auditorium.				
1 gymnasium.				
No. 22, additional equipment	129	5,000	.....	5,000
Equipment for shop in basement $2,000				
Equipment for cooking room 3,000				
5,000				
Total	1,729	75,000	585,000	660,000

b. TRADITIONAL PLAN—CAPACITY AND COST.

One complete school for Nos. 16, 21, and 29, at $565,000	1,440	$66,500	$565,000	$631,500
1,440 pupils.				
36 classrooms.				
10 special rooms.				
1 auditorium.				
2 gymnasiums.				
One new building for No. 18, at $120,000	160	10,800	120,000	130,800
160 pupils.				
4 classes.				
4 classrooms.				
4 special rooms.				
1 auditorium.				
1 gymnasium.				
No 22, additional equipment	.....	5,000	.....	5,000
Equipment for shop $2,000				
Equipment for cooking 3,000				
5,000				
Total	1,600	82,300	685,000	767,300

[1] Sites required, 2 for new buildings, 300 by 300 feet; 1 for playgrund, 100 by 300 feet.

BUILDING PROGRAM FOR NEGRO SCHOOLS.

One complete school for Nos. 16, 21, and 29.

Enrollment as of September 30, 1920:

No. 16, grades, kindergarten and 1 to 8	448	
No. 21	201	
No. 29	402	
Total elementary	1,141,	or 30 classes.
10 per cent increase	114	
Total pupils to be provided for	1,255,	or 32 classes.
High school, No. 16	103	
10 per cent increase	10	
	113	
Grand total	1,368,	or 35 classes.

Capacity needed under work-study-play plan:

16 classrooms for elementary school
3 rooms for high school—history, English, language
1 kindergarten

20 classrooms
2 laboratories
2 shops for boys
2 shops for girls
2 drawing rooms
1 music room
1 nature-study room

10 special rooms
1 auditorium
2 gymnasiums

Summary:

20 classrooms
10 special rooms
1 auditorium
2 gymnasiums

Capacity needed under traditional plan:

30 classrooms (32 elementary rooms, 3 high schools, 1 kindergarten)
10 special rooms
1 auditorium
2 gymnasiums

4. THE CONDITION OF THE PRESENT SCHOOL PLANT.

It will in nowise be a shock to the school board of Wilmington, nor to the citizens of the city, when we say at once that the building of schoolhouses has not kept up with the needs of the children of the city, and that they are now for the most part being housed and taught in antiquated and unsatisfactory buildings. No one who knows what a modern schoolhouse is could possibly escape this conclusion. Were we to try to judge of what is going on in Wilmington, and had to make our deductions alone from an examination of the school buildings, we would expect to see the street cars drawn by mules, the streets and business houses lighted by gas, and the homes by kerosene lamps. We could not hope to see an automobile nor pass a modern department store, and yet when we emerge from the school buildings we find a thoroughly modern business city, with a palatial hotel, an imposing city hall, modern street car service, and the whole city ablaze with electric lights. The majority of the elementary-school children and their teachers are living and working in conditions consonant with those of the city of a half century ago. We have not suggested this comparison out of any desire to find fault, but to state in a concrete way that the spirit of progress else-

where seen in the city has in some unexpected way forgotten to take the needs of the school children, as far as proper housing is concerned, into account.

THE LACK OF PLAYGROUNDS.

In the first place there are no playgrounds of any consequence connected with the school-buildings. Fifty years ago there were commons or vacant lots about most American cities, where children were at times allowed to play, but in general the spirit of play was looked on as something to put up with rather than to be cultivated. But we have just as surely found a better and safer way to treat our children in this respect as we have found a better and safer method than oil lamps to illuminate our houses.

The young of all animals instinctively play, for this is nature's way of preparing them for the actual work of life. Children are no exception to this rule. Indeed this instinct in them is more compelling and demands a fuller expression than in any lower animal. We submit therefore that one of the big problems the city of Wilmington must face, and finally solve if it is to do its duty to the children and the State, is to set about at once to secure ample grounds for all the new school buildings it needs to erect. We wish it were possible that the older buildings, which must still be used for some time, could be made to look out on playgrounds instead of dirty roofs or unkempt back yards and noisy streets. There is not likely to be real relief from attempting to comply with a recommendation that land adjoining the old buildings be condemned and turned into playgrounds, for the cost would be prohibitive in most cases, and the congestion of business about them would in time make these locations wholly unsatisfactory for school purposes.

But the board of education must now see that the children of Wilmington have been cheated for many years for lack of playgrounds, and that it is the duty of all to make it impossible for similar conditions to be reproduced at any new buildings to be erected. It would be utter folly to build another large building in the city on less than a full-sized block. Does the reader think this is an extravagance? If so, please withhold a judgment until the following questions are answered:

REASONS FOR AMPLE PLAY SPACE.

Must the city child give up any sort of real play with his fellows and never learn the self-control and cooperation it brings, or shall we let him try it in the streets amidst the increasing hazards there found? Shall we preach much about physical education and deny him the most economical and most natural form of it? Can a teacher within a building successfully teach children to get on to-

gether without a boss if she can not let them actually play together without a boss?

There can be no doubt that the truest and most real training in democratic behavior may be had on the school playground. A theoretical, pedagogical teaching of democracy gets nowhere. If all our children had opportunity to play together in the wholesome atmosphere of our public schools, it would do more to preserve and purify democracy than all our noisy politicians. It is sound educational doctrine which calls for ample opportunity for our children to play together, and it is sane, economical educational practice to give them playgrounds. Moreover, juvenile delinquency is intimately associated with the lack of playgrounds, and this has been demonstrated over and over. Good school buildings are very important, but ample playgrounds must be considered the first essential for the children.

One of the newest buildings in the city is so situated that it is almost impossible to light it properly, to say nothing of the noise, dust, and danger due to its location. Reference is made to No. 30. It was a serious mistake to locate it on that small tract of ground, badly oriented, wholly inadequate in size and so unsuitable as to demand a wretchedly planned building. And just here may we say as forcefully as possible that if a small, badly placed lot of improper shape and faulty orientation is selected, it is impossible to construct on it an economical and satisfactory school building. We believe that the blindest spot in the vision of the school authorities of Wilmington has been directed toward the selection of school sites. No more serious blunder in this regard could be cited than that of placing the new high-school building where it is. Not only is there no playground about it, but one-half of it was necessarily doomed to insufficient light and one-half of the old building criminally darkened. Furthermore, since the lot was restricted the necessity for more room operated practically to compel the architect to run it up four stories high despite fire hazards, mending inconvenience and loss of time in school work, and really the criminal neglect of the proper care of adolescent girls. But this same lack of selecting proper building sites is shown in dozens of other cases.

We wish then, with all sincerity and with the utmost solicitude for rendering service, to suggest the following guiding principles, and earnestly entreat the board of education to apply them when the duty of selecting a site for a new building devolves upon them.

GUIDING PRINCIPLES IN SELECTING SITES.

1. The site must be large enough and of the proper shape to make it possible to plan for an economical and hygienic building.

2. The site must be removed from noisy streets, factories, and railways.

3. The ground should be dry and uncontaminated with city refuse. It should be fairly level and in a safe environment.

4. A lot that will permit the placing of a building with the long sides facing directly east and west, other things equal, is a much more valuable lot for a schoolhouse than one whose long axis makes it necessary to face the long sides of the building to the north and south, or an intermediate direction. We wish to point out in this connection that the board of education of Wilmington is peculiarly handicapped in selecting proper sites for school buildings, because of the fact that the city streets for the most part run at an angle to the cardinal points of the compass. That is to say, if the streets ran due east and west, and due north and south, the proper orientation of school buildings would be far easier.

But those who object to this statement will argue that because of this unusual direction of the streets of Wilmington, a greater number of rooms will get the sunshine than if the streets ran with the cardinal points of the compass. May we reply that this is true, and that for homes it is probably as good an orientation as we could demand. But school conditions make different demands from homes and other types of buildings. Since the streets in general in Wilmington run from northeast to southwest, and from southeast to the northwest, all classrooms with windows facing toward the southeast are troubled almost all day on clear days with direct sunshine on the desks of the pupils seated next to the windows; and since the desks can not be moved the pupils must be protected by closing the windows with shades. When this is done, and it is a necessity under these conditions, those pupils further removed from the windows are badly handicapped for lack of sufficient illumination on their books. But this does not state the whole difficulty.

When shades are pulled down proper ventilation of the room through the windows is an utter impossibility and the deadening effect of living and working in impure air must be suffered all day long. On the other hand, if a classroom has its windows facing directly toward the east, on clear days the whole room in its full extent may get a purifying sunning before school begins, and shades are necessary only for an hour or so after school opens. Then for the rest of the day the shades can all be entirely rolled up and the whole schoolroom flooded with nonglaring light, and proper ventilation can be secured by adjusting the windows to suit weather conditions. When the windows in a classroom face the southwest, then the trouble with direct sunshine on clear days must be struggled with all afternoon, and ventilation accordingly impeded for the reasons above stated. If, on the other hand, the windows open directly

toward the west, then trouble is avoided until during approximately the last hour or so of school. Besides, it will be plainly seen by any careful observer, who is sufficiently interested in the care of the children to go into classrooms early in the morning or late in the afternoon, that, when these rooms face directly east or directly west, the whole room gets a better sunning than any other orientation will permit. Classrooms facing northeast or northwest get little or no sunshine in winter and are consequently not as wholesome as they should be.

All this discussion on proper orientation has been introduced here to show the absolute necessity of selecting as far as possible sites which will permit of planning and placing a schoolhouse so that all of the classrooms may get either east or west light. It is plain that to be able to do this in Wilmington the buildings must be skewed on the lot, and hence a larger lot is needed than if the streets ran with the cardinal points of the compass. We therefore recommend that all sites chosen for future buildings should take these necessities into account and that the board of education make them possible of fulfillment by selecting large grounds which will permit of planning and placing the buildings properly.

REASONABLE DISTANCES FROM HOMES.

5. It is as yet a practical necessity to place buildings for primary grades near enough to the homes of the children to permit them to walk to and from school safely and without too much exposure in bad weather. Hence the board is limited to restricted neighborhoods in selecting sites for such buildings. But after children are 10 or 12 years old they may walk a much farther distance to school not only without serious danger, but with physical advantages therefrom. It is absurd to plan to place all school buildings as near as possible to the homes of the children of the upper grades, and then when they get to school to pay some one to try to give them wholesome physical development in stuffy schoolrooms, or at least on some restricted playground. It is far more sensible to locate our buildings for such grades on lots big enough for the building and with ample playground left, even at the expense of a mile walk, than to sacrifice the chance for exercise in the open air by seeking to get the buildings within a few blocks of their homes.

NOISE OF STREET TRAFFIC TO BE AVOIDED.

6. The noise of a modern city's traffic has become so increasingly disturbing to schools situated near business sections that we recommend a careful study of the possible extension of such traffic and to keep as far from it as possible. Furthermore, the danger to chil-

dren at street crossings in busy sections of the city demands careful consideration when sites for school buildings are to be selected.

GUIDING PRINCIPLES IN BUILDING CONSTRUCTION.

While the following general statement, guiding principles for school architecture and school hygiene, may seem a bit out of place in a "report of conditions," still out of our sincere desire to be of real service we beg to include them and content ourselves with brief statements without going into a lengthy discussion giving adequate reasons for each and all of them. But since many of them imply lack in the present buildings we have thought it best to group them together rather than to duplicate them in that part of this report which expresses our judgments on each of the buildings:

1. It is safer and better to limit the height of elementary school buildings to not more than two stories.

2. It is safer, and in many ways better, when an assembly room is to be constructed to place it on the ground floor.

3. It is essential and economical to fireproof the furnace room and stairways thoroughly when the building is constructed. This precaution will lower insurance, as well as practically insure the safety of the children when the other usual precautions are taken.

4. There is no satisfactory evidence to prove that fire escapes will effectively insure the safety of school children. Such safety devices are better adapted for use of adults in factories and other inflammable buildings where numbers are, comparatively speaking, much smaller, and where self-reliance counts for so much.

5. As far as possible all school buildings should be planned and set so that either east or west light only is secured for classrooms.

6. All classrooms should have unilateral lighting, and, for Wilmington, the ratio between the area of glazing and that of the floor surface should be not less than 1 to 5; 1 to 4½ would be better.

7. Classrooms for elementary schools should not be over 31 feet long and 23 feet wide, interior measurement. A room of this size will accommodate 40 to 45 pupils, and no teacher should try to teach more. In high-school buildings a number of smaller classrooms should be included, in which small classes of advanced students or special students could recite. Large rooms for small classes are uneconomical and objectionable.

8. The height of the classrooms from finished floor to finished ceiling should not be over 13 feet; 12½ feet is better.

9. The bottoms of the windows should always be at least 4 feet above the floor, and their tops extend as near to the ceiling as possible. These are very important conditions for securing proper illumination and the protection of the vision of children.

THE FLOORS AND LIGHTING.

10. The floors of school buildings must be carefully laid, and constantly and properly cared for, because their condition is a vital point in school hygiene. The floors of practically all of the school buildings in Wilmington are in bad condition. They have been scrubbed until they have swelled and shrunken so much as to open cracks, leave splinters, and become scruffed up generally. All protruding nails in old badly worn floors should be driven in with a nail set, the desks removed, and the floors resurfaced with sandpaper machines. After they have been thus cleaned and smoothed they should be carefully oiled with a good, light floor oil, being careful to put on only as much as the floor will absorb. Following this treatment the floors should be swept daily with sawdust mixed with a little kerosene and clean sand. Specially prepared apparatus is now on the market for applying the oil. It is very poor economy to allow the floors to wear for lack of protection, as has been the case with the floors in these school buildings. There is no evidence to show that oiling floors of school buildings has rendered them a greater fire hazard, but we know it does eliminate much dust from the schoolroom air, and renders the building generally freer from bacterial life.

11. The oculists have assured us that either a very light buff or a cream colored white with a dull finish is the best color for the plastering of classroom. A large majority of the classroom walls in the school buildings of Wilmington are painted a dark dull green. This is a rather serious blunder both because of the great amount of light thus absorbed, and the disagreeable æsthetic result produced upon both children and teachers. They may in most cases not have noticed it, but the ill effects are registered unconsciously. It will cost no more to do it properly than improperly and we suggest that the error thus pointed out will not be again committed in Wilmington at least.

BLACKBOARDS.

12. For some reason a very poor quality of slate has been almost universally used for the blackboards. We could not with certainty find out from what source this slate was secured, but we earnestly recommend that no more of it be used. In many rooms it has worn uneven and become so gray that it is with great difficulty that the children can read what is written on the boards. The best quality of black slate should be used and set with great care. Such slate will last indefinitely and will not change its color, and is the most economical in the long run.

13. Blackboards should be set to fit the height of the children using them, and hence when buildings are planned for the children

of the elementary grades, each room should be planned for a specific grade. This demand was almost uniformly neglected in constructing the school buildings of the city. The blackboards we found are for the most part set as high for first-grade pupils as for those of the eighth grade, and consequently benches and platforms had to be improvised below them for the children to stand on to use the board with any degree of ease. This is not only bad for the children, for the janitor, and the teacher, but is also a worse than useless waste of public funds. It costs not one cent more to set blackboards the proper height than at an improper height, but does cost money to build a platform for the children to stand on to reach the boards.

The blackboards for the first and second grades should be set 26 inches above the floor, that for the third and fourth, 28 inches, for the fifth and sixth 30 inches, and that for the seventh and eighth 34 inches. For high-school pupils the blackboards should be set approximately 36 inches above the floor. In all classrooms below the seventh grade the slates need not be over 3 feet wide, but a space above should be left between the plastering and the frame for the slate, to receive some cloth to which drawings and exhibit material might easily be fastened or removed at will. The teacher's board should be 4 feet wide.

JANITOR SERVICE.

14. The janitor service in Wilmington schools is below standard, though of course we found exceptions. We believe the reasons for this rather serious weakness may be stated as follows:

(*a*) Until very recently salaries had been too low to command the best service, and habits learned then have been carried over.

(*b*) There seems to be no decided qualification or training demanded from those who seek this employment.

(*c*) So far as we could discover there was no organized effort upon the part of the school authorities to instruct them after securing service, and no systematic attempt among the janitors themselves to learn new and better methods of schoolhouse keeping. We recommend that a course of lectures and demonstrations for janitors be instituted, and that they meet at least once a month for instruction and for conference among themselves in order that their work be in a measure professionalized. They should be furnished with magazines and literature bearing on the problems they meet almost daily and their work checked up regularly. A great deal of money could be saved in the coal bill of the public schools if janitors were carefully taught and trained how to get the best possible combustion in the furnaces. There are many useful tricks in all kinds of necessary labor.

(*d*) Salaries are so low that many janitors are forced to get other jobs in order to earn a livelihood. This means that in a number of instances janitors in the Wilmington schools are not at their buildings during the school session nor at regularly stated times even when schools are in session.

(*e*) The payment of the janitor of a building a lump sum out of which he must provide the help he needs. The tendency always is, in such case to unduly limit the assistance procured, consequently the work is in danger of being neglected. Again, such a plan is bad, for it places the janitors of the schools, no matter how conscientious they are—and undoubtedly there are a number in Wilmington who are taking a deep personal interest in their work—under a suspicion which may or may not be justified. It would seem a much better arrangement for the board to work out an adequate wage scale based on the floor space which the janitors are to care for, modified by special conditions which obtain in the several schools, pay the janitor in the larger buildings a sufficient additional sum for supervising his assistants, and then employ directly whatever helpers are needed in order to keep the buildings in the condition that the board demands. With such an arrangement any standard of cleanliness and efficiency in the upkeep of the buildings can be reached which the community demands and which the board requires without securing this at the expense of the janitors themselves, who are, under the present wage scale, undoubtedly working on too close a margin.

CHARACTERIZATION OF PRESENT BUILDINGS.

The remainder of this part of the report will be devoted to brief statements concerning the various buildings. We have not attempted to make a complete description of the buildings, but have merely registered our reaction toward them after looking them over as carefully as we could in the time at our command:

School No. 1.

This is a three-story building accommodating a grammar school, and very awkwardly planned, necessitating a great loss of time and much confusion in passing from study rooms to recitation rooms between recitations. There is no playground of any consequence, and the building in its present condition is safe for the children only under the most watchful care.

The joists in the basement are insufficiently protected from possible fire, the electric wiring is a source of danger, and the ducts installed for a previous hot-air heating system have never been removed, permitting dust and any possible smoke from the basement to enter the rooms. In case of fire these ducts would greatly facilitate its rapid spread through the building. These should be removed at once. It is in a very noisy section of the city, and is closely joined by old, inflammable buildings. The floors are badly worn, the basement contains too much débris, and the fire escapes are hazardous, and especially in

icy weather. The light, in most of the rooms, is insufficient on dark days, and from many points of view the building is unfit for school purposes.

We recommend that no more money be spent on this building except to make it as safe as possible during the time it must be used, and to dispose of it as soon as possible. This building has served for almost 50 years, and is now as badly out of date as a modern city without a sewer system.

School No. 2.

This building is in a very noisy place, occupying a rather dangerous corner where traffic is bound to increase. There is no playground of any consequence, many of the classes are overcrowded, and while the building is well cared for, it is on an unfit location for a school. The toilet facilities, especially for the boys, are insufficient. No more money should be spent on this building except to keep it in safe repair, and as soon as possible the lot and building should be sold. It was a mistake to make the addition to the old building. The lot, together with the old building, should have been sold at that time, for it had then been used more than 50 years, and could not be reconstructed along modern demands without undue expense.

School No. 3.

This is a miserable old building, badly planned, set on a small lot, and should never have been enlarged. It is badly lighted and surrounded with inflammable buildings. The janitor service in this building, if we may judge by conditions seen when it was visited, is unsatisfactory. The basement is dark, damp, and insufficiently protected from possible fire hazards. New outside toilets had just been installed, and we take this opportunity to point out to the board of education that thoughtlessness bordering on criminal neglect is here shown by the fact that the urinal troughs (and troughs should never again be used) are set too high to accommodate the little boys, and as a result the floor will soon be saturated and odorous. These things are inexcusable, for it would not have cost one cent more to set this trough with the proper slope and at the proper height to accommodate all.

The wash from the small brick-paved playground in the rear is likely to give much trouble near the entrances to the building during wet weather. An attempt to prevent this was a feeble and penurious attempt.

Nothing of any permanent consequence can be done with this building but to tear it down, buy a better site, and construct a new building. The old part has now served over 60 years, and the addition 30 years.

School No. 4.

This old part of the building, now used for a grammar school, contains 14 rooms, is heated by steam, is badly lighted, in that the windows are improperly set and in two adjoining sides of the classrooms. The old part of the building was erected 58 years ago, while the addition dates back 38 years. The basement is dark and damp, the floors are very dry, and should be oiled. It is not a fit place for a school building, and while the walls of the buildings are in fair condition it would be bad economy to spend more on this building than will care for the necessary upkeep. It would cost almost as much to transform it into a satisfactory building as to construct a new one according to approved plans. Here again in this building care must be taken to reduce the fire hazard to the lowest possible terms. Also the basement should be kept clear of all

débris, the joists over the furnace should be well protected, the cinders and ashes should be removed with the utmost pains, and all waste paper and other combustible material should be daily cared for. The new form of outside toilets seem now in good condition, but constant care will be necessary during extremely cold weather to keep the water in all pipes and tanks from freezing.

School No. 5.

There were about 225 pupils enrolled in this building. It is an 8-room building with one classroom now unused. It is heated by steam with ordinary steam pipes connected up along the walls to serve as radiators. Because of the mild weather prevailing during the survey we are, of course, unable to speak experimentally concerning the effectiveness of the radiation. Theoretically it does not measure up to the requirements in windy, cold weather, and we suggest that special attention be given to this possible weakness in severe weather. The basement is merely a dark, badly ventilated cellar. Here again we wish to warn the board that fire protection is needed especially between the smoke-pipe and the ceiling above.

The classrooms have the usual disadvantages due to bilateral lighting. Either the teacher must face the light, or the pupils must face it.

The boys' toilet was found in a very bad condition, there being no urinal provided, and, of course, the floor and walls were wet and nasty. This type of outside toilet (girls' toilet included) is most disagreeable in cold and inclement weather. In warm weather the toilets should be flushed daily instead of once or twice a week. This type of toilet used in several of the older buildings should be discarded and modern sanitary ones installed within the building, or at least where heat may be secured and the children protected from inclement weather.

School No. 6.

This is a small building erected in 1853, hence nearly 70 years old, and was planned in accordance with schoolhouse ideals dominant at that time. That is to say it was planned at a time when little or no attention had been given to school architecture as such, and hence is poorly adapted to meet the modern demands of school hygiene. It is heated by low-pressure steam, of a later installation. The floors are in fair condition, but in need of oil. The lighting is faulty, as all of the school buildings of that period show. The windows are badly set and in two adjoining sides of the classrooms. There is a small playground. Since this is a small building and not planned with a view to further enlargement, it should be abandoned as soon as possible. It is our judgment that no attempt should be made to enlarge either of these buildings.

School No. 7.

This building represents perhaps the most archaic type of school building in the city. It is 3-stories high, with but two classrooms on each floor. The stairs are steep and the classrooms are lighted from three sides, making it impossible to seat the children to get proper light on their work. The teachers are compelled to face the light when in front of the children. The building is in no sense fireproof and it is easily possible in case of fire to have a dangerous panic. The walls are painted a dark "muddy" green color and are disagreeably dismal. The outside toilets are in a disreputable condition and altogether unworthy of the fine children and splnedid teachrs making up the school. The floors are dry and rough and need immediate attention. The area ways are dirty and some of them insufficiently covered to protect the children from danger.

The citizens of Wilmington should not be satisfied to continue the use of this building. Every precaution should be taken to prevent fire. One of the doors leading to the fire escape was found locked during school hours.

We recommend that this building be abandoned at as early a date as possible for it is wholly unsatisfactory for school purposes. It has been in use more than 60 years and can not economically be reconstructed into a modern building.

School No. 8.

This is another old building with a later addition. It is poorly lighted and most of the windows set so near the floor as to permit the outside reflected light to shine into the eyes of the children seated near the windows. This is especially true of the windows in the classrooms on the first floor. If the building is to be used much longer we recommend that the windows be raised so that their bottoms will be at least four feet above the floor. The floors are badly in need of proper care, and the cold and disreputable outside toilets should be abandoned and modern ones installed in a more convenient place. It is heated by low-pressure steam and so far as we could determine the plant was adequate.

There is a very small playground attached. The building is in a noisy place because of its proximity to both electric and steam railways.

School No. 9.

This building is only 25 years old, and while it was badly planned it will probably have to be used for some years. The floors are badly in need of care for they are very dry and wearing in places. The assembly room should never have been placed on the third floor. The light in the classroom is faulty because of bad orientation and faulty placing of windows. So far as we could determine there is no way to remodel this building without undue expense. We recommend that the floors should be oiled at once and that one or two additional toilet seats be placed for the boys.

The janitor service of this building, if we may judge from a single visit, is not up to standard.

School No. 10.

The older part of this building has been in use 50 years, the newer part nearly 30 years. The classrooms in the older part are badly lighted and there is no way to render them satisfactory from this or any other point of view. The addition is better, but has light from two adjoining sides. The outside toilets were in a bad and insanitary condition, and something ought to be done immediately to make them at least decent, if not comfortable. The basement is dark, but was as clean as it could well be made. Fireproofing is needed above the boiler and smoke pipe. There is very urgent need of a water spigot in the basement, and safety for the building demands it. Drinking fountains are badly needed in this building.

This building should be used no longer than absolutely necessary.

School No. 11.

The older part of this building was erected in 1869, and an addition in 1909. There are not enough seats in the girls' toilets and the boys' urinal is insanitary. The usual defect in fenestration is obvious, the walls of the classrooms are badly colored, the blackboards set with poor slate, and the floors need immediate attention. It is not advisable to attempt any reconstruction of the build-

ing but rather to keep it in good repair until such a time as the board can command the means to supplant it with a new building on a much larger lot.

School No. 12.

This building is practically identical in form with No. 10, and the general equipment no better. The outside toilets, especially the boys', were found in bad condition. The basement is dark and damp, and while there was some space for play it is totally inadequate. Here, as in No. 10, some relief can be had by raising all the windows upstairs in the old part of the building in order to get better lighting. New sashes are needed in any case. The floors need attention. The janitor was absent from the building when inspection was made.

School No. 13.

This building has been used about 30 years and is in fair condition. The floors, however, are very dry and need attention. The basement was clean, and with proper care there seems to be no fire hazard in any exceptional way. We were told by the teachers and the janitor that it is difficult to keep the building warm in cold weather and that it was necessary to keep on such days as high as 15 pounds pressure. The boiler seems to be too small to meet the needs economically. The walls of the classrooms are tinted the usual disagreeable green. The blackboards in some of the rooms are set so high as to make it necessary to have platforms under them so as to accommodate the children. This, of course, was simply lack of information on the part of the architect and should have been corrected by those who passed on the plans. The light is bad, because it comes from two or more adjacent sides, and additional drinking fountains should be set at once. The toilets are outside and the boys' was not in good condition.

The cost of reconstructing this building to make it wholly acceptable would be too great to warrant such a recommendation.

School No. 14.

This is practically a duplicate of Nos. 10 and 12, though the older part was built a few years later than the older parts of these. The same sort of addition was also made in 1892.

The janitor service here was markedly below standard if we may judge from a single visit. The radiators, as in the similar buildings mentioned, consist of ordinary steam pipes stretched across the room. These are never satisfactory and the teachers complained of lack of heat in cold weather. The sashes in the older part of the building are in a very bad condition, some of them indeed were so badly worn as to make it doubtful whether they will hold the glass much longer. When these are replaced the windows should be set higher if this building is to be used much longer. The boiler room is not sufficiently protected from fire, especially directly above the smoke pipe and the boiler. There are insufficient drinking fountains and those now supplied are set too high. The outflow from the drinking fountains spreads out on the walk, and during freezing weather this will of necessity make much trouble from icy walks. Besides, even at other times, this outflow makes a sloppy appearance about the entrance. This can easily be corrected by setting underground drain to lead the water to the street. The boys' toilet is in very bad condition and should be condemned at once. It is simply a foul cesspool and unfit for the use of any one.

No. 15.

This building has been in use 45 years, was built according to models of that day, and of course was badly orientated, with windows on two or three sides of the classrooms, and incorrectly set. The floors need attention, for they are very dry and wearing. The heating system was complained of, and there is a real fire hazard here unless the utmost care is taken. Ashes had accumulated to an unwarranted amount, but were being removed when the inspection was made. Fireproofing above the boiler and the smoke pipe is needed at once. The most that can be done with this building is to treat the floors at once, fireproof as indicated, see that ashes are removed daily, keep the basement free of débris, and get rid of this building as soon as possible.

School No. 16 (Howard Colored High School).

This building is used for colored pupils of the kindergarten, the elementary grades, and the high school. It is seriously overcrowded, is a dangerous fire trap because of the lack of halls, the use of gas in the basement, and general condition of the basement. Its present most awkward arrangement of rooms has resulted from additions to an old building which was originally very poorly planned. The only just, safe, and economical thing to do with this building is to sell it or tear it down. It is wholly unfit for the purposes now used and is a real menace as well.

School No. 17.

This building, which has been used nearly 40 years, is badly placed on a small lot in low, wet land, and is not a fit building in many respects. The boys' toilet is not supplied with a urinal, and as a result it was in a very nasty condition. The fence in the rear, separating the boys' side from the girls' side, was broken, and we are sure indecencies are perpetrated as a result. In fact, we observed such while making the inspection. This could be repaired in a few minutes, and why it was left so we can not understand. As soon as possible this building should be sold for other purposes.

School No. 18 (colored).

This building, used for colored children, is situated in a very insanitary neighborhood and is totally unfit for school purposes. The lot is small and wet, the rooms are very dark and heated by stoves. The building was badly planned and constructed nearly 40 years ago. There are outside pit toilets. The building was about as clean as conditions permitted. There is nothing to do with this building but to abandon it at the very first opportunity.

School No. 19.

This building is in a fair state of repair but, like all others of its kind, was badly planned. There is nothing to do but keep it in good repair and bide the time when something better can be had.

We wish to suggest that the boiler room should be made safer by fireproofing the joists above the boiler and especially above the smoke pipe. The basement is dark and rather damp. The toilets are outside and not connected with the sewers. This condition should be remedied at once. There are many old desks and other débris in the basement. This material should be taken out. The floors need attention.

School No. 20.

This building, like No. 19, is in a fair condition, but badly planned. It has been used 38 years. The only change or reconstruction we deem advisable in this building is, if possible, to lift the windows at least 16 inches higher. This would give much relief in the way of illumination and especially shield the eyes of the children from much outside reflected light. The walls are of the usual dark-green color and absorb much light. Moreover they offend every sense of esthetic taste.

There are not enough seats in the toilets either for the girls or the boys, especially the latter. The urinal trough is odorous and bad. The floors need attention. If the basement were cemented a very useful playroom could be made for bad weather. This building is worth this outlay.

School No. 21 (colored).

This building, erected in 1891, is used for colored children. There were about 200 children in attendance; none above the sixth grade. The building was in a fair state of repair, but the janitor service inefficient. The janitor was away and the furnace room was locked when inspection was made. The basement in the boys' toilet was damp and unsatisfactory. There were some new toilet stools and tanks stored in this basement. They should be taken out and put to use in some other building. The lighting was faulty, but can not be changed economically. The floors need attention.

School No. 22 (colored).

This is a rather curiously planned building, and while it has a commodious gymnasium-assembly hall, the classrooms are ill adapted for school purposes. The janitor was away from the building, the furnace-room door was locked, and the principal could not find a key to unlock it. We were told that this janitor had "another job and was away from the school building much of the school day." This, we submit, is totally unsafe, and such a state of affairs is unworthy of the city. The floors need attention. There is apparently nothing to be done with this building but to keep it in repair and make the most of a rather awkward arrangement. It can not be reconstructed economically, or additions made, for the lot is too small and the environment unsuitable.

School No. 23.

This building is one of the newer buildings, erected in 1906. It is in fair condition and while better planned than most of the buildings in the city is set improperly on the lot. There is a chance here to add to the school ground by purchasing the adjoining property. This should be done at once for this section of the city is developing rapidly and more classrooms will be needed soon. Two-thirds of the basement on the north side should be partitioned off from the coal bin, cemented and used as a playroom in bad weather. The iron beams and posts in the basement are badly in need of paint. Electric wiring should be installed and the windows and floors put in order.

School No. 24.

This is one of the better buildings of the city but is overcrowded. The transoms above the windows are nailed, and this makes ventilation difficult. These

should be put in order and used instead of the short windows. The small rooms now being used as classrooms are very dark and should not be used. There is insufficient light both artificial and natural. More electric lights should be installed immediately. The floors are in bad condition and should be gone over at once. No further additions should be made to this building.

School No. 25.

There is much congestion in and about this building, partly due to crowding on the grounds four portable one-classroom buildings. And may we say here that two of these portables were badly placed from the point of view of proper lighting. The buildings were fairly clean, and with due care seem safe enough from fire hazards; but a sudden fright or stampede here might be very disastrous. Every precaution should be taken. The toilet seats are set too far from the light and the toilet rooms are unnecessarily large. Additional land should be purchased for this building and the portables be removed a further distance from the main building. Special toilet facilities for the pupils in these buildings should be included in this suggested change. The best school garden we saw in this city was in connection with this school. The floors should be treated and kept in better condition.

School No. 26.

The building known as No. 26 is badly situated near a marshy place used as a dumping ground. The principal stated that at times the odor from refuse collected there was quite disagreeable at the schoolhouse. In addition complaint was made because of the gaseous odors released by the burning of waste from the Bond Manufacturing Co.'s plant not far away. This was noticeable during the inspection. All that can be done here now is to keep the building in repair until other housing arrangements can be made. To this end the toilets should be put in better shape at once, especially the one for the boys, the floors should be put in good condition, walks laid and the retaining wall guarded to prevent accidents. The playgrounds should be graded and some apparatus for little folks installed.

School No. 27.

No. 27 is a small building adjoining the park and offers to the children attending the best opportunity for play and recreation of any building in the city. The heating of this building was complained of. The boiler seems to be too small for the amount of radiation demanded. The building was clean and apparently safe. The walls were painted the usual dark green. The blackboards in this building were in the main usually poor, some of them set too high above the floor, and benches were necessary in order that the children might use them. The lot upon which the building is placed is too small and if more classrooms are needed an economical and permissible addition to this building will be almost an impossibility. The usual faulty lighting and orientation mars the use of this building, as the same defects mar nearly all the school buildings of the city.

School No. 28.

This is a three-story building used for the grammar grades. There are 670 children on the roll. The building is in fair condition except the floors. They have been badly neglected and consequently are badly worn. The toilet facili-

ties for the boys are inadequate, there being but six seats with 335 boys attending. This toilet in addition is very dark and insanitary. Additional light, ventilation, and seats and urinals should be supplied at once. The custom of shifting the children from classroom to classroom for departmental work makes much confusion, involves the impossibility of properly adjusting seats to suit the children and necessitates tremendous wear on the building, especially the hall and stairways. We wondered what would happen here if in the midst of one of these numerous transfers a fire should break out, or a false alarm be sounded. It would be a serious situation to say the least, and if this plan is continued the attention of the teachers should be called to the danger involved. While it would handicap some of the teachers to move instead of the children because of the needed equipment, still there is a possibility of much relief here, with less risk if those teachers who can move would do so. Then, of course, this constant shifting of the children multiplies the possibility of spreading any contagious disease that might break out.

The building is not well arranged, though it represents a fairly good model for the time when it was built. It has been used about 35 years. The floors should be looked after at once and kept in good condition.

School No. 29 (colored).

This is one of the best planned buildings in the city. It is used for colored children and was found in neat, clean condition with the exception of the boys' toilet. This should be put in a sanitary condition immediately. We recommend also that a cement floor be put in on the north side of the basement, so that this space may be utilized for indoor games during bad weather. The usual mistake of putting an assembly room on the third floor was again noted. The walls are the usual dirty green color and absorb much light. The floors are dry and need oiling at once. The best stairways seen in any elementary building in the city are to be found here.

The janitor was absent from the building when the inspection was made.

School No. 30.

This building is the newest grammar school in the city, and was placed on an altogether unsatisfactory lot as to size and shape. It was practically impossible for any architect to plan a good building, with the number of rooms demanded, for this lot. More money was wasted, we imagine, in this building because of the necessity of making it fit this lot than would have been needed to buy a good site somewhere in this neighborhood. The building is now overcrowded. There is no chance to reconstruct or enlarge this building. The lighting is troublesome, but, possibly, could not be prevented. We noticed that the bottoms of the windows are approximately the proper height above the floor. The desks were in good condition and more carefully set than any elsewhere seen.

The High School.

There are only two recommendations that we deem it necessary to make for these buildings, despite the fact that the classrooms in the adjoining sides of the two buildings are very dark.

We wish to recommend that another story or passageway be put on the bridge between the buildings, so that students may pass from one to the other one story higher. This is needed to relieve the congestion of the one passage now used and also to prevent so much climbing up and down stairs. This addition can

easily be made and at a slight expense and should be ordered at once. The floors throughout both buildings need treatment.

We wish to express our disapproval of making high-school buildings four stories high, because of the added fire hazard, but more especially because of the excessive amount of stair climbing imposed upon girls of high-school age. We also wish to point out the fact that there is much waste space in the annex included in cloakrooms which are not used to an appreciable extent and never will be as long as this building is used for high-school purposes. Any architect should have known that a student must have some form of locker for his wraps and that these open cloakrooms could not meet the needs. This plan should have been checked up and revised by some high-school teacher who knows what is demanded. The lack of such attention cost the city many thousands of dollars. Furthermore, this annex should never have been built, for there was insufficient ground, and the classrooms on the adjoining sides of both buildings would of necessity be doomed to darkness. This mistake almost approximates criminal ignorance.

APPENDIX.

EXHIBITS I TO XXI.

EXHIBIT I.

WILMINGTON PUBLIC SCHOOLS.

GENERAL FUND STATEMENT.

(As of June 30, 1920.)

RECEIPTS.		*DISBURSEMENTS.*	
Cash (balance July 1, 1919)	$16,901.58	Liquidation of accounts payable, applicable to 1918–19	$17,754.99
Revenues, 1919–20	587,971.52	Expenditures of school year 1919–20	600,076.11
Accounts payable, applicable to 1919–20	18,598.05	Transfer to new building fund	2,072.55
		Cash (balance June 30, 1920)	3,567.50
Total	623,471.15	Total	623,471.15

NEW BUILDING FUND STATEMENT.[2]

(As of June 30, 1920.)

RECEIPTS.		*DISBURSEMENTS.*	
Cash (balance July 1, 1919)	$3,152.91	Expenditures of school year 1919–20	$54,530.24
Revenues, 1919–20	43,753.77	Cash (balance June 30, 1920)	190.45
Transfer from general fund	2,072.55		
Accounts payable, school year 1919–20	5,741.46		
Total	54,720.69	Total	54,720.69

COMBINED FUND STATEMENT.

(As of June 30, 1920.)

RECEIPTS.		*DISBURSEMENTS.*	
Cash (balance July 1, 1919)	$20,054.49	Liquidation of accounts payable, applicable to school year 1918–19	$17,754.99
Revenues, school year 1919–20	631,725.29	Expenditures for school year 1919–20	654,606.85
Accounts payable, school year 1919–20	24,339.51	Cash (balance June 30, 1920)	3,757.95
Total	676,119.29	Total	676,119.29

[1] Not including appropriation of $100,000 for school building, levied in school tax in 1919–20, but not as yet turned over to department of public education.

[2] As prepared from existing data.

EXHIBIT II.

CITY OF WILMINGTON—BOARD OF EDUCATION.

Statement of Expenditures from New Building Fund Account for the Fiscal Years 1910–11 to 1919–20, inclusive, as Shown by Books of the City Auditor.

Fiscal years.	Building and equipment.	Bond payments.	Total.	Source of funds.
1910–11	$21,065.67	.....	$21,065.67	Bond issue of $20,000 and appropriation from city council.
1911–12	27,062.38	.....	27,062.38	Do.
1912–13	68,948.14	.....	68,948.14	Do.
1913–14	6,660.75	$40,000.00	46,660.75	Appropriation from city council.
1914–15	.....	20,000.00	20,000.00	Do.
1915–16	58,684.90	.....	58,684.90	Bond issue of $166,000 and appropriation from city council.
1916–17	95,569.92	.....	95,569.92	Bond issue of $27,000 and appropriation from city council.
1917–18	45,169.09	.....	45,169.09	Appropriation of city council.
1918–19	59,172.13	20,000.00	79,172.13	Do.
1919–20	28,924.15	20,000.00	48,924.15	Do.
Total	411,257.13	100,000.00	511,257.13	

EXHIBIT III.

Statement of Wilmington Public School Property (Land, Buildings, and Equipment) as of December 31, 1919.

Buildings.	Total.	Land.[1]	Buildings.[2]	Equipment.[2]
Total	$2,324,857.22	$206,417.00	$1,971,623.35	$146,816.87
No. 1	82,347.01	14,950.00	62,030.00	5,367.01
No. 2	75,314.38	7,500.00	61,105.50	4,708.88
No. 3	34,749.25	4,500.00	27,426.20	2,823.05
No. 4	58,691.11	10,000.00	45,322.70	3,278.41
No. 5	44,231.19	5,000.00	36,274.00	2,957.19
No. 6	25,766.13	7,000.00	16,981.00	1,785.13
No. 7	28,674.76	4,950.00	22,107.00	1,617.76
No. 8	45,308.16	7,350.00	35,654.60	2,303.56
No. 9	100,897.64	6,375.00	88,449.50	6,073.14
No. 10	44,289.58	5,000.00	36,337.00	2,952.58
No. 11	67,595.05	5,100.00	57,503.50	4,991.55
No. 12	45,872.68	4,120.00	38,132.00	3,620.68
No. 13	60,061.72	2,400.00	54,951.50	2,710.22
No. 14	44,790.94	2,500.00	39,299.50	2,991.44
No. 15	45,604.79	5,000.00	37,656.25	2,948.54
No. 16	93,003.56	2,850.00	79,951.50	10,202.06
No. 17	42,104.08	4,800.00	34,974.00	2,339.08
No. 18	11,985.45	600.00	10,593.00	792.45
No. 19	50,057.18	7,500.00	39,754.00	2,803.18
No. 20	42,726.64	5,000.00	36,459.00	1,267.64
No. 21	41,700.13	2,100.00	37,253.00	2,347.13
No. 22	57,846.49	[3] 2,450.00	52,625.00	2,771.49
No. 23	56,498.28	2,080.00	50,087.00	4,331.28
No. 24	144,645.50	14,000.00	123,020.00	7,625.50
No. 25	65,750.57	2,992.00	57,339.90	5,418.67
No. 26	27,744.82	800.00	25,137.50	1,869.32
No. 27	28,714.03	2,120.00	24,874.50	1,719.53
No. 28	172,779.08	9,000.00	153,154.20	10,624.88
No. 29	96,007.76	4,200.00	85,888.00	4,979.76
No. 30	136,802.16	[3] 7,000.00	121,558.50	8,243.66
High school	428,830.10	20,680.00	379,724.00	28,426.10
Lot, 22d and Locust	4,000.00	[3] 4,000.00	.....	.....
Lot, 20th and Washington Streets	22,500.00	[3] 22,500.00	.....	.....

[1] Values given in Report of Wilmington Public Schools, 1912.
[2] Values set forth in appraisal report of Prudential Engineering Co. of Dec. 31, 1919.
[3] Approximate value.

EXHIBIT IV.

Comparative Statement of the Value of School Property in 45 Cities of Population of 30,000 to 100,000, 1917–18.

Thousand dollars.		Thousand dollars.	
6,432	1. Akron, Ohio.	1,706	24. Pasadena, Calif.
5,042	2. Springfield, Mass.	1,662	25. Berkeley, Calif.
4,443	3. Des Moines, Iowa.	1,570	26. Flint, Mich.
4,349	4. Hartford, Conn.	1,375	27. Bay City, Mich.
3,842	5. Salt Lake City, Utah.	1,371	28. Springfield, Ohio.
3,714	6. Duluth, Minn.	1,352	29. Little Rock, Ark.
3,334	7. Tacoma, Wash.	1,338	30. Decatur, Ill.
3,178	8. Elizabeth, N. J.	1,305	31. Cedar Rapids, Iowa.
3,081	9. Lynn, Mass.	1,280	32. Pawtucket, R. I.
2,625	10. Oklahoma City, Okla.	1,258	33. Wheeling, W. Va.
2,580	11. Canton, Ohio.	1,241	34. Altoona, Pa.
2,474	12. Peoria, Ill.	1,232	35. Topeka, Kans.
2,463	13. Utica, N. Y.	1,220	36. Oshkosh, Wis.
2,301	14. Bayonne, N. J.	1,198	37. Manchester, N. H.
2,287	15. *Wilmington, Del.*	1,141	38. Montgomery, Ala.
2,191	16. Evansville, Ind.	1,071	39. Salem, Mass.
2,191	17. Fort Worth, Tex.	900	40. Chattanooga, Tenn.
2,162	18. Springfield, Ill.	780	41. Savannah, Ga.
1,997	19. Wilkes-Barre, Pa.	725	42. Meriden, Conn.
1,946	20. Terre Haute, Ind.	654	43. Lexington, Ky.
1,886	21. Butte, Mont.	586	44. Mobile, Ala.
1,881	22. Binghamton, N. Y.	440	45. Charleston, S. C.
1,801	23. Kansas City, Kans.		

EXHIBIT V.

Statement of Assessed Valuation of Property in City of Wilmington, Tax Rates (City, School, and Total), and of Tax Levies for the Years 1910 to 1920, inclusive.

Fiscal years.	Assessed valuation.	Tax rates.			Tax levy.
		Total.	City.	School.	
1910-11	$52,338,766	$1.50	$1.01	$0.49	$778,267
1911-12	53,940,096	1.50	1.02	.48	827,482
1912-13	55,451,280	1.53	1.03	.50	867,512
1914-15	57,526,338	1.53	1.03	.50	902,042
1915-16	76,270,588	1.35	.99	.36	1,043,807
1916-17	78,771,659	1.35	.95	.40	1,077,217
1917-18	80,360,600	1.35	.89	.46	1,098,080
1918-19	83,433,675	1.35	.89	.46	1,138,288
1919-20	85,133,225	1.75	1.25	.50	1,545,674
1920-21	91,705,750	1.75	1.25	.50	1,686,033
	106,566,025	1.75	1.25	.50	1,946,103

EXHIBIT VI.

Comparative Statement of Assessed Property Available for Taxation, Reduced to Common Basis of 100 Per Cent Valuation in 45 Cities of 30,000 to 100,000 Population, 1917–18.

Thousand dollars.		Thousand dollars.	
230,405	1. Akron, Ohio.	106,506	12. Canton, Ohio.
201,787	2. Springfield, Mass.	100,000	13. Butte, Mont.
197,840	3. Duluth, Minn.	101,214	14. Kansas City, Kans.
181,733	4. Montgomery, Ala.	97,836	15. Lynn, Mass.
178,000	5. Salt Lake City, Utah.	93,534	16. Wheeling, W. Va.
172,000	6. Des Moines, Iowa.	91,763	17. Wilkes-Barre, Pa.
151,436	7. Hartford, Conn.	87,459	18. *Wilmington, Del.*
125,000	8. Chattanooga, Tenn.	82,845	19. Utica, N. Y.
114,692	9. Tacoma, Wash.	81,495	20. Springfield, Ill.
108,053	10. Fort Worth, Tex.	80,800	21. Little Rock, Ark.
106,667	11. Savannah, Ga.	80,487	22. Pasadena, Calif.

Thousand dollars.		Thousand dollars.	
81,012	23. Flint, Mich.	58,278	35. Altoona, Pa.
80,000	24. Terre Haute, Ind.	57,995	36. Mobile, Ala.
79,948	25. Peoria, Ill.	54,762	37. Charleston, S. C.
79,560	26. Manchester, N. H.	53,575	38. Decatur, Ill.
78,333	27. Evansville, Ind.	52,791	39. Binghamton, N. Y.
77,514	28. Elizabeth, N. J.	42,413	40. Salem, Mass.
77,379	29. Oklahoma City, Okla.	40,020	41. Cedar Rapids, Iowa.
76,057	30. Pawtucket, R. I.	37,662	42. Bay City, Mich.
75,473	31. Berkeley, Calif.	37,290	43. Lexington, Ky.
74,609	32. Springfield, Ohio.	34,864	44. Oshkosh, Wis.
68,485	33. Bayonne, N. J.	34,137	45. Meriden, Conn.
65,108	34. Topeka, Kans.		

EXHIBIT VII.

Comparative Statement of Tax Rates, Per Thousand, for School Purposes, Reduced to Common Basis of 100 Per Cent Valuations of Property Available for Taxation in 45 Cities of 30,000 to 100,000 Population, 1917–18.

$11.08	1. Cedar Rapids, Iowa.	$5.50	24. Manchester, N. H.
10.99	2. Des Moines, Iowa.	5.40	25. Terre Haute, Ind.
9.18	3. Pasadena, Calif.	5.31	26. Springfield, Mass.
9.00	4. Bayonne, N. J.	5.29	27. Elizabeth, N. J.
8.79	5. Oklahoma City, Okla.	5.24	28. Oshkosh, Wis.
8.78	6. Peoria, Ill.	5.00	29. Altoona, Pa.
8.50	7. Topeka, Kans.	5.00	30. Little Rock, Ark.
8.00	8. Kansas City, Kans.	4.83	31. Duluth, Minn.
7.14	9. Utica, N. Y.	4.81	32. Canton, Ohio.
6.95	10. Bay City, Mich.	4.70	33. Springfield, Ohio.
6.60	11. Meriden, Conn.	4.60	34. *Wilmington, Del.*
6.43	12. Binghamton, N. Y.	4.40	35. Lexington, Ky.
6.37	13. Berkeley, Calif.	4.37	36. Flint, Mich.
6.25	14. Butte, Mont.	4.25	37. Hartford, Conn.
6.18	15. Salem, Mass.	4.25	38. Tacoma, Wash.
6.00	16. Evansville, Ind.	3.60	39. Wheeling, W. Va.
6.00	17. Wilkes-Barre, Pa.	3.36	40. Charleston, S. C.
6.00	18. Decatur, Ill.	3.25	41. Roanoke, Va.
6.00	19. Springfield, Ill.	3.00	42. Mobile, Ala.
5.95	20. Akron, Ohio.	3.00	43. Fort Worth, Tex.
5.94	21. Salt Lake City, Utah.	2.71	44. Savannah, Ga.
5.50	22. Lynn, Mass.	1.44	45. Chattanooga, Tenn.
5.50	23. Pawtucket, R. I.		

EXHIBIT VIII.

General[*] Statement of Expenditures of Wilmington Public Schools for the Fiscal Year 1919–20.

	Per cent.		Amount.
TOTAL	100.0		$654,606.35
I. EXPENDITURES PERTAINING TO THE PRESENT	84.7		554,633.66
GENERAL CONTROL SERVICE	3.5		22,669.98
Regulation and control[1]	.5		3,501.00
School election expense			
Board of education and secretary's office	.5	$3,501.00	
Direction and control	1.5		9,621.23
Superintendent's office	1.0	6,621.23	
Enforcement of compulsory education laws	.5	3,000.00	
Census enumeration			
Instruction supervision	.9		5,657.14
General instruction supervision			
Vocational instruction supervision	.1	484.00	
Americanization instruction supervision	.8	5,173.14	
Property supervision	.6		3,890.59
Supervision of operation of buildings	.3	1,899.53	
Supervision of repairs	.3	1,991.06	

[*] See detail tables supporting the above.

[1] Set forth in Wilmington city charter as supervision and control.

	Per cent.			Amount.
INSTRUCTIONAL SERVICE	65.1			$426,448.66
Day school	62.4			408,613.03
Undistributed	.6		$3,477.56	
Elementary instruction	48.4		317,019.13	
White schools	42.1	$275,670.50		
Colored schools	6.3	41,348.63		
Secondary instruction (high schools)	13.2		86,822.25	
White schools	11.4	75,205.58		
Colored schools	1.8	11,616.67		
Higher instruction (normal school training)				
Colored schools	.2		1,294.09	
Night school	2.0			13,198.86
Elementary instruction—Americanization	1.7		10,766.86	
Secondary instruction-Vocational	.3		2,432.00	
Continuation school	.7			4,636.77
Part-time school (in shops)				
Secondary instruction—Vocational	.7		4,375.73	
Extension school (day classes for adults)				
Elementary instruction—Americanization			261.04	
PROPRIETARY SERVICE	15.5			101,213.44
Operation of school plant [1]	8.3			54,349.56
Elementary school buildings and grounds	6.1		40,071.75	
Undistributed	.4	2,936.23		
White schools	4.8	31,422.53		
Colored schools	.9	5,712.99		
High-school buildings and grounds	2.1		13,812.81	
Undistributed	.1	520.04		
White schools	2.0	12,969.10		
Colored schools		323.67		
Other than public school buildings	.1		465.60	
Upkeep of school plant	7.2			46,863.88
Elementary school buildings, grounds, and equipment	5.4		35,202.84	
Undistributed	1.4	9,154.37		
White schools	3.7	24,375.53		
Colored schools	.3	1,672.94		
High-school buildings, grounds, and equipment	1.8		11,661.04	
Undistributed	.3	1,801.32		
White schools	1.5	9,762.83		
Colored schools		96.89		
AUXILIARY AGENCIES AND OTHER ACTIVITIES	.6			4,301.60
Medical inspection of school children	.5		3,104.61	
Contribution toward lunch service expense	.1		796.99	
Home and school gardens			400.00	
Community use of school buildings				
2. EXPENDITURES PERTAINING TO THE PAST	2.8			18,002.50
Fixed charges:				
Interest	2.6		17,002.50	
Contribution toward teachers' retirement fund	.2		1,000.00	
3. EXPENDITURES PERTAINING TO THE FUTURE	12.5			81,970.19
Outlays	8.3			54,470.19
Administration property	.1		582.85	
Elementary school property	6.1		39,812.77	
Undistributed	3.6	23,730.62		
White schools	1.8	11,408.31		
Colored schools	.7	4,673.84		

[1] Operation of school plant distributed by school organizations, total, (8.3 per cent) $54,349.56; day school, (7.9 per cent) $51,757.51; night school, (0.4 per cent) $2,592.05; general, $334; Americanization, (0.4 per cent) $2,258.05; vocational instruction, ——; continuation school, ——.

Outlays—Continued.				
High-school property	2.1		$14,045.60	
White schools	2.1	$14,045.60		
Colored schools				
Property other than in school buildings			28.88	
Payment of debt [2]	4.2			$27,500.00
Elementary school investment	1.1		7,500.00	
High-school investment	3.1		20,000.00	

[2] Does not include payment of short term loans negotiated to cover any interim prior to receipt of revenues.

EXHIBIT IX.

Statement of Cost of General Control Service of Wilmington Public Schools, Fiscal Year 1919–20.

Purposes.	Total.	Salaries.	Supplies.	Other expense.
Total	$22,669.96	$20,519.21	$1,931.42	$219.33
Regulation and control service [1]	3,501.00	3,199.95	225.71	75.34
School elections expense				
Board of education and secretary's office	3,501.00	3,199.95	225.71	75.34
Direction and control service	9,521.23	9,051.92	488.57	80.74
Superintendent's office	6,621.23	6,051.92	488.57	80.74
Enforcement of compulsory education laws	3,000.00	3,000.00		
Census enumeration				
Instruction supervision	5,657.14	4,409.55	1,184.34	63.25
General instruction supervision [2]				
Vocational instruction supervision	484.00	484.00		
Americanization instruction supervision	5,173.14	3,925.55	1,184.34	63.25
Property supervision	3,990.59	3,857.79	32.80	
Supervision of building operation	1,899.53	[3] 1,899.53		
Supervision of repairs	1,991.06	1,958.26	32.80	

[1] Designated by Wilmington city charter as supervision and control.
[2] General instruction supervision distributed only to day school elementary instruction.
[3] Includes $66.25 Americanization expense.

EXHIBIT X.

Statement of Cost of Instructional Service in Wilmington Public Day Schools, Fiscal Year 1919–20.

Schools.	Total.	Salaries of supervisors, principals, and clerks.	Salaries of teachers.	Textbooks, instructional supplies, and other expenses.
Total	$408,613.03	$48,494.34	$339,736.66	$20,182.03
Undistributed	3,477.56			3,477.56
Elementary instruction	317,019.13	43,128.43	261,573.82	12,316.88
White schools	275,670.50	37,336.37	227,524.79	10,809.34
Supervision	8,008.58	7,828.09		180.49
Building No. 1	17,752.11	1,543.75	15,705.05	503.31
2	11,120.96	1,353.13	9,462.29	305.54
3	9,783.50	1,319.25	8,231.95	232.30
4	17,498.06	1,575.00	14,954.22	968.84
5	6,044.60	1,189.50	4,594.80	260.30
6	6,895.89	1,200.00	5,292.84	203.05

Statement of Cost of Instructional Service in Wilmington Public Day Schools, Fiscal Year 1919–20—Continued.

Schools.	Total.	Salaries of supervisors, principals, and clerks.	Salaries of teachers.	Textbooks, instructional supplies, and other expenses.
Elementary instruction—Continued.				
White schools—Continued.				
Supervision—Continued.				
Building No. 7	$5,961.52	$719.50	$4,912.36	$329.66
8	6,904.85	740.00	5,854.98	309.87
9	16,958.90	1,539.42	14,830.14	589.34
10	7,255.67	767.38	6,169.17	319.12
11	11,745.90	1,367.50	10,095.17	283.23
12	8,978.83	1,305.00	7,378.40	295.43
13	8,323.29	806.32	7,372.17	144.80
14	8,370.90	1,305.00	6,772.97	292.93
15	9,429.45	802.26	8,221.60	405.59
17	5,953.22	704.95	5,000.87	247.40
19	8,688.31	1,254.00	7,062.38	371.93
20	9,531.99	1,305.00	7,814.62	412.37
23	8,748.91	1,257.01	7,270.24	221.66
24	23,300.52	1,641.55	20,470.11	1,188.86
25	13,507.07	1,425.00	11,614.71	467.36
26	4,865.56	670.02	3,962.00	233.54
27	4,087.23	632.11	3,397.40	57.72
28	23,765.53	1,690.63	20,715.78	1,409.12
30	12,389.15	1,445.00	10,368.57	575.58
Colored schools	41,348.63	5,792.06	34,049.03	1,507.54
Supervision	1,130.55	1,105.00		25.55
Building No. 16 (elementary grades)	13,770.31	469.60	[2] 12,663.00	637.71
18	2,846.21	1,042.37	1,683.91	119.93
21	6,991.39	1,235.00	5,496.76	259.63
22	3,715.40	1,090.02	2,416.09	209.29
29	12,894.77	850.07	11,789.27	255.43
Secondary instruction (high schools)	86,822.25	5,365.91	76,868.75	4,587.59
White schools:				
General instruction	75,205.58	4,661.50	66,343.66	4,200.42
Supervision	418.97	393.50		25.47
Wilmington High School	74,786.61	4,268.00	66,343.66	[1] 4,174.85
Vocational instruction, Wilmington High School				
Colored schools:				
General instruction, Howard High School (Bldg. No. 16)	11,616.67	704.41	10,525.09	[2] 387.17
Vocational instruction, Howard High School				
Higher instruction (normal training):				
Colored school, Howard High School	1,294.09		1,294.09	

[1] Includes graduation expenses of $297.29.

[2] Includes graduation expenses of $227.75.

EXHIBIT XI.

Statement of Cost of Instructional Service of Wilmington Public Night Schools, Fiscal Year 1919–20.

	Total.	Salaries of teachers.	Text-books.	Other supplies used in instruction.	Other expense of instruction.
TOTAL	$13,198.86	$11,023.90	$975.56	$1,156.93	$42.47
Elementary instruction	10,766.86	8,591.90	975.56	1,156.93	42.47
Americanization instruction	10,766.86	8,591.90	975.56	1,156.93	42.47
Undistributed	215.13	215.13			
Building No. 1	772.27	622.38	67.28	79.79	2.82
4	1,568.78	1,269.00	134.56	159.58	5.64
8	680.64	530.75	67.28	79.79	2.82
10	672.27	522.38	67.28	79.79	2.82
11	464.69	389.75	33.64	39.89	1.41
14	730.89	581.00	67.28	79.79	2.82
17	691.39	541.50	67.28	79.79	2.82
19	1,108.78	883.75	100.92	119.68	4.43
Other than public-school building	3,862.02	3,036.26	370.04	438.85	16.89
Secondary instruction	2,432.00	2,432.00			
Vocational instruction	2,432.00	2,432.00			
Wilmington High School	1,527.00	1,527.00			
Howard High School					
Other than public-school building	905.00	905.00			

EXHIBIT XII.

Statement of Cost of Instructional Service, Wilmington Public Continuation School, Fiscal Year 1919–20.

	Total.	Salaries of teachers.	Text-books.	Other supplies used in instruction.
Total	$4,636.77	$4,563.23	$33.64	$39.90
Part-time school (in shops), secondary instruction, vocational	4,375.73	4,375.73		
Extension school (day classes for adults), elementary instruction, Americanization	261.04	187.50	33.64	39.90

EXHIBIT XIII.

Statement of Cost of Proprietary Service in Wilmington Public Schools—Operation of School Plant, Fiscal Year 1919–20.

	Total.	Salaries of engineers, firemen, and janitors.	Fuel.	Gas and electricity.	Janitors' supplies.	Other expense of operation.
TOTAL	$54,249.56	$31,403.40	$15,742.77	$3,471.09	$987.44	$2,744.86
Day school:						
White schools	45,395.40	25,821.78	13,875.44	2,516.00	870.16	2,312.02
Colored schools	6,362.11	3,676.37	1,867.33	268.29	117.28	432.84
Night school:						
General	334.00	194.00		140.00		
Americanization	2,258.05	1,711.25		546.80		

2 Statement of Cost of Proprietary Service in Wilmington Public Schools—Operation of School Plant, Fiscal Year 1919–20—Continued.

	Total.	Salaries of engineers, firemen, and janitors.	Fuel.	Gas and electricity.	Janitors' supplies.	Other expense of operation.
Continuation school:						
Part time						
Extension						
Elementary school buildings	$40,071.75	$24,571.66	$11,174.96	$1,437.43	$781.84	$2,105.86
Undistributed	2,936.23		74.21		[1] 781.84	2,080.18
White schools	31,422.53	21,048.29	9,295.69	1,078.55		
No. 1. Day school	1,496.85	940.00	544.87	11.98		
Night school—Americanization	260.25	160.25		[2] 100.00		
2. Day school	1,375.74	960.00	412.04	3.70		
3. Day school	962.62	660.00	294.52	8.10		
4. Day school	1,010.22	720.00	279.28	10.94		
Night school—Americanization	[2] 376.80	170.00		[2] 206.80		
5. Day school	976.70	660.00	291.37	25.33		
6. Day school	830.21	600.00	219.54	10.67		
7. Day school	797.01	600.00	181.75	15.26		
8. Day school	1,013.20	720.00	280.27	12.93		
Night school—General	64.00	64.00				
Americanization	226.25	156.25		[2] 70.00		
9. Day school	1,377.36	960.00	371.28	46.08		
10. Day school	1,066.88	660.00	395.05	11.83		
Night school—General	77.00	67.00		[2] 10.00		
Americanization	155.25	135.25		[2] 20.00		
11. Day school	1,281.30	780.00	490.99	10.31		
Night school—Americanization	230.25	160.25		[2] 70.00		
12. Day school	1,043.29	660.00	378.56	4.73		
13. Day school	1,100.54	720.00	376.10	4.44		
14. Day school	903.01	720.00	173.08	9.93		
Night school—Americanization	177.75	157.75		[2] 20.00		
15. Day school	946.93	660.00	271.23	15.70		
17. Day school	959.62	660.00	285.94	13.68		
Night school—Americanization	185.25	155.25		[2] 30.00		
19. Day school	1,067.92	660.00	400.83	7.09		
Night school—Americanization	181.25	151.25		[2] 30.00		
20. Day school	1,159.74	720.00	439.74			
23. Day school	1,027.03	720.00	302.38	4.65		
24. Day school	1,993.26	1,220.00	606.83	166.43		
25. Day school	1,627.47	1,122.58	476.57	28.32		
26. Day school	814.11	600.00	214.11			
27. Day school	871.41	600.00	271.41			
28. Day school	2,143.08	1,393.45	686.38	63.25		
30. Day school	1,642.98	955.01	651.57	36.40		
Improved school lots						
Colored schools	5,712.99	3,523.37	1,805.06	358.88		25.68
No. 16. Day school	1,121.92	864.00	204.58	27.66		25.68
Night school—General	193.00	63.00		[2] 130.00		
18. Day school	505.62	256.37	249.25			
21. Day school	978.26	660.00	309.30	8.96		
22. Day school	1,322.28	720.00	414.83	187.45		
29. Day school	1,591.91	960.00	627.10	4.81		
High school buildings	113,812.61	6,366.74	4,567.81	2,033.66	205.60	639.00
Undistributed	520.04					520.04
White schools—						
Wilmington High—						
Day school	12,969.10	6,150.74	4,516.67	[1] 1,994.25	[1] 205.60	[1] 101.84
Night school						
Colored schools—						
Howard High—						
Day school	323.67	216.00	51.14	39.41		17.12
Night school						
Other than public school buildings:						
Night school—Americanization	465.00	465.00				

[1] Undistributed as to night school or other activities.
[2] Arbitrarily distributed as applicable to night school.

EXHIBIT XIV.

Statement of Cost of Proprietary Service in Wilmington Public Schools—Upkeep of School Buildings, Fiscal Year 1919–20.

Schools.	Total.	Undistributed labor.	Repairs to buildings, grounds, and general equipment.	Repair and replacement of heat, light, plumbing equipment.	Repair and replacement of furniture.	Undistributed materials (shop stores).	Other expense of upkeep.
Total	$46,863.88	$1,425.00	$20,287.52	$18,248.21	$2,092.82	$1,949.00	$2,861.33
Elementary school buildings	35,232.84	1,140.00	16,201.47	12,294.00	1,648.59	1,949.00	1,969.78
Undistributed	9,151.37	1,140.00	2,963.48	610.91	552.40	1,949.00	1,938.58
White schools	24,375.53	.....	12,591.69	10,806.21	916.13	.....	31.30
Building No. 1	1,108.75	.....	883.53	160.21	65.01	.....	.....
2	87.42	.....	27.55	59.87	.....	.....	.....
3	615.63	.....	491.71	62.87	61.05	.....	.....
4	1,679.41	.....	466.61	1,188.45	24.35	.....	.....
5	980.95	.....	764.30	126.62	90.03	.....	.....
6	800.88	.....	685.28	111.90	3.70	.....	.....
7	601.83	.....	365.80	224.48	11.55	.....	.....
8	497.40	.....	220.78	170.38	106.24	.....	.....
9	1,052.89	.....	792.25	257.84	2.80	.....	.....
10	878.10	.....	467.18	348.12	62.80	.....	.....
11	820.64	.....	585.64	12.40	222.62	.....	.....
12	60.15	.....	6.00	35.25	18.90	.....	.....
13	565.46	.....	530.81	34.65	.....	.....	.....
14	903.94	.....	700.83	179.11	24.00	.....	.....
15	4,007.71	.....	644.40	3,963.31	.....	.....	.....
17	1,315.27	.....	893.05	452.22	.....	.....	.....
19	390.23	.....	58.25	267.98	30.00	.....	.....
20	1,120.85	.....	888.70	232.15	.....	.....	.....
23	781.21	.....	179.35	506.26	69.20	.....	26.40
24	1,537.16	.....	1,251.98	285.18	.....	.....	.....
25	1,194.80	.....	339.71	713.41	121.78	.....	.....
26	475.75	.....	383.65	92.10	.....	.....	.....
27	253.40	.....	84.85	139.75	28.80	.....	.....
28	1,387.42	.....	621.68	757.34	3.60	.....	4.80
30	632.16	.....	237.80	394.36	.....	.....	.....
Colored schools	1,672.94	.....	649.30	876.88	146.76	.....	.....
Building No. 16	387.59	.....	103.88	175.46	48.25	.....	.....
18	347.06	.....	114.74	178.20	54.12	.....	.....
21	290.60	.....	274.53	16.07	.....	.....	.....
22	140.05	.....	.....	113.07	26.98	.....	.....
29	507.64	.....	96.15	394.08	17.41	.....	.....
High-school buildings	11,661.04	285.00	4,083.05	5,954.21	447.23	.....	891.55
Undistributed	1,891.32	285.00	740.86	152.72	138.09	.....	884.65
White schools—Wilmington High	9,762.83	.....	3,301.22	5,757.63	297.08	.....	406.90
Colored schools—Howard High	9,689.00	.....	40.97	43.86	12.06	.....	.....

EXHIBIT XV.

Statement of Cost of Auxiliary Agencies and Other Activities of Wilmington Public Schools, Fiscal Year 1919–20.

	Total.	Salaries.	Supplies.	Other expense.
Total	$4,301.60	$3,716.66	$537.95	$46.99
Medical inspection of school children	3,104.61	2,566.66	537.95	.....
Contribution toward lunch-service expense	796.99	750.00	.....	46.99
Home and school gardens	400.00	400.00	.....	.....
Community use of school buildings[1]	.....	.....	.....	.....

[1] No items of expense appeared charged to this account.

EXHIBIT XVI.

Statement of Cost of Fixed Charges of Wilmington Public Schools, Fiscal Year 1919–20.

Charges.	Total.
Total	$18,002.50
Interest	17,002.50
On short-term loans	
On mortgages	2,265.00
On bonds	14,737.50
Contribution to teachers' retirement fund	1,000.00

EXHIBIT XVII.

Statement of Cost of Capital Outlays of Wilmington Public Schools, Fiscal Year 1919–20.

Schools.	Total.	Land and improvements to land.	New buildings.	Alterations to old buildings.[1]	Heat, light, plumbing, and electrical equipment.[1]	Furniture.[1]
Total	$54,470.19	$981.50	$5,651.77	$37,848.37	$970.90	$9,017.65
Administration property	582.85					582.85
Elementary school property	30,812.77	981.50		37,848.37	970.90	12.00
Undistributed	23,730.62	981.50		22,252.74	496.38	
Alterations to buildings	22,749.12			22,252.74	496.38	
Lot—12th and Orange Streets	700.00	700.00				
Lot—20th and Washington Streets	281.50	281.50				
White schools	11,408.31			10,933.79	474.52	
Building No. 1	114.00				[2] 114.00	
Building No. 4	25.00				[2] 25.00	
Building No. 8	50.24				[2] 50.24	
Building No. 10	17.50				[2] 17.50	
Building No. 11	3,662.15			3,635.95	[2] 26.20	
Building No. 14	28.85				[2] 28.85	
Building No. 17	182.00				[2] 182.00	
Building No. 19	30.73				[2] 30.73	
Building No. 25	7,297.84			7,297.84		
Colored schools	4,673.81			4,661.81		12.00
Building No. 18	1,921.57			1,921.57		
Building No. 22	2,752.27			2,740.27		12.00
High school property	14,045.69		5,651.77			8,393.92
White schools—Wilmington High	14,045.69		5,651.77			8,393.92
Colored schools—Howard High						
Property other than in school buildings	28.88					28.88

[1] Not repairs or replacements.
[2] Expenditures from Americanization funds.

EXHIBIT XVIII.

Statement of Payment of Debt of Wilmington Public Schools, Fiscal Year 1919–20.

	Total.	Payment of mortgages.	Payment of bonds.
Total	$27,500	$2,500	$25,000
Undistributed	7,500	2,500	5,000
Elementary school investment	20,000		20,000
High-school investment			

EXHIBIT XIX.

Enrollment in Private and Parochial Schools of Wilmington, Nov. 1, 1920.

Schools.	Under 6 years.	6-14, inclusive.	15-18, inclusive.	Over 18 years.	Total.
Private schools:					
Friend's School		250	63	1	314
Tower Hill	34	194	25	1	254
Total private	34	444	88	2	568
Parochial schools:					
St. Joseph's	1	66	1		68
St. Peter's		200	16		216
St. Ann's		292	26		318
St. Elizabeth's	11	360	3		374
St. Hedwig's		845			845
St. Joseph's Day		31	2		33
St. Mary's		515	7		522
St. Patrick's	1	431	37		469
St. Paul's	13	758	38		809
St. Peter's Cathedral		249	11		260
Sacred Heart	2	125	2		129
St. Stanislaus	2	268			270
St. Thomas	3	433	12		448
Salesianum		80	59		139
Ursuline Academy		139	26		165
Total parochial	33	4,792	240		5,065
Grand total	67	5,236	328	2	5,633

EXHIBIT XX.

Original Capacity of 30 Elementary School Buildings; Net Enrollment for 1910-1920—Per cent of Increase in Enrollment 1910-1920—Excess of Pupils over seating Capacity—Additional Capacity Needed—Number of Special Facilities Available—Number of Teachers, Principals, and Assistants.

Name of school.	Regular facilities: Date of erection.	Grades.	Capacity of school on basis of 40 pupils per class.	1909-10	1919-20	Net enrollment: Increase in number of pupils, 1910-1920.	Net enrollment: Percent of increase, 1910-1920.	Excess of pupils over seating capacity.	Regular classrooms now available.	Total classrooms required for present enrollment.[1]	Excess of classrooms required over those available.	Special facilities: Auditorium: Built for purpose.	Auditorium: Classrooms used as aud.	Gymnasium: Built for purpose.	Gymnasium: Classroom used as gym.	Shops: Manual training.	Shops: Other.	Cooking room.	Sewing room.	Drawing room.	Music room.	Science laboratories.	Library.	Principal's office.	Teachers' room.	Teaching force: Regular teachers.	Special teachers: Cooking.	Sewing.	Manual training.	Art.	Drawing.	Music.	Science.	Physical training.	Total.	Principal.	Assistant principal.	Total.
Elementary (white schools)—Continued.																																						
No. 1	1871	6, 7, 8	480	492	633	141	28.7	153	12	16	4	3												1		11		1		1		1				1		18
No. 2	1855-1909	1b-6b	400	483	509	25	5.2	108	10	13	3	1												1		11										1		12
No. 3	1858-1890	1b-5a	320	435	455	20	4.6	135	8	12	4													1		10										1		11
No. 4	1852-1892	6, 7, 8	480	472	653	181	38.3	173	12	17	5															16		1	1							1		19
No. 5	1876	1b-5a	320	320	237	[2]83	[2]25.9	[2]83	[illegible]	[illegible]	[2][illegible]													1		6										1		7
No. 6	1853	1b-5a	240	314	293	[2]21	[2]6.7	53	6	9	2													1		6										1		7
No. 7	1855	2b-3b, 5b-5a, 6b.	240	266	275	9	3.4	35	6	7	1												1	1		6										1		7
No. 8	1863-1891	1b-1a, 2a-3b, 4b-4a, 6a.	240	355	334	[2]21	[2]5.9	94	6	9	3	1												1		7												

[1] This does not include the small rooms over the front door now used as classrooms, but too small for regular classrooms.
[2] Decrease.

Original Capacity of 30 Elementary School Buildings; Net Enrollment for 1910–1920, etc.—Continued.

Name of school.	Date of erection.	Grades.	Regular facilities: Capacity of school on basis of 40 pupils per class.	1909–10	1919–20	Net enrollment: Increase in number of pupils, 1910–1920.	Net enrollment: Per cent of increase, 1910–1920.	Excess of pupils over seating capacity.	Regular classrooms now available.	Total classrooms required for present enrollment.	Excess of classrooms required over those available.	Special facilities: Auditorium: Built for purpose.	Auditorium: Classrooms used as aud.	Gymnasium: Built for purpose.	Gymnasium: Classroom used as gym.	Shops: Manual training.	Shops: Other.	Cooking room.	Sewing room.	Drawing room.	Music room.	Science laboratories.	Library.	Principal's office.	Teachers' room.	Teaching force: Regular teachers.	Special teachers: Cooking.	Sewing.	Manual training.	Art.	Drawing.	Music.	Science.	Physical training.	Total.	Principal.	Assistant principal.	Total.
Elementary (white schools)—Continued.																																						
No. 9	1895	1b–6a	400	544	589	45	8.3	189	10	15	5	1							1					1	0	13			1			1				1		16
No. 10	1869–1892	1b–5a	320	340	277	63	18.5	43	8	7	1													1		6										1		7
No. 11	1869–1909	1b–6a	320	277	526	249	89.9	206	8	14	6	1												1		14										1		15
No. 12	1860–1890	1b–5a	320	420	398	22	5.2	78	8	10	2													1		9										1		10
No. 13	1888	1b–1a, 2b 2a, 3b 3a, 6b–6a.	320	382	344	38	9.9	24	8	9	1													1		8										1		9
No. 14	1872–1892	1b, 6a	320	319	351	2	.6	31	8	9	1													1		7										1		8
No. 15	1874	1b–5a	280	418	413	5	1.2	133	7	11	4															10										1		11
Nos. 17 and 26	1883–1890	1b–6a	400	364	479	115	31.6	79	10	12	2													1		12										2		14
No. 19	1881	1b–6b	320	394	382	12	3.0	62	8	10	2													1		10										1		11
No. 20	1881	1b–5a	320	366	370	4	1.1	50	8	10	2													1	1	9										1		10
No. 23	1906	1b–6a	320	300	348	48	16.0	28	8	9	1													1	1	7										1		8
No. 24	1893	6, 7, 8	480	553	725	172	31.1	245	12	19	7	1				1			1	2				1		18		1		1	1	1		1		1		24
No. 25	1889	1b–6a	320	347	676	329	94.8	356	8	17	9															15										1		16
No. 27	1895	3b–3a, 4b–4a.	160	145	147	2	1.4	13	4	4	0													1		4										1		5
No. 28	1884	6, 7, 8	600	528	764	236	44.7	164	15	20	5	1				1				1				1		19		1		1		1				1		23
No. 30	1913	1b–6a	400	...	531	531	...	131	10	14	4	1												1		13										1		14
Total white elementary			8,320	8,864	10,708	1,844	20.8	2,388	208	278	70	10			0	2	0	0	2	3	0	0	0	21	2	250		4	2	3	1	4	0	1	265	25		290

Elementary (colored schools):[1]																																			
No. 18	80	[3] 79	133	54		55	2	3	1														2											
No. 21	320	203	235	32		[1] 87	8	6	[1] 2												1		7											
No. 32	120	[3] 60	129	69		9	3	4	1	1											1		4											
No. 20	440	[3] 400	571	171		131	11	15	4	1											1		13											
Total colored elementary	960	742	1,068	326	43.9	108	21	28	4	2	0	0	0	0	0	0	0	0	0	0	3	0	26											
Total white and colored elementary.	9,280	9,606	11,776	2,170	22.6	2,496	232	306	74	12	0		2	0	0	2	3	0	0	0	24	2	276											
High school		454	457	3	7					1					1	1			1				18	2	1	2	2	2	2	2		32	1	1	34
Total colored		1,196	1,525	329	27.5					3			1		1	1			1				45	2	1	2	2	2	2	2		58	5	1	64
Grand total		10,060	12,233	2,173	21.6																														
White high school		1,051	1,402	348	33.0																														
Grand total		11,111	13,635	2,521	22.7					13	0		3	0	1	3	3	0	1	0	24	2	295	2	5	4	5	3	6	2	1	323	30	1	354

[1] Decrease.
[2] Basement.
[3] These figures represent the average number belonging, according to the 39th annual school report, 1910, Wilmington, Del., pages 74–76, 79, 80, and 86. The figures for net enrollment by years, minus duplicates for these schools, are not given. Therefore the above is the only figure that can be compared with the 1920 enrollment.

EXHIBIT XXI.

From a Report of the Commerce Club of Toledo, Ohio.[1]

The work-study-play plan in some cities.

City and State.	Estimated population in 1918.	Number of schools operating under plan.	Attitude of superintendent to plan.	Special remarks.
Winnetka, Ill.	5,000	All on modified form.	Favorable.	Effects saving in capital investment, enriches school program, and makes possible the employment of competent, trained departmental teachers.
Detroit, Mich.	850,000	16 this year, 30 next year; modified form.	do.	Adjusts plans to facilities of particular buildings. Teachers enthusiastic about plan. Increases seating capacity of building from 16 to 40 per cent.
Kalamazoo, Mich.	50,000	All on modified form.	do.	Used in third to sixth grades, inclusive. Junior and senior high schools, all on departmentalized plan.
Minneapolis, Minn.	416,000	2 elementary, as emergency measure.	Prefers traditional plan.	
Bayonne, N. J.	70,000	2 elementary in modified form, as emergency measure.	do.	
Newark, N. J.	450,000	9	Favorable.	Has decided advantages over traditional plan which more than offset disadvantages. Teachers having had 1 year of successful experience in these schools receive a bonus of 5 per cent.
New Brunswick, N. J.	38,000	1 in modified form; platoon plan.	do.	Accomodates 16 sections of pupils to space usually assigned to 13 groups, or increases capacity 23 per cent.
Passaic, N. J.	70,000	2	do.	Average per capita annual cost reduced to 5-hour basis for all schools is $42.51 for traditional schools as compared with $37.73 for work-study-play plan schools.
Schenectady, N. Y.	108,000	1 in greatly modified form.	Favors traditional plan.	
New York City, N. Y.		None	do.	Was tried out under Mayor Mitchel's administration of New York City. School conditions were then made a political issue and present city administration elected on a platform opposed to work-study-play plan.
Troy, N. Y.	80,000	1 in modified form.	Favorable.	Satisfied with plan. Children get greater advantages than with old type of school.
Rochester, N. Y.	300,000	3 in modified form.	Favors in a conservative way.	Work has been successful to date. Present indications are that it will be extended rather than reduced.
New Castle, Pa.	36,000	4	Favorable.	Considered a marked improvement over traditional plan. Success depends upon the securing of teachers properly trained to do the special teaching which this type of school demands.
Pittsburgh, Pa.	504,000	6	do.	Will extend the use of the plan.
Sewickley, Pa.	6,000	All for 8 years.	do.	Has decided advantages over traditional plan.
Swarthmore, Pa.	3,000	All for 8 years; modified form.	do.	Very complete school equipment and program; per pupil cost $97.87.
El Paso, Tex.	77,000	Tried out by previous superintendents, in modified form; in none this year.		Worked fairly well in 3 schools; is not regarded with enthusiasm by the general body of teachers.

[1] Reprinted from School Life Aug. 1, 1920.