SCHOOL BUILDING NEEDS

OCTOBER 1965

MIDDLETOWN
CONNECTICUT

gelhardt, Engelhardt and Leggett • Educational Consultants

37.

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Middletown, Connecticut

October, 1965

Engelhardt, Engelhardt and Leggett, Educational Consultants
Purdy Station, Westchester County, New York

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I

GROWTH OF MIDDLETOWN

Middletown is a growing community. In total population it has been growing steadily for over a century and has demonstrated sizable increments each decade since 1880. At present, the population is estimated at 31,000 persons, exclusive of institutional population. Estimates made by the City Plan Commission indicate that there is sufficient land available for this population figure to double by the year 2000.

Table 1
ACTUAL AND ESTIMATED POPULATION
Middletown, Connecticut
1810 - 2000

Year	Population	Year	Population
1810	2,014	1910	11,851
1820	2,618	1920	13,638
1830	3,123	1930	24,554
1840	3,511	1940	26,495
1850	4,211	1950	29,711(25,644)*
1860	5,182	1960	33,250(29,419)*
			estimated
1870	6,923	1970	35,700
1880	6,826	1980	42,000
1890	9,013	1990	52,600
1900	9,589	2000	65,000

Source: 1810-1960, Bureau of the Census, U. S. Department of Commerce; 1970-2000, Middletown City Plan Commission, The Plan of Development, prepared by Technical Planning Associates.

* Second figure is without institutional population; estimates are also exclusive of institutional population.

It should be pointed out that the large gain in population between 1920 and 1930 was the result of the consolidation of the Town and City of Middletown. Because of the change in method of reporting institutional population between 1940 and 1950, the second figure is shown for 1950 and 1960. Rather than gaining population between 1940 and 1950, therefore, Middletown's population declined by three per cent. Chart 1 shows the changes in Middletown's population between 1930 and 1960 and the anticipated growth to the year 2000.

Middletown is also changing in character and will probably continue to do so. The new expressways which will make Middletown readily accessible to all parts of the state are already encouraging the development of large new residential areas for commuters. The expansion of Wesleyan University will also result in substantial growth of population. Both of these developments will cause much more emphasis to be placed on excellence in the public educational system than perhaps has ever beenexperienced by the community. The recommendations which are contained in this report are therefore based on a long-range plan which will permit development of a fine program with maximum economy.

The birth rate in Middletown has increased from 18.8 per thousand in 1950 to 25.8 per thousand in 1960, a statistic which is contrary to the general trend throughout the nation.

Middletown's population is also growing younger; the median age in 1950 was 34.1 and in 1960 it was 33.5; of the children under five years old there were 8.3 per cent in 1950 and 9.7 per cent in 1960; of the children ages five through 17

CHART I

POPULATION GROWTH

MIDDLETOWN, CONNECTICUT, 1930-2000

NOTE: ESTIMATES 1970-2000 MADE BY MIDDLETOWN CITY PLAN COMMISSION.

there were 15.4 per cent in 1950 and 19.9 per cent in 1960. The median school years completed by persons 25 years of age and over has increased from 8.9 in 1950 to 9.7 in 1960. During this period of growth and changing character of the community the median income for residents has increased from $2,978 in 1950 to $5,544 in 1960, as represented by the United States Bureau of the Census. All of these changes are of significance in the evaluation of the school system and the projection of future needs.

There is probably no single public institution of greater importance to a growing community than its public schools. The attractiveness of residential developments is measured by the quality of the schools. Communities that want to attract and hold industries are learning that improvement of the schools is one of the most critical factors.*

The changing situation in Middletown with the new demands that are placed on the public school system by a younger community and a suburban population requires that a re-evaluation of the entire educational program be made. First of all, the goals for secondary education need to be established in the light of demands which are placed on youth today. The broadening of the curriculum at the secondary level is essential, and this cannot be done in small high schools except at excessive expense. Students who wish to go on to college require a much more extensive program than has been offered in the past. The needs of other youths who terminate their formal education upon completion of high school are greater than they have ever been. Pupils need to develop interests and skills which will permit them to enter into the highly competitive

* Wall Street Journal - September 23, 1965.

occupational and educational market. The organization and administration of high schools which will enable boys and girls to achieve these ends has changed markedly in the last decade, and historic patterns have no place in the development of Middletown's school system if it is to face its responsibilities as it grows and changes as indicated by its population statistics.

Certainly attention should be given to the needs for changes in the elementary school program, including ungraded classes and team teaching, and in the secondary program to the vital necessity of providing extended programs for terminal boys and girls as well as those in the college preparatory group.

Middletown now stands on the threshold of a new era, and the decision of whether it is to follow tradition or move forward to a school system which is appropriate to the latter part of the 20th century is its most important decision. There is no question that its efforts at present, in both elementary and secondary education, are at best undistinguished. It possesses the financial ability and professional leadership to create the finest educational system in the state.

II

ESTIMATES OF ENROLLMENTS

Middletown's enrollments in kindergarten through grade twelve have risen from 5,319 in 1960-61 to 5,712 in 1965-66, an increase of 7 per cent. The figures do not include tuition students. The increase took place in the elementary grades where the rise was 21 per cent compared to a decrease of 7 per cent in the secondary grades.

By 1970-71 elementary enrollments are expected to increase to 4,152 pupils in kindergarten through grade six, a rise of 15 per cent, while secondary enrollments are expected to be 2,423 pupils in grades seven through twelve, an increase of 12 per cent. A decline in senior high school enrollments is anticipated during this period, the result of somewhat smaller numbers of children now in the upper elementary grades.

Estimates of future enrollments have been based on the following factors:

1. Number of births to residents of Middletown
2. Migration into the community of families with children of preschool and school age
3. Attendance at non-public schools
4. Retention in the high school grades
5. Tuition pupils attending Middletown's schools

Births

The number of children born to residents of Middletown each year since 1950 is shown in Table 2.

Table 2
NUMBER OF BIRTHS TO RESIDENTS
Middletown, Connecticut
1950-64

Year	No. Born	Year	No. Born
1950	482	1957	699
1951	581	1958	731
1952	587	1959	696
1953	561	1960	761
1954	631	1961	682
1955	672	1962	705
1956	661	1963	684
		1964	737

Source: Office of Public Health, State of Connecticut Department of Health, Hartford.

Since 1957 the numbers of births have been fluctuating almost yearly, as contrasted to the pattern for the country as a whole which has shown a slight downturn since 1961.

In order to predict entering enrollments in the public school, a comparison has been made between kindergarten enrollments and the numbers of children born five years earlier. The relationships are presented in Table 3 since 1959-60.

Table 3
NUMBER OF BIRTHS, 1954-60, AND ENROLLMENTS
IN KINDERGARTEN, 1959-60 THROUGH 1965-66
(with estimates through 1969-70)
Middletown, Connecticut

Birth Year	No. Born	School Year	Kindergarten Enrollment	Ratio
1954	631	1959-60	429	68
1955	672	1960-61	485	72
1956	661	1961-62	478	72
1957	699	1962-63	476	68
1958	731	1963-64	567	78
1959	696	1964-65	564	81
1960	761	1965-66	631	83
1961	682	1966-67	estimated 559	
1962	705	1967-68	578	
1963	684	1968-69	561	
1964	737	1969-70	604	

It has been estimated that 82 per cent of the children born each year will enter public kindergarten five years later. The figures are substantiated by the census of four-year olds and by calculating directly to the total enrollment in kindergarten including both parochial and public school pupils. In regard to the latter, this year the same number of children entered parochial and public kindergarten as the number born

five years previously, indicating that any migration out of Middletown of families with preschool children that might have occurred has been fully offset by the migration into the community of families with preschool children.

Migration

There are some evidences that net migration into Middletown is on the increase. The ratio between kindergarten and births has been rising, the slight out-migration of families with children of elementary school age is not evident this year. On the other hand, the number of building permits issued for new housing units has dropped slightly. If the migration pattern should reverse itself over the pattern of two or three years ago, then it is likely that the estimates of enrollments presented in this report will be conservative. It is not considered wise, however, for the district to build its schools on this assumption until the need becomes more evident, and it is recommended that this situation be studied yearly on the basis of the trends indicated here to evaluate the possibility of migration increasing. In any case, the recommendations of this report will allow some leeway for slightly larger numbers of children.

Table 4 presents the numbers of building permits issued for new housing units each year since 1950.

Table 4
NUMBER OF NEW HOUSING UNITS
AUTHORIZED BY BUILDING PERMITS
Middletown, Connecticut
1950-64

Year	Permits Issued
1950	230 (50 public)
1951	188
1952	226
1953	199 (72 public)
1954	109
1955	148
1956	263
1957	209 (16 public)
1958	173 (4 public)
1959	148
1960	191
1961	193
1962	164
1963	324 (204 apartment units)
1964	149

Source: 1950-58, Bureau of Labor Statistics, U. S. Department of Labor; 1959-64, Bureau of the Census, U. S. Department of Commerce.

An analysis of past enrollments by grades in the public schools has been made to determine the pattern of migration and the rate of retention in the high school. Past enrollments by grade each year since 1959-60 are shown in Table 5.

Table 5
PAST ENROLLMENTS BY GRADE
Middletown, Connecticut
1959-60 through 1965-66

Year	K	1	2	3	4	5	6	7	8	9	10	11	12
1959-60	429	422	451	411	369	368	433	447	370	400	382	347	324
1960-61	485	456	419	447	419	393	370	430	442	447	366	327	318
1961-62	478	498	443	415	440	418	358	382	430	518	432	334	283
1962-63	476	510	455	427	405	413	415	379	365	507	502	405	303
1963-64	567	508	498	447	410	384	401	410	361	341	494	464	385
1964-65	564	607	489	487	456	399	385	389	404	314	321	451	446
1965-66	631	614	552	481	487	445	397	388	397	345	307	314	414

Enrollments 1959-60 through 1964-65 are as of the end of September; those for 1965-66 are as of September 13th.
Tuition pupils not included.

Shown in Table 6 are the percentages of movement from one grade to the next. The four-year period from 1962-63 to 1965-66 has been studied as well as the changes over the past year (1964-65 to 1965-66).

Table 6
MOVEMENT FROM GRADE TO GRADE
Middletown, Connecticut
1962-63 through 1965-66

From Grade	To Grade	4-year Period	2-year Period
K	1	108	109
1	2	95	91
2	3	98	98
3	4	99	100
4	5	97	97
5	6	99	99
6	7	99	101
7	8	99	102
8	9	90	86
9	10	97	96
10	11	93	94
11	12	94	94

Tuition pupils not included in analysis.

As stated earlier, there is some slight evidence that out-migration in the elementary grades is lessening, and it has been assumed in the estimates of enrollments that a balance will be achieved and that out-migration of families with children in the public schools through grade eight will be compensated for by in-migration of families. The marked changes between kindergarten and grade one and

grades one to two are believed to be the result of retention of pupils in grade one. In making the estimates it has been assumed that fewer pupils will be retained in grade one than formerly.

Attendance at Non-Public Schools

Of Middletown's children 22.6 per cent attend non-public schools. This year there are 1,685 pupils attending the three parochial elementary and two parochial high schools. The numbers are given by grade and school in Table 7.

Table 7
ENROLLMENTS IN PAROCHIAL SCHOOLS
Middletown, Connecticut
1965-66

Grade	St. John	St. Mary	St. Sebastian	Mercy High	Xavier High	Total
K	53	38	38			129
1	53	37	48			138
2	48	41	54			143
3	58	37	56			151
4	45	51	53			149
5	42	33	41			116
6	46	43	36			125
7	50	43	38			131
8	47	45	50			142
Total Elementary	442	368	414			1,224
9				72	89	161
10				101	53	154
11				71	75	146
Total Secondary				244	217	461
Total All Grades						1,685

High School enrollments include Middletown pupils only.

To show the pattern of parochial enrollments more clearly, the numbers of pupils attending non-public schools from 1961-62 through 1964-65 are presented by ages.

Table 8
PUPILS ATTENDING NON-PUBLIC SCHOOLS, AGES 4-17
Middletown, Connecticut
1961-62 through 1964-65

Age	1961-62	1962-63	1963-64	1964-65
4	28	44	37	25
5	95	123	136	106
6	104	112	145	130
7	98	118	119	123
8	105	113	119	125
9	116	112	111	112
10	101	122	121	110
11	111	110	125	114
12	118	120	119	108
13	72	91	130	123
14	32	37	112	162
15	20	24	40	118
16	13	16	29	65
17	4	6	12	29
Total - Non-Public	1,017	1,148	1,355	1,450
Total - All Schools	6,550	6,766	7,098	7,126
Per Cent Non-Public	15.5	17.0	19.1	20.3

With the opening of the parochial high schools the percentage of non-public school pupils rose. While the number of children ages 4 to 12 attending parochial school remained between 20 and 22 per cent of the total, the number of children ages 13 to 17 rose from 6.6 per cent to 20.5 per cent. The influence of the opening of the parochial high schools is also apparent in Table 5, where the gain that had taken place between grades eight and nine in the public schools turned into a loss in 1963-64. Allowance has been made in the estimates of enrollments for pupils leaving the public eighth grade and entering either the parochial high schools or the Vinal Regional Technical School.

In the elementary grades it has been assumed that the same numbers of pupils will continue to enter the parochial schools. At present, these schools have no plans to increase their capacities. If the rate of migration were to increase, it would be likely to place a greater burden on the public schools.

Retention in High School

The rates of retention, or holding power, of the high school in grades nine through twelve have shown some improvement since 1960-61. The retention between grades ten and eleven and eleven and twelve, however, at 94 per cent is lower than desirable. It is interesting to observe that the rate of retention of Haddam and Middlefield pupils in Middletown between grades ten and eleven is considerably lower than that of Middletown residents; between grades eleven and twelve it is slightly higher. The existing rates of retention have been used in estimating high school enrollments.

With an improved program for all students, it should be possible to raise these percentages closer to 100 per cent, which in turn would tend to increase the estimates of enrollments.

Tuition Students in the High School

Haddam and Middlefield have sent pupils in the high school grades to Middletown for many years. Table 9 presents their combined enrollments in grades ten through twelve.

Table 9
PUPILS ATTENDING MIDDLETOWN SCHOOLS ON TUITION
Haddam and Middlefield
1960-61 through 1964-65

Year	10	11	12	Total
1960-61	65	69	67	201
1961-62	87	57	61	205
1962-63	118	78	51	247
1963-64	106	98	74	278
1964-65	87	90	96	273

In making all the estimates of enrollments, these pupils have been excluded in order to get a clear picture of the trends of Middletown's students alone.

Estimates have been made of Haddam's and Middlefield's enrollments. From a total of 273 pupils in Middletown in 1964-65 they are expected to rise to nearly

500 pupils by 1973-74 in grades ten through twelve. For grades nine through twelve in that year there are expected bo be over 650 students.

Estimates of Enrollments

Based on the foregoing factors, estimates of enrollments have been prepared. They are presented by grade groupings in Table 10.

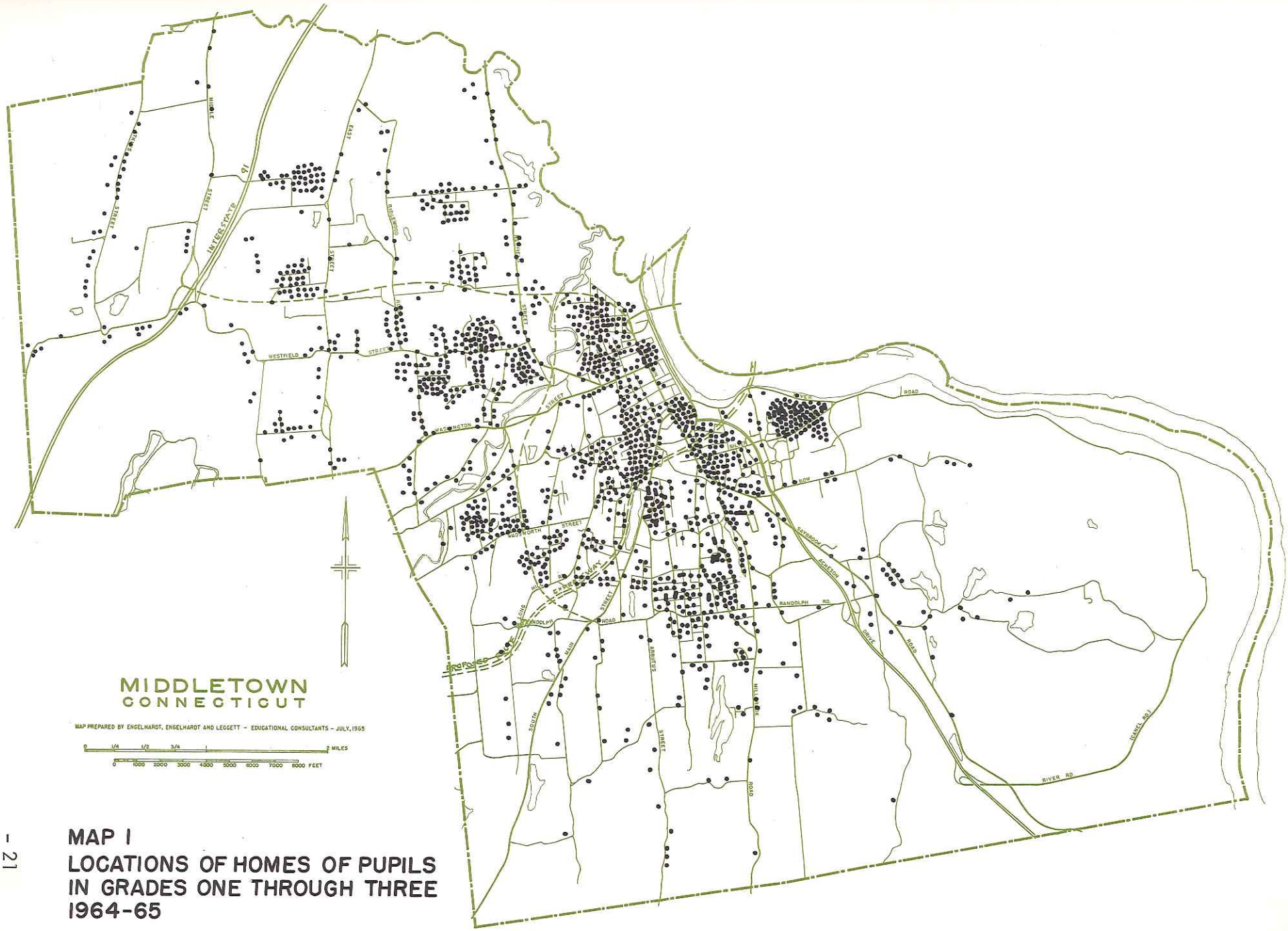
Table 10
ESTIMATES OF ENROLLMENTS
Middletown, Connecticut
1966-67 through 1978-79

Year	K-6	7-9	10-12	K-5	6-8	9-12	K-12
1964-65	3,387	1,107	1,218	3,002	1,178	1,532	5,712
1965-66	3,607	1,130	1,035	3,210	1,182	1,380	5,772
1966-67	3,764	1,127	891	3,319	1,230	1,233	5,782
1967-68	3,897	1,175	899	3,410	1,329	1,232	5,971
1968-69	3,971	1,274	915	3,490	1,413	1,257	6,160
1969-70	4,094	1,358	912	3,542	1,520	1,302	6,364
1970-71	4,152	1,465	958	3,588	1,597	1,390	6,575
1971-72		1,542	1,049		1,747	1,475	
1972-73		1,692	1,121		1,754	1,618	
1973-74		1,699	1,220		1,768	1,729	
1974-75		1,713	1,289		1,698	1,865	
1975-76		1,643	1,424		1,743	1,928	
1976-77		1,688	1,425			1,948	
1977-78			1,436			1,942	
1978-79			1,375			1,924	

Enrollments for 1964-65 and 1965-66 are actual. Tuition students not included in the estimates.

Distribution of Pupils

Map 1 shows the locations of homes of pupils attending grades one through three in 1964-65. The distribution of pupils has been used in projecting elementary enrollments in the schools throughout the district and in studying the question of location of a high school.



MAP 1
LOCATIONS OF HOMES OF PUPILS
IN GRADES ONE THROUGH THREE
1964-65

III

EXISTING FACILITIES

Middletown has 10 elementary schools, a combination elementary-junior high school, a junior high school, and two senior high schools. Their locations are shown on Map 2.

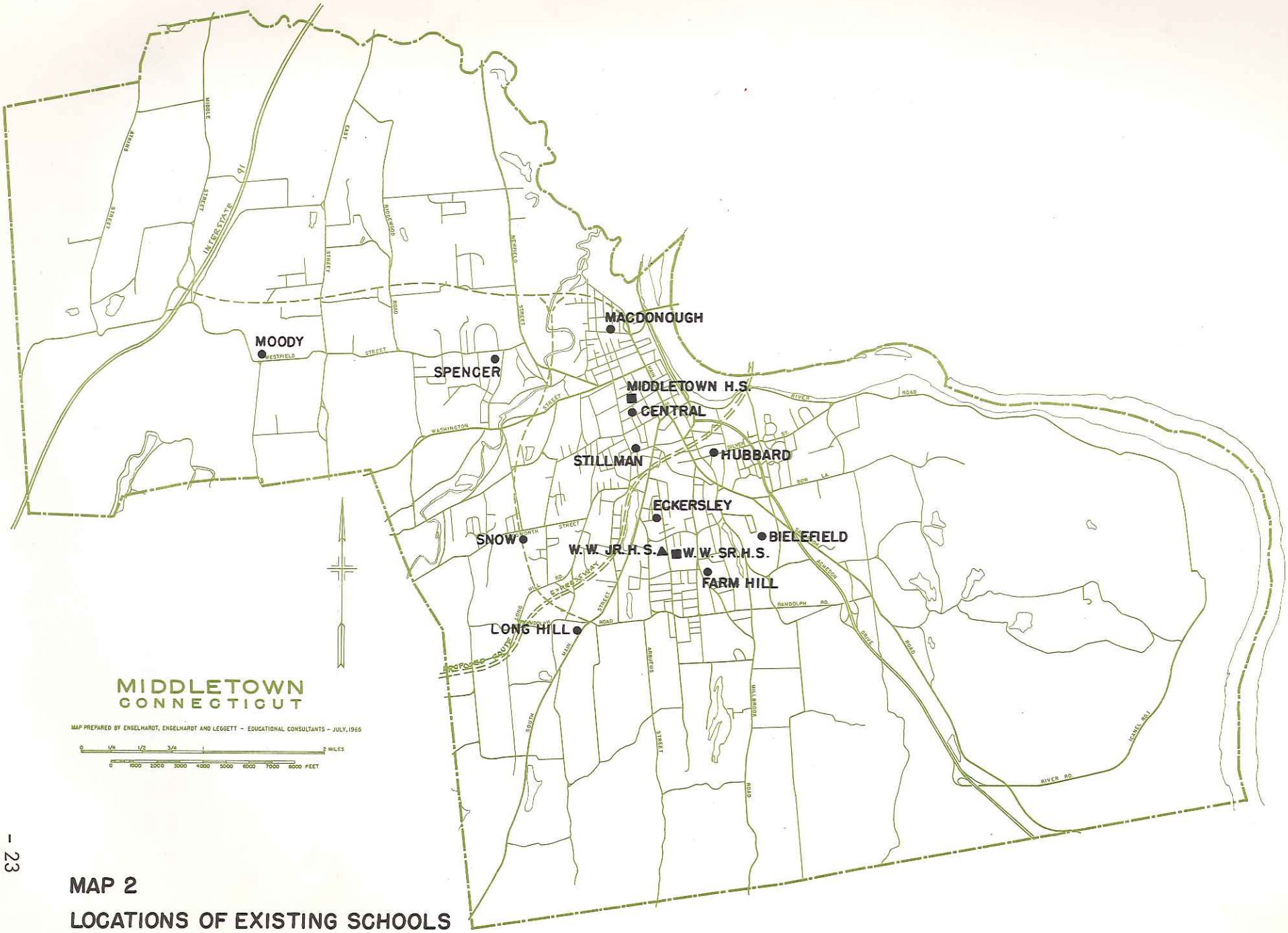
The capacities of the schools based on present usage are shown in Table 11. Capacity has been determined in the following manner:

elementary schools - 25 pupils per regular classroom and 20 in kindergarten on half day session

junior high school - 27 pupils per home room - in regular classrooms and science rooms

senior high school - at 80 per cent utilization, since it is not possible to schedule every teaching station to its maximum every period of the day

special education - at 15 pupils



MAP 2

LOCATIONS OF EXISTING SCHOOLS

Table 11
CAPACITIES OF SCHOOLS AND GRADES HOUSED
(with current enrollment)
Middletown, Connecticut

School	Grades Housed	No. of Classrooms	Capacity	Enrollment 9/13/65
Elementary				
Bielefield	K-6	8, 1 K	240	248
Central	K, 3-8	13, 1 K	377	386
Eckersley Hall	K-6	6, 1 K	190	176
Farm Hill	K-6	12, 1 K	340	399
Hubbard	K-4	10, 1 K	290	312
Long Hill	1-4	4	100	99
Macdonough	K-6*	11, 1 K	300	323
Moody	K-6	18, 2 K	530	566
Snow	K-6*	18, 2 K	510	514
Spencer	K-6	18, 2 K	530	582
Stillman	K-3	7, 1 K	215	215
Total Elementary		125, 13 K	3,622	3,820
Woodrow Wilson Junior High	7-9	29	783	871
Middletown High	9-12		628	613
Woodrow Wilson Senior High	10-12		984	757
Total Capacity			6,017	6,061

* and Special pupils - Macdonough at 10 per room; Snow at 15 per room.
Capacity is calculated in elementary schools at 25 per classroom and 20 in kindergarten on half day session, in junior high at 27 per home room, and in high school at 80 per cent utilization.

In the elementary schools there is a wide variation in class sizes. Classes range from as low as 15 to as high as 33. The low figure results from splitting a class of 33 pupils. It is obvious that children do not enter a grade in even groups of 25 or 30. Out of 118 classes in grades one through six, 10 have more than 30 pupils each.

In the kindergarten 16 out of 23 sections had more than 25 pupils each and only 2 had a desirable size of 20 pupils each.

Some general points applicable to many of the schools should be emphasized:

Several of the schools are too small to provide a satisfactory elementary program. It is costly to provide special facilities for a school of only one classroom per grade. More than one classrom per grade makes it possible to provide for ability grouping of pupils and greater interaction among teachers in working on curriculum and in understanding pupils. The best teaching methods cannot be used where there is only one class per grade, since the teacher must attempt to handle the entire range of subject matter and pupil ability in the same classroom. Good teaching techniques have proved the desirability of being able to group and regroup children according to their mastery of the various areas of work. Reading groups for advanced achievers should be separate from those who have been slow to develop in this area; the same applies to arithmetic and spelling. It is entirely possible for a child to be in the advanced group of one specialty and the slow group of another, in a kind of flexible grouping which is impossible to attain without adequate enrollments to ensure that a group can be formed for each ability level.

By this kind of grouping and regrouping, it becomes possible for the teacher to direct attention to the specific needs of each child, and progress can be made more rapidly. Three would be a desirable number of classrooms per grade, with four the maximum.

Many classrooms are too small to carry on a modern educational program. An adequate classroom will include:

a. A wide variety of resources. Books, newspapers, magazines, illustrative exhibits, and other audio-visual aids require ample space for use and storage.

b. Greater participation in projects by each pupil. Space is needed to work with large groups, small groups, and individuals.

c. More flexibility in the classroom has turned it into a learning laboratory where a variety of activities can take place at the same time.

Many of the older classrooms follow the traditional lecture and recitation pattern with little opportunity for flexibility, projects, or small group work. Many rooms have an excessive amount of chalkboard and insufficient bulletin board.

The sites of the older schools are far below minimum standards in size. Play area is extremely limited and, in some cases, covered with gravel. The limitations are particularly confining for the upper elementary pupils, for it is at this age that their interest in games which require large play areas is developing. The physical development of the child along with his intellectual development should be a major concern of the school program.

No special provision has been made for art or science in the elementary grades. Creation of a combination storeroom-workroom for art and science has been found to be valuable in stimulating these programs.

Little or no provision has been made for special teachers in individual or small group work, such as speech therapist, remedial reading teacher, psychologist, or music instructor. In some cases, provisions for the nurse are makeshift.

It is strongly recommended that hot lunch service facilities be provided in each elementary school to avoid the necessity for children spending a large part of the school day going home for lunch. This lunch service can be very simple with a one-plate meal offered at a very reasonable cost. In view of the lack of kitchens in the various schools, it might be well for the district to consider a central kitchen, transporting food to each of the elementary schools. This probably would be more economical than to construct new kitchens at each location.

Special mention should be made of the library. Although provision has been made for libraries in the elementary schools, neither they nor those in the secondary schools meet acceptable standards. Because of the development of knowledge in scope and depth of understanding, books are assuming an even more vital role in the educational process than formerly. The emphasis of the library is broadening to include not only books, which remain the basic tool of the learning process, but also other resources of learning - motion pictures, slide films, microfilms, recordings, teaching machines, taped lessons, and a continually growing reservoir of periodicals, pamphlets, maps, and pictures.

The function of the library, as well as its tools, has been undergoing a change. The librarian is taking a more active role in working with teachers, keeping them informed of new developments and informational services, in many cases initiating programs, and in general encouraging the demand for library services. Also developing is the teaching function of the librarian in working with small groups and individuals in stimulating their interests and meeting their special needs. The close relationship between the librarian and the teacher is illustrated in the provision of professional curriculum workrooms in the library area. Library classrooms and smaller spaces such as carrels, seminar and conference rooms, where pupils can learn more about the function of the library and how to use it effectively, are being introduced in many schools.

Emphasis on independent self-directed work by the pupil is growing and it will be in the library that he will begin to receive major preparation and support for this process. This will require an expanded central resource unit where opportunities for individual work are present and yet where, since the pupil is not yet ready for independent work, supervision and guidance are available to him when necessary.

The need for library facilities in the elementary schools has been recognized in recent years. There should be room to seat at least 40 pupils and to house a minimum of 8,000 volumes in each elementary school. Many school systems are providing a professional librarian at least part time to elementary schools. There

should be facilities for audio-visual storage, maintenance, and preview, with sufficient space for a librarian's workroom and office and small group rooms for listening to recordings, television, and small group or individual conferences.

Bielefield Elementary School

Built in 1954, the Bielefield Elementary School is a one-story building located on a site of ten acres. It has eight classrooms and one kindergarten, giving it a capacity of 240 pupils; enrollment this year is 248 pupils in kindergarten through grade six.

The typical classroom is smaller than desirable. It has an asphalt tile floor, plaster walls, and acoustic tile ceiling. Chalkboard has been installed on one wall and knotty pine paneling on another. Presumably the latter is intended for tacking purposes, but in some cases the location of storage cabinets makes it inaccessible. The rooms all have sinks, work counters, and built-in storage. The kindergarten is larger than the regular classroom and has a coat room and toilet adjacent.

The library, with seating for 24 pupils, is not large enough to seat an entire class.

There is no separation between the principal's office and his secretary's office. At present, the school does not have a full-time principal. When it is enlarged, however, provision should be made for a separate office for the principal so that he may conduct interviews with parents, teachers, and pupils in privacy.

The all-purpose room is used for assembly, lunch, and physical education. It is smaller than desirable, particularly for these uses; and, if this school is enlarged, consideration should be given to providing a second activity space. The stage is satisfactory.

For the most part, corridors and toilets have excellent finishes. Use of terrazzo on toilet room floors, however, is not as satisfactory as ceramic or quarry tile.

Bielefield is too small a school to carry on an adequate elementary school program. It should be enlarged to provide not less than three classrooms per grade. A full-time principal will be required. A playroom should be provided which will enable an adequate physical education program to be carried on. Consideration also needs to be given to small group as well as large group activities and to the provision for grouping and regrouping children according to the speed of learning.

Eckersley Hall Elementary School

The Eckersley Hall School was built in 1928 and has one story and a basement. The school is located on a site of only two acres. There is a very small play area covered mainly with gravel. If this school is to be used for any length of time, the entire playground should be paved. There are six classrooms and a kindergarten in the basement, giving it a capacity of 190 pupils; enrollment this year is 176 pupils in kindergarten through grade six.

Classrooms are extremely small ranging in size between 500 and 600 square feet. They have varnished wood floors, plaster walls, and acoustic tile ceilings.

Wardrobes and bookcases are located at the rear. One of the rooms has only coat hooks. There are two walls of chalkboard and a small amount of bulletin board. Lighting is fluorescent, but below acceptable standards. Rooms have only one electric outlet. One classroom has a drinking fountain and a toilet adjacent.

The stairway to the basement is steep and does not have a center railing. The kindergarten in the basement is a particularly poor facility. Its general appearance and location in the basement hardly make it appropriate for a child's first introduction to school. Window sills are high. The ceiling is covered with exposed pipes. Bulletin board is too high for small children to reach. Chalkboard is composition board and is unsatisfactory. Coat storage and toilet facilities are near the room.

The library is located in the basement. It has seating for 20 pupils and about 1,000 volumes. The principal's office is a good size, but it is preferable to locate this on the main floor so that it is readily accessible to visitors.

The all-purpose room is used for assembly, lunch, and physical education. It has a small stage.

Because of several factors - the size of site, the difficulty of providing satisfactory facilities, the few classrooms, and the impracticality of adding to the building - it is recommended that this school be considered for abandonment as soon as provision can be made for its pupils elsewhere.

Farm Hill Elementary School

The Farm Hill School contains two units: the first, built in 1927, has eight classrooms, administrative spaces, library, art room, and auditorium; the annex, opened in 1964, has four classrooms, kindergarten, and gymnasium. The school has a capacity of 340 pupils; enrollment this year is 399 pupils in kindergarten through grade six.

The typical classroom in the original building is small. It has a varnished wood floor and acoustic tile ceiling. Some of the tiles are loose. Chalkboard is installed on two walls; some of it has deteriorated and should be reground or replaced. Only a small amount of bulletin board has been provided. Radiation is direct. Ventilation is poor, because the ventilating ducts have been closed. Lighting, which is fluorescent, is only fair. The rooms have old movable furniture in poor condition, a built-in bookcase, a teacher's closet, and a wardrobe. Only one electric outlet is provided, making it difficult to use the variety of audio-visual equipment that is now available.

The auditorium, library, and art room are located in the basement. A center rail should be installed in the stairway leading to this area. The auditorium has high windows, a concrete floor, and acoustic tile ceiling. Radiation is exposed on the ceiling. The stage is very small and offers little opportunity for a satisfactory dramatic program.

The library seats only 18 pupils and has about 1,200 volumes. Here, again, pipes are exposed on the ceiling; one is quite low.

The art room has a sink, work counter, and storage cabinets. Tackboard is insufficient.

Classrooms in the annex are a much more satisfactory size for elementary school pupils. They have sinks, drinking fountains, and work counters. Each classroom has a toilet and storage closet. Two rooms share a coat alcove and an exit to the out-of-doors. Ample chalkboard and bulletin board have been provided. Some of the bulletin board is inaccessible, however, because of the location of the work counter and storage cabinets. Classroom furniture is satisfactory and a good supply of bookcases and storage cabinets has been provided.

The kindergarten has its own toilet, storeroom, and exit to the out-of-doors. It is a good-sized room.

The gymnasium is an excellent size and has two exits to the out-of-doors. It has cinder block walls and an asphalt tile floor. It is recognized that asphalt tile is less expensive than wood, but it is doubtful that it will ever be as satisfactory as wood for a gymnasium, since wood has greater resiliency. It would also be advisable to provide a padded wainscot rather than cinder block.

The site is nearly fully occupied by buildings, and there is not much area left for play. In order to facilitate parking, it is suggested that the islands in the parking area be removed.

In view of the existing limitations of site, it is important to add as much land as possible. The Farm Hill School will remain a permanent part of the school plant

for many decades, and eventually it will be desirable to add more classrooms to this building and increase the outdoor play area. The library should be improved to seat at least 40 pupils. As in other elementary schools throughout the district, serious consideration should be given to the need for a lunch program.

Hubbard Elementary School

The Hubbard School was built in 1908 and is located on a site of five acres. The playground is covered with gravel. The school has 10 classrooms and a kindergarten, giving it a capacity of 290 pupils; enrollment this year is 312 pupils in kindergarten through grade four. Fifth and sixth graders from this district attend the Snow and Bielefield Schools.

This is one of the poorest schools in the district. Classrooms are small, wood floors are in poor condition, lighting is only fair, chalkboard has deteriorated, radiation is direct with no protection for pupils. Furniture, although movable, is old and should either be refinished or replaced. The kindergarten is simply a regular classroom. Toilets have poor finishes; floors are painted concrete, walls are painted brick, and partitions are of wood.

Special facilities are extremely limited. The former library is being used as a classroom (this has not been included in the capacity of the school); and a small basement storeroom is now being used for the library.

The auditorium is small, and its size is being even further reduced by the construction of a classroom for preschool children. The principal's office serves also as the health room.

Since this is a non-fire-resistive building, smoke doors have been provided and sprinklers are located in the corridors. There is a fire escape on the front of the building.

It is recommended that this school be replaced in an early priority. Sufficient land should be obtained to provide adequate play areas and parking.

Long Hill Elementary School

The Long Hill School, built in 1926, should be regarded as only a temporary expedient for the district. It has only four classrooms and a small auditorium. The classrooms have wood floors, plaster walls and ceilings, one wall of chalkboard, and a small amount of bulletin board. Two of the rooms are quite small.

The school location, at the corner of a busy intersection, is not appropriate for young children and the size of the building precludes any form of ability grouping or provision for special facilities. The school now houses 99 pupils in grades one through four.

The school should be abandoned at an early date.

Macdonough Elementary School

Built in 1925, the Macdonough School has 10 classrooms, a kindergarten, and a special classroom. Assuming that the latter should contain no more than 10 children, the capacity of the building is calculated at 300 pupils; present enrollment is 315 pupils in kindergarten through grade six and 8 pupils in the special class. The school is

located on a site of only two acres, but additional land for a playground has been acquired by the Park Department.

This school will undoubtedly continue to be operated for many years and should be maintained in optimum condition. The typical classroom is a satisfactory size. Floors are of wood and are heaving in some places. The classrooms need acoustic treatment. Two rooms contain fixed seating. There is an insufficient amount of bulletin board. Some rooms have an excessive amount of chalkboard, much of which is in poor condition. Radiation is exposed. The regular classrooms do not have sinks. Some storage and bookcases have been built in. Lighting is fair.

Special education pupils are housed in a regular classroom. It has a sink and work counter. Classrooms for special education require more space than is usually provided in a regular classroom, and some simple materials of a crafts nature should be available. For example, it is desirable to have a large free area which can be used for class work or other projects, small cooking area, ceramics bench, shop area, and a growing area, in addition to the customary toilet facilities, wardrobe, chalkboard and tackboard, bookshelves, and storage.

The kindergarten is an exceptionally large room and has a folding partition. Cubicles and wardrobes have been provided. It has its own toilet facilities.

The multi-purpose room is a good size and has ample natural lighting. The stage has a folding partition.

The principal's office is located on the second floor; only a partial partition separates it from the outer office.

The library is small and crowded with seating for 28 pupils.

Consideration might be given to installing smoke doors at stairways.

It is suggested that the special education facilities be centralized at a new Hubbard school which will thus relieve Macdonough of this class. When this is done the special classroom could be converted to a library and the present library might be used for small group work and individual instruction. It is also suggested that a playroom be added to this building and that the present multi-purpose room be used for assembly and lunch.

Van Buren Moody Elementary School

The Moody School was opened in September, 1964, and has 18 classrooms and 2 kindergartens. Its capacity is 530 pupils; enrollment this year is 566 pupils in kindergarten through grade six. This is a very attractive school set on a fine site of 34 acres; outdoor play space is excellent.

Classrooms are still not as large as desirable and do not have as much built-in storage as some of the other schools. Nevertheless, facilities and finishes are satisfactory. The rooms have work counters and sinks, and ample chalkboard and tackboard. Toilets are located between the rooms. The rooms have asphalt tile floors, cinder block walls, and acoustic ceilings. Kindergartens have exits to the out-of-doors.

The library has ample seating but lacks shelf space. The administrative suite is excellent. It includes the general office, principal's office, health room, teachers' room, and conference and workroom.

This school has a combination room for assembly and physical education and a separate cafeteria with a well-planned kitchen. In future planning, the district may wish to consider a different arrangement. A cafeteria-assembly room and separate gymnasium have been found to be a good combination, since fewer problems in scheduling arise when these functions are combined than with the present arrangement. It is then possible to use the gymnasium full-time for physical education. Consideration should be given to providing a padded material on the walls of the physical education space. A teachers' dining room has been provided.

Wilbert Snow Elementary School

The Snow School was opened in 1955 and is one of the most attractive schools in the district. The natural contours of the site have been used effectively with seven separate units joined by paved walks. The site contains 25 acres. Ample play areas have been provided. The walks between buildings should be repaved.

Special facilities are excellent. Five of the units contain four classrooms each. Two classrooms are used for special education and two for kindergarten, all of which are belowacceptable standards of size. The capacity of the school, under present usage, would be 510 pupils; enrollment this year is 491 pupils in kindergarten through grade six and 23 pupils in special education classes.

The administration building contains a cafeteria, auditorium, library, offices, health room, and teachers' room. The auditorium has a good stage and a sloping floor; seating has been provided for 325. The cafeteria has an asphalt tile floor,

plastic wainscoting, corkboard walls, and acoustic tile ceiling. Attention should be given to securing the ceiling tiles into place.

The library is a pleasant room with adequate seating for 35 pupils. Consideration might be given to converting part of the extensive area set aside for the teachers' lounge to a professional library and workroom.

The classroom buildings have four classrooms each. Although larger than many of the classrooms throughout the system, they still do not meet a desirable size. Each room has a sink and work counter. Chalkboard and bulletin board appear to be ample. Extension of the bulletin board on the floor, however, has created a maintenance problem in that it is difficult to clean. Chalkboard is of composition board and should eventually be replaced with a more durable material. Lighting is only fair. Additional built-in storage should be provided in the classrooms.

The gymnasium was designed for community as well as school use and is an excellent facility.

Bertrand E. Spencer Elementary School

The Spencer School was built in 1951; 10 classrooms were added in 1958. The school is located on a site of 12 acres and has a satisfactory playground. There are 18 classrooms and 2 kindergartens, giving it a capacity of 530 pupils; enrollment this year is 582 pupils in kindergarten through grade six.

One of the major deficiencies of this school is in the area of special and supporting spaces. These were all designed for the original building and are not adequate

to care for the larger enrollment. The multi-purpose room serves for assembly, luncheon, and physical education. It is small, only about 40 by 60 square feet. Ceiling tiles should be secured in place. Thought should be given to changing the layout of the kitchen to provide greater efficiency.

The library is one of the poorest in the district. There is seating for only 16 pupils, and it is a small crowded room. The health room and the workroom adjacent to the teachers' room are both small.

The typical classroom has a work counter and sink with drinking fountain, built-in storage, and provision for pupils' outer clothing. Provisions for chalkboard and tackboard are satisfactory. They have clerestory lighting which has been painted to reduce the glare. There are evidences of roof leaks in the original building. Many of these rooms are below desirable size. The kindergartens are larger and have their own toilets, coat rooms, and exits to the out-of-doors. Provision for additional storage should be made in the classrooms in the addition.

This school will be continued in use for many decades. It is located in a growing part of the district and its deficiencies should be corrected. A new library should be added which will provide seating for at least 40 pupils with bookcase space to house at least 8,000 volumes. The present library may be used for small group instruction. A playroom should be provided to enable the physical education program to operate throughout the day. Additional classrooms will be necessary in order to meet the needs of the increasing enrollment in this area.

Florence A. Stillman Elementary School

The Stillman School has two stories and a basement and was built in 1936. The building is set back only slightly from the sidewalk and occupies most of the one-acre site. The City athletic field to the rear is used by high school pupils. The building is not fire-resistive and has open stairways; consideration should be given to installing smoke doors.

Stillman has seven classrooms and a kindergarten. Its capacity is 215 pupils; present enrollment is 215 pupils in kindergarten through grade three. Its upper elementary pupils attend Central.

The typical classroom has asphalt tile floor, plaster walls, and acoustic tile ceiling. More bulletin board has been provided than in some of the other older schools. Chalkboard is poor and should be reground or replaced. Although the rooms are not large, some of them have a workroom between two rooms which contains a sink and storage facilities. Built-in storage and wardrobes are also located in the classrooms. The kindergarten is a good size and has its own exit to the out-of-doors. The room has a sink, drinking fountain, storage facilities, and wardrobes.

The auditorium seats 225 pupils and it a satisfactory space. Eventually the old wood seats should be replaced. A large area in the basement which is also used for groups will be converted to a preschool room. This school does not have a library, and thought should be given to making provision for it in the future.

With remodeling and an addition, Stillman could be a very satisfactory elementary school for many decades. It is recommended that a playroom, library,

art-science space, and new offices be provided, along with additional classrooms. This will bring the school up to three classrooms per grade plus two kindergartens. Arrangements should be made to acquire the park land immediately adjacent.

Central Elementary School

Central School has had a somewhat spotty existence. The first building on the site was built in 1842. The school was partly destroyed by fire in 1878, and was repaired and renovated in 1879; in 1911 a fire again damaged the building but it was quickly repaired. In 1951 the structure was heavily damaged by fire, and in 1952 the present schoolhouse was constructed.

Unfortunately, while all this building and rebuilding was going on, the site remained small, encompassing about one acre. The National Council on Schoolhouse Construction suggests a site of 14 acres for a school of this size.

As a result of site limitations, the building has been located close to the street where traffic movement and noise have the maximum adverse effect. There are no satisfactory parking spaces for cars of teachers, custodians, other staff members, or visitors. The south playground is used for parking but this should be discontinued. The sidewalk needs replacement. Although the playground area is limited in size, it has been fully blacktopped so that it has all-weather potential.

The surrounding area consists of residential dwellings, Wesleyan University buildings, and factories about one block away. Urban renewal may affect the nature of the surrounding area.

The building contains one kindergarten room, seven elementary classrooms, four secondary classrooms, one home economics room, two science rooms, one art room, one industrial arts room, a gymnasium, a music space, and a library. This year the building houses 25 kindergarten pupils, 180 pupils in grades three through six, and 181 seventh and eighth graders, a total of 386. Under present usage, its functional capacity would be 377 pupils.

The junior high school pupils are the only seventh and eighth graders outside of Woodrow Wilson Junior High School. In ninth grade they enter Middletown High School while the pupils at Woodrow Wilson Junior High continue there through the end of ninth grade. This is not a satisfactory arrangement. A junior high school with only 80 to 90 pupils in a grade is too small to provide the rich variety of experiences required by the children except on a very uneconomical operating basis. In addition, these children are separated from contact with the bulk of the seventh, eighth, and ninth graders who are attending Woodrow Wilson Junior High.

Within the school, which is essentially a two-story structure, quality of the instructional space varies. The kindergarten is an attractive room of adequate size. Typical elementary classrooms are small. Each is provided with fluorescent lighting, acoustical tile ceiling, movable furniture and a sink with work counter.

Except for the kindergarten, there are no separate room toilets. In general, pupil's outer clothing is kept in corridor lockers. All elementary classrooms are located on the first floor. At the west end of the first floor are the auditorium and gymnasium.

The auditorium seats 300. Although the stage is small, lighting is good. The gymnasium contains but one teaching station. There are ten girls' showers with privacy stalls and ten boys' showers in locker areas. Basket storage is used for gymnasium suits with dressing lockers for outer clothing. Locker areas are characterized by poor ventilation and poor drainage of water which collects on the floor.

The administrative offices are also located on the first floor. The guidance office is a small internal space used by a part-time guidance counselor. The space is too small and does not create the atmosphere required for successful counseling.

In the main office, the clock and bell system appear to be in disrepair. The waiting room is small and narrow. The intercommunication system is housed in a separate space off the waiting room. The vault is so large that it is also used for the storage of supplies. Since there is no separate workroom, machine noise is quite audible.

On the second floor the rooms vary a bit in size, but are generally small. The home economics room is a combination foods-clothing area with six unit kitchens and 13 sewing machines. The art room is a good size and has adequate storage.

The science rooms each have a limited number of pupil experiment stations. Storage facilities are limited. The thermostat for the entire building, except the office, is located in one of the science rooms. Having only one thermostat has apparently resulted in uneven heating of the building.

The library seats only 36 pupils and has stack capacity of roughly 4,500 volumes. The American Association of School Librarians recommends book collections of

6-10,000 volumes in schools the size of Central and seating capacity for at least 10 per cent of the student population. The library office is about the correct size. The audio-visual and speech therapy room is small and requires better ventilation.

The cafeteria is also used for class space. Lighting is totally inadequate for classroom purposes. The seating capacity is 72. The kitchen is extremely small and inadequate for a hot lunch program. Some pupils are permitted to eat at the nearby high school where hot lunches are available.

The band room is located in the basement in a space of 500 square feet with a seven-foot high ceiling. The only natural lighting is provided by two small windows. This room is totally inadequate.

The industrial arts room is divided into a mechanical drawing and shop area. The mechanical drawing room is also used for wood storage. It is equipped with 18 all-metal drafting tables. The power tool work area occupies 400 square feet nearby with a hand tool area of 700 square feet also nearby. It must be difficult for one instructor to supervise this space because of distance and intervening partitions. The lighting level is too low for a shop.

There are two boilers in the building, but only one is operable. The corridors contain some plastic wainscoting material which is tearing in spots. Lighting levels throughout the building are generally low and in the corridors it is especially noticeable.

In summary, as the building now stands it is neither a good junior high school nor a good elementary school. The enlargement of Stillman to a satisfactory size will make it unnecessary to continue operation of Central. Under the circumstances, it is recommended that Central be abandoned. Not only are its facilities less than adequate but its site does not permit the possibility of any suitable redevelopment.

Middletown High School

Middletown High School is the oldest public school building in the community. It was built in 1894, three quarters of a century ago. The Spanish-American War had not yet been fought, Roentgen had not yet produced Xrays, and Utah, Arizona, New Mexico, and Oklahoma had not yet been admitted to the Union.

The building was renovated in 1914, about the time Emperor Franz Joseph of Austria made his ill fated trip to Sarajevo. The auditorium, gymnasium and library were added in 1931, at the beginning of the Depression. In short, the building was constructed for a different age and time. The fact that it has served so well over the years is a compliment to the vision and ability of the people who first conceived it.

It is located close to Central School between Wesleyan University and downtown Middletown. The site on which it is located is totally inadequate. The building occupies the entire site of about one acre. Outdoor physical education instruction and athletic events must take place at remote fields: Palmer Field one mile away and City Field three quarters of a mile away. There is no off-street parking provided either for staff, visitors, or deliveries. The building houses 613 students in grades nine through

twelve. Present capacity is estimated at 628 pupils, too small a unit for a modern comprehensive high school.

Table 12
CAPACITY OF MIDDLETOWN HIGH SCHOOL
Middletown, Connecticut

Space	No.	No. of Pupils	Capacity
Classrooms	17	27	459
Science rooms	4	24	96
Commercial			
Typing room	1	30	30
Classroom	1	25	25
Office practice room	1	20	20
Home economics laboratories	2	20	40
Industrial arts shop	1	20	20
Art room	1	25	25
Music room	1	35	35
Gymnasium	1	35	35
Total Number of Pupils			785
Capacity at 80 Per Cent Utilization			628

Regular classrooms are small and contain movable furniture. Typically, two walls have chalkboard, and one has tackboard. Bookcases and storage provisions

in the classrooms are quite limited except for rooms such as number 8 which omits tackboard in favor of bookcases. Lighting is essentially poor in spite of fluorescent fixtures. A few rooms such as 14, 16, and 26 have extra rows of light with somewhat better levels of illumination than other classrooms. Exposed radiators are unsightly and present burn hazards.

On the first floor there are seven classrooms, a language room, the auditorium, the band room and the offices. The auditorium seats 723 students. The stage is far too small for high school use. At present, it serves as instructional space for drafting and is totally unsatisfactory for such use.

The band room is located at the rear of the building. It is 800 square feet in size, but must handle 60 band members. For this purpose, the room should be twice the size. Acoustics are poor.

The office area is small and poorly laid out. Spaces for the guidance counselors are inadequate and appear to be an afterthought, which is a sense they are in a building of this age. The nurse's space has a sink and a toilet but lacks a privacy area for ill students. Teachers' rooms are plain but adequate.

Room 9 has a 15-station language laboratory. Four of these positions are equipped to listen, respond, and record while the others are listen and respond only.

One the second floor, room 19 is set up like room 9 with language teaching equipment. Room 15 is used for biology instruction. The demonstration desk has gas, cold water, and 110 volt AC, but there are no pupil laboratory stations. Room

10 is also used for biology. In this room only water service is available at the instructor's desk. There are no pupil laboratory stations although an electrical outlet strip runs along the floor. This room also lacks adequate storage, although it is larger than room 15.

Room 12 is used for instruction of physics and general science. Only electricity is available at stations, although water was once available as was gas. The demonstration desk has cold water, gas, and electricity. The room is crowded, for 32 pupil stations have been placed in a room of 650 square feet. One notable feature of the room is its two-story storage closet; unfortunately this does not provide really effective storage space.

Room 11 is only about 450 square feet in size. Although suitable for use by small groups, it is too small to be counted as a regular classroom. Room 13 is used for bookkeeping instruction. Larger than the regular classrooms, it contains desks, two adding machines, and a typewriter. In addition to the rooms mentioned, there are four regular classrooms on this floor.

The library is located to the rear of the building on the second floor, directly over the band room. It is a good-sized room, seats 72 pupils, and holds up to 5,000 volumes. Stack space is insufficient. A library ought to be a warm, inviting place, attractive to young people. This room appears plain and barren, an impression which is partly conveyed by its high ceiling, lighting arrangements, and window treatments. Off the library is a small office and work area and a good conference and magazine storage space.

On the top floor of the building there are four regular classrooms plus special purpose areas. One of the classrooms, number 23, has a low ceiling caused by the roof line.

Rooms 20 and 21 are home economics rooms. The clothing room is small with 11 sewing machines and a fitting corner. Room 21 is larger, but can hold only five unit kitchens. Room 21 shows signs of recent roof leaks.

Room 22 is the chemistry laboratory. It contains 30 pupil desks with cold water and gas service. Storage provisions are inadequate. The acoustical ceiling shows signs of former leaks.

Room 25 is the art room. It lacks a kiln and pottery wheel. The skylight has been blocked out for light control. As in several other rooms, there are signs of ceiling leaks.

Room 28 is used for business education instruction in the use of office machines. It lacks convenient electrical outlets at pupil stations. Room 29 is used as a typing room. It contains 45 pupil stations. An unsightly but effective seven-foot electric plug-in strip is suspended from the ceiling for electric typewriters. The rear of room 29 contains business machines.

The basement contains the cafeteria, gymnasium, industrial arts, and service areas. The cafeteria seats 350. The tall concrete columns and sparsity of windows lends an institutional atmosphere. The lighting is poor. The kitchen is adequate in size and open to the dining area. Most kitchens are separate spaces for reasons of

hygiene as well as safety. Circulation to the dishwash facility is poor because of conflicts with the serving lines. Teachers have no private area where they may eat and relax apart from students.

The industrial arts offering is limited to work in woods and plastics. No metalworking instruction is provided for. The former metal shop is used as a finishing room.

The physical education facilities are antiquated and inadequate. The present schedule calls for one day per week of physical education for students in contrast to the need for at least three periods. The boundaries of the court are too close to the edges of the gymnasium for safety.

The girls' shower room has eight showers plus dressing cubicles. The entire area is poorly lit and ventilated. The boys' shower room has eight showers. Ventilation is inadequate. The team room has a low ceiling and no showers. The painted cement floors get slippery when wet. In view of the generally poor facilities, it was interesting to discover a whirlpool bath.

In general, the school is outdated. The regular classrooms tend to be small, and it does not contain special subject spaces that are large enough or sufficiently well equipped for present and future educational programs.

The building has mechanical problems. Heat levels on the second floor are too low, particularly in the library. There is a lack of forced ventilation. Lighting levels are generally too low. It is interesting to observe that all classroom doors may be locked in such a manner that they cannot be opened from the inside. This type of lock is not permitted in new school buildings.

In summary, the building has served the community over a long period of years. The building now needs so many improvements to make it suitable for future generations that it would be imprudent to repair or renovate. It is suggested that the building cease to be used at the earliest practicable date.

Woodrow Wilson Junior High School

The original section of this building was constructed in 1931. Six classrooms were added in 1939 and 12 more in 1960. The older sections of the building are three stories in height, while the newest section is one story. For the past ten years, the building has housed grades seven through nine. Present operating capacity is calculated at 783 pupils; enrollment this year is 871 pupils.

The building is located on an 11-acre site, adjacent to the high school and the central office building. There is ample parking in front of the school. Bus garages to the rear are unsightly and insufficient for the number of buses. The bus garage might be relocated at a more remote point which would not interfere with school operation.

The building contains 23 classrooms which may be used for instruction in English, mathematics, social studies, and foreign languages. Most of these rooms tend to be small; however, they are still adequate provided class sizes are kept under 27. Room 211 is not included in this figure. Because of its small size, it should only be used for special instruction where the groups are smaller than 18. Room 25 is about 900 square feet in size and is presently used for a special education class. It is included in the total given above.

The science facilities range from fair to poor. Rooms 14, 16, and 18 are smaller than desirable for combination classroom-laboratories. The science storage facility off room 16 is small for servicing these three rooms. Room 12 is a better size but lacks the individual pupil experiment stations so essential in a modern program. Room 214 also lacks laboratory space. Room 212 is far too small for general science instruction; it is only suitable for small group work, films, or lectures in science. Room 213 as now arranged is inadequate except for individual or small group project work.

Rooms 9, 10 and 11 are set aside for home economics instruction. Room 9 is used for teaching grooming and child care, room 10 for foods and room 11 for clothing. All of these rooms are small but are reasonably well fitted out for the purpose intended. Class size should not exceed 20 in either the food or clothing area.

The industrial arts program is carried on in rooms 1, 2, 3, and 4. All of these spaces are small for regular-sized classes; and, if only a few pupils at a time use the space, a serious problem of supervision is presented. The graphic arts room is limited to letter press work with hand composition. The room is adequate for up to 12 pupils at a time. The metals area is small; there are metal forming tools and a few machines typical of junior high school programs. The welding area is questionable from a safety standpoint. The old pyrene-type fire extinguisher located in the welding area should be discarded in favor of one of the new foam-type units. The wood shop lacks an adequate finishing area. The mechanical drawing room has space for only 18 desks. Schools tend

to use larger spaces which accommodate 24 desks, thus making more efficient use of the instructor's time.

The art rooms tend to be small with limited storage provisions. The music room is large enough and has a small stage. A second space behind the gymnasium and auditorium which is used as the band room is inadequate. The room shape is poor - too narrow for its length; the acoustics are not satisfactory; and there is no space for instrument storage.

The gymnasium is about 80 by 50 feet which is a fairly good size for one teaching station. The apparatus room is excellent as a supplementary teaching space. It is not possible to supervise both the apparatus room and the main gymnasium at the same time; two instructors should be involved.

The auditorium seats 686. Acoustics are fair to poor. The stage is good for junior high school purposes. It is fairly deep with good wing space and good storage. However, the stage is too small for effective use by the senior high school.

The cafeteria seats 299 pupils and is currently used in three shifts. Four tables are located in a rear corridor which is not desirable. The teachers have a private space in which to eat, but it is too small for the number which must be accommodated. The kitchen is so small and crowded that the hot water booster and a refrigerator are located at the side of the cafeteria. The kitchen lacks adequate storage so that it is difficult to buy food in economical quantities. Dry storage is inconveniently located. The oven lacks a good exhaust. The dishwashing unit is at the head of one of the two

serving lines which results in congestion and annoyance. The cafeteria and kitchen were originally designed for 650 pupils and are overextended with the present enrollment.

The library and study hall occupy the center front of the building on the top floor. The library is remote from classes in the new wing. The study hall has seats for 70 and it is separated from the library by a movable partition. As presently arranged, the library is inadequate as a learning and resource center for the school. It is about 800 square feet in size, seats 24 pupils, and has stack capacity for about 4,000 volumes. The library should have seating capacity for 15 per cent of the pupils enrolled and should contain a collection of at least 10,000 volumes. Magazine storage provisions are insufficient. There is no library classroom or conference room although there is a small workroom with a sink. The value of a study hall for junior high school is seriously questioned.

The school contains only two guidance counselor's offices. Both need better acoustical treatment. The waiting room should be partitioned to the ceiling so as to make counseling more private. The nurse's office is small and lacks a private cot space. The principal's office is satisfactory but the record space is too small. The workroom is good.

The building is equipped with a sprinkler system throughout as well as smoke doors and other provisions for fire safety.

Outdoor play space is very limited. Through agreements with the city, the pupils have daily use of the municipal field except for the two baseball infields. The intramural program has had to be restricted because of this lack of space.

Taken as a whole, the school has a number of areas which must be improved. Since much of the problem deals with the size of spaces, the alternatives are either to build additional space or to convert some of the present space. In this situation, converting present space is probably the wisest course of action. It must be kept in mind that this will result in a smaller pupil capacity, but this in itself will provide relief in certain areas of the school.

Suggested improvements include:

1. Removal of bus garages from present location.
2. Opening of football field to physical education use as well as extension of agreements with the city for the use of municipal play areas during and immediately after school.
3. Closing off of Hunting Hill Avenue and development of additional blacktop spaces.
4. Room 212 may be used for small group work in science. Rooms 214 and 12 should be equipped with pupil experiment stations, and rooms 211 and 213 should be joined to form a good-sized classroom-laboratory for science.
5. Two shops should be developed in the space now allotted to four. The shop program should be carefully reviewed to be sure it meets the needs of all junior high school pupils including prevocational with girls as well as boys.

6. A fine library might be developed on the main floor in the space now occupied by rooms 101, 102, 103, and the corridor.

7. Good art spaces could be developed in the area now occupied by rooms 23, 24, and 25; music could be located in rooms 5, 6, and 8.

8. Consideration should be given to the development of a central kitchen to serve both schools at this location as the most economical arrangement.

9. The space now used for study hall and library could be converted to a classroom and a large group instruction area.

10. After these suggested changes, there would still be 15 regular classrooms as well as the large group room. There would be seven science rooms, two art rooms, two music rooms, a shop area for two instructors, a home economics area for two instructors and a special education classroom. The gymnasium would still have one full-sized station and one station for small groups. This also assumes that one space would continue to be set aside for a special education classroom. The building would have a functional capacity of 675 pupils.

If the recommendations of this report are carried out and the buildings on this campus are used for junior high school purposes, it would be well to consider the use of the present vocational agricultural shop building for junior high school shops.

Woodrow Wilson High School

Woodrow Wilson High School was built in 1956. A library, art room, and 16 classrooms were added in 1960. A separate building houses the vocational agriculture facilities. Table 13 presents the method of calculating the capacity of this school. Present enrollment is 757 students in grades ten through twelve.

Table 13
CAPACITY OF WOODROW WILSON SENIOR HIGH SCHOOL
Middletown, Connecticut

Space	No.	No. of Pupils	Capacity
Classrooms	25	27	675
Language laboratory	1	25	25
Science rooms	5	24	120
Commercial			
Typing room	1	30	30
Classrooms	2	25	50
Office practice room	1	20	20
Home economics laboratory	2	20	40
Industrial arts shops	3	15	45
Mechanical drawing room	1	20	20
Art room	1	25	25
Music room	1	35	35
Gymnasium with partition	1	70	70
Total Number of Pupils			1,155
Capacity at 80 Per Cent Utilization			924
Vocational Agriculture Building			60
Total Capacity			984

In a school of this size it is desirable to have a library which seats at least 150 students. The present library seats only 40. As a result, a special pass system must be employed to limit the number of pupils permitted in the library at any given time. A modern library is more than a place where books are stored and read. It is a resource center for all instructional materials such as books, magazines, periodicals, microfilms, films, filmstrips, tapes, and records. Because of the wide variety of materials stored and prepared in the modern school library it is an indispensable part of the total instructional program. The size of the present library tends to be a limiting factor on the program. The stack capacity is about 8,000 volumes when full, compared with a desirable capacity of about 25,000 volumes. Magazine storage space is limited. This could be overcome with microfilm copies of old issues. The library workroom is too small to serve as a center for the preparation of instructional materials. No photocopiers, photoprinters, camera copying stands, dry mount presses, and similar devices for producing transparencies, overlays, and slides were in evidence.

The science rooms tend to be small but are well equipped. The physics and chemistry rooms have very limited storage spaces.

Room 10, one of the English rooms, has windows to the rear. As a result the instructor must face a bright wall as he faces the class, an unsatisfactory arrangement.

The mechanical drawing room has space for only 20 students. It is a small room for the large tables which need to be used. The shops tend to be small, although they are adequate for the equipment which is being used. Good practice calls

for master switches placed in at least two locations well apart from each other in the shop, tied in with magnetic switches on individual machines. The present wiring is not arranged in this fashion. The large woodshop lacks a separate finishing room.

The guidance arrangement is inadequate for a high school. There is only one private counseling area. In a school of 1,000 pupils there should be at least four counselors in addition to administrators. Additional counseling space is required. The nurse's office is too small and has poor ventilation. There is no satisfactory place for children to lie down when ill.

The lack of an auditorium has been felt keenly by the teaching staff. Attempts to use the junior high school auditorium have been unsuccessful, mainly because of scheduling difficulties. One of the most important aspects of an auditorium for senior high school use has to do with the stage as an instructional space; the cafeteria has no stage, so there is no present alternative but to use the junior high school stage or else restrict the program.

There is a lack of large group instructional spaces except for the music room and a lack of suitable spaces for the student activity program. The building as a whole tends to be short on storage space.

Building circulation is poor. A five-minute passing time is required. Schools of 1,000 typically can use a three- or at most four-minute passing time.

Outdoor physical education space is insufficient. There are no well-developed playing spaces near the school except for the tennis courts and the football field. The football field has insufficient space for spectators unless stands are crowded

dangerously close to the playing field. At the earliest opportunity the school should acquire as much land as possible to the rear of the site. There are several open fields there which might be leveled for use as physical education spaces. The school should also consider asking that Hunting Hill Avenue be closed in the block between the school buildings so that the football field may be expanded and additional play space gained.

On the positive side, the building is relatively new. Classrooms in general are entirely adequate for a secondary school program. The development of the music area is quite satisfactory. The home economics suite is excellent.

The art room is well planned and has ample storage and display area. Some of the paper cabinets should be deeper because of the large-sized paper used in art work. There is also a need for a drying area.

In summary, the building is in good condition but lacks many of the facilities essential for a modern senior high school program. In addition, the site is so small and complicated by the adjoining junior high school needs that it would be impossible to increase the capacity to any large degree. Thus, the building would always remain a small high school, inadequate for a comprehensive program. Under the circumstances the long-range plan should consider utilizing this building for junior high school purposes and providing more adequately for senior high school elsewhere.

IV

ANALYSIS AND RECOMMENDATIONS

Chart 2 presents the capacity of Middletown's secondary schools and the anticipated enrollments in grades seven through twelve. The relationships are somewhat deceiving in that Middletown High Schools's capacity is included, and this unit is recommended for abandonment as soon as possible. The enrollments do not include tuition pupils.

Senior High School

One of the critical problems that Middletown is facing is the development of its senior high school. The Middletown High School is obsolete and should be abandoned for school use. Its inadequate facilities and site, together with its low capacity of 628 pupils, make it impractical to redevelop into a satisfactory unit. With the exclusion of Middletown High School, the Woodrow Wilson Senior High School has a capacity of 984 students, including the vocational agricultural building, compared to an anticipated enrollment of 1,400 in grades ten through twelve by 1975, or 1,900 in grades nine through twelve, at that time.

As indicated previously, this school lacks many essential facilities. Its capacity is also low for a fully comprehensive high school, and it would be unnecessarily expensive to carry on a complete program for college preparatory as well as terminal students. Although the site could be enlarged to a degree by the acquisition of

CHART 2

SECONDARY ENROLLMENTS AND CAPACITY OF EXISTING SCHOOLS
GRADES SEVEN THROUGH TWELVE, 1966-67 THROUGH 1976-77

land and the closing of Hunting Hill Avenue, any gross enlargement of this plant would simply encroach upon a badly needed outdoor play area and parking facilities. It would also mean a very heavy concentration of young people in junior and senior high school, exceeding a 2,000-student population, even if the senior high were restricted to grades ten through twelve.

If the present capacity of Woodrow Wilson Senior High were to remain as it is and additions made which would simply correct its deficiencies, then a second senior high school would be necessary. For grades ten through twelve this second senior high school would need a capacity of only 500 students, an extremely expensive operation, since in a comprehensive program the utilization of staff and facilities would be low - approximately 70 per cent - compared to a utilization for a high school of 1,500 students of 90 per cent.

Tuition Students

The foregoing analysis of the senior high school enrollments includes only those students who are residents of Middletown. Haddam and Middlefield send students to Middletown on tuition in grades ten through twelve. The question, therefore, presents itself of what the future will bring as far as tuition students are concerned. The question also arises of whether Middletown should build facilities out of its own debt limit to provide space for tuition students. In the school year 1964-65, Middletown accommodated 273 students from these two towns in grades ten through twelve.

It is apparent from the enrollment projections of these two towns that their enrollment will climb to over 500 students by 1972, representing over 30 per cent of the total enrollment in Middletown's high school population. As enrollments from these sending towns climb, there can be no long-range assurance that they will continue on a tuition basis. The only permanent solution to their situation is to belong to a high school district either by joining Middletown or becoming part of a regional school district. When this may occur is difficult to forecast at the moment. But the history of sending-receiving relationships in communities elsewhere points to the fact that in the long run either the sending or receiving towns can be seriously hurt by the assumption that the relationship will continue forever.

In the case of Middletown building a high school 30 per cent beyond the capacity needed for Middletown alone could mean that, if tuition students were to withdraw over the course of the next 10 or 20 years, Middletown would have facilities that could not be fully utilized and, at the same time, would be burdened with the additional debt required beyond its own needs.

Enrollment forecasts do indicate that if Middletown were to build its own high school for the maximum foreseeable enrollments which will occur about 1975 the tuition students from Haddam and Middlefield could be accommodated up to 1972, after which a permanent solution to their housing problem would need to be considered.

Senior High School for Grades Ten through Twelve or Grades Nine through Twelve

All of education has been undergoing a ferment during the past several years. This is particularly true in the high school years. The needs of each student must be considered so that he may achieve the maximum of which he is capable. Developments in curriculum over the past decade have indicated clearly the desirability of maintaining a four-year high school to include grades nine through twelve.

In order to meet the needs of the individual student, greater diversity of curriculum is required. This carries with it a demand for specialized facilities and equipment and teachers with the specialized training to carry out the program. In the sciences new methods of teaching are being developed which involve the student more deeply in experimentation. Biology, for example, can no longer be served satisfactorily in a classroom equipped only with a demonstration desk and tables and chairs. Space is required where students can work on individual projects as well as space for growing plants and raising animals. Advanced courses are being offered in the many subject matter areas, in which perhaps only a few students will be concerned. Radical changes in technology are bringing about changes in employment. If they are going to carry out one of their major functions, schools will have to recognize and even anticipate these changes as they occur, without simply waiting to reflect the changes some time after they have occurred.

The work leading to college preparation begins in the ninth grade and unifying it in the senior high school is very helpful to students and staff. The curriculum associated with programs for students who will terminate their formal education at the

end of high school is best begun in the ninth grade to ensure a full four-year sequence of educational opportunity. This is of considerable importance, especially since some of these students will be slow learners who will require ample time to absorb the material and achieve success by the time they graduate. Students who enter into vocational courses of a highly skilled or technical nature should be offered a four-year sequence. The nine-through-twelve grade organization is also helpful in the transition of students from parochial eighth grade into the public ninth grade, in that it makes it possible for them to spend all their high school years in one school.

Under the circumstances, it is recommended that Middletown provide a senior high school for grades nine through twelve as is now done at Middletown High school.

One High School versus Two High Schools

An analysis of the educational advantages of two 1,000-student schools and one 2,000-student school points to the possibility that the 2,000-student school could be made much more effective than the two smaller schools in terms of student opportunities.

If the program were to be operated on the basis of 25 students per class under the traditional class distribution, the two schools would require approximately 110 teachers; one school would require 100 teachers. Methods of teaching are improving rapidly, however. One new element indicates the desirability of grouping students in other than regular class sizes of 25 with 45-minute periods. Certain subjects may be

pursued advantageously in large groups of 150 or more students, perhaps once a week, with small seminars of six or eight students each, two or three times a week, and periods for individual study set aside at other times. This type of teaching technique suggests more teachers than the standard class organization. Therefore, if the 110 teachers required for the two 1,000-student schools were to be employed for the 2,000-student school, there could be 10 additional staff members who could be utilized to pursue the newer teaching techniques at no additional cost.

In the larger school equal opportunities for all students to follow their choice of subjects in a much more diversified program would be possible. For example, in the field of terminal education potential jobs mandate inclusion in the program of such subjects as building trades, machine tool design, food processing, data processing, electronics, pre-vocational nursing, commercial art, cartography, graphic arts, beauty culture, the needle trades, and the development of high-level skills in office practice and languages. To introduce such subjects in smaller high schools would result in small class sizes and an expensive program. On the other hand, the larger school could provide a sufficient number of students to make this expanded program adequate and economical.

In the analysis of the program requirements for a 1,000-student school as compared to a 2,000-student school, there would be many more subjects which would require only one section each in the small school than in the large school. Major courses would operate with a large number of sections in the 2,000-pupil school, thus offering more opportunities for tracking and organization according to the talents and abilities of students.

One of the major problems associated with the larger high school is that of organizing it in such a way that there is no curtailment of extracurricular opportunities, especially opportunities in leadership. Grouping according to the house plan permits a series of organizations to operate, directed toward creating these opportunities for all those who can benefit by them.

Perhaps one of the most important advantages of the larger high school is the possibility for the concentration of resource materials in the library. Middletown should consider that such a library would house at least 50,000 volumes, covering a broad range of knowledge, along with such audio and visual materials that would be needed to complement the book collection. To duplicate this in two schools would present a very serious financial burden.

As examples of the efficiency that can be established in one high school versus two, it is possible to consider the present situation that exists at Middletown and Woodrow Wilson High Schools. For example, the enrollment in the college preparatory physics course at Wilson is 38 and that at Middletown is 40, involving two teachers and two laboratories. If consolidated, the enrollment would be 78, which could be taken care of in one laboratory and with one teacher. Also under these circumstances, to obtain full utilization of the teacher time in the two schools requires that the teacher teach outside his major subject field, which is not desirable.

Another example of program improvement that would occur through consolidation of the high schools can be found in the field of social studies. Middletown High School at present offers four courses in this discipline, while Woodrow Wilson High

School offers only three. Consolidation would not only offer better utilization of staff and facilities, but it would also permit teachers specializing in the various courses of social studies to offer their special talents to all the children of Middletown. A teacher who is expert in the field of United States history could make a contribution to all the students rather than being limited to those in one of two small high schools. Duplication of teaching and administrative staff and facilities is also to be found in areas such as the business department, industrial arts, homemaking, fine arts, and music.

There is no question from this analysis that the single high school is preferable to two small schools from the point of view of both economy and teaching effectiveness. In addition, the potential of grouping and regrouping of students according to their abilities, skills, and interests can be pursued much more satisfactorily in the larger school. Under the circumstances, the most logical course for Middletown to follow is to create a single high school and to incorporate grades nine through twelve in it. A new site of adequate dimensions should be sought which will permit expansion as may be required in the future and provide adequate athletic facilities, necessary parking, and other outdoor needs.

Junior High School

With grades nine through twelve in a senior high, a decision must be made of what grades will be housed in the junior high. A two-year school for grades seven and eight is not recommended. Most teachers believe that pupils derive more

benefit from a longer period than two years in a school. Three or four years gives them greater opportunity to understand pupils, making their influence far more valuable. The longer period also makes it possible to provide a more integrated sequence in subject matter.

To incorporate grade six in the junior high school would provide a far more satisfactory program and would enable sixth graders to participate in many of the special subject fields with specialized teachers, such as the language arts, science, mathematics, and the arts. Because of the speeding up of the educational process many sixth graders today are ready for the type of program that has been offered in the past in the junior high school and can benefit greatly by moving beyond the limited environment of the typical elementary school.

It is of great importance at this age level that each child be given the maximum of individual attention so that his talent, skills, ability, and interests may be developed to the fullest. The school for these grades must strive to:

1. Enable boys and girls to acquire specific knowledge and competence in various subject areas
2. Permit and encourage group processes
3. Permit individual work and study
4. Encourage curiosity by providing an environment which is challenging, interesting, and diversified
5. Provide opportunities for the child to come into contact with a vast number of experiences, including broad representation in the humanities, the arts, and the sciences

6. Provide for recreation, physical education, and physical development on a wholesome and well-guided foundation

7. Provide opportunities for development of the individual as a responsible member of the school group.

The essence of the program in these grades lies in the richness of its offering to its pupils. Intellectually, pupils in the middle grades are ready to move out of the relatively circumscribed surroundings of the primary school with its self-contained classrooms into an upper school where they have the opportunity to work with and immerse themselves in the sciences, languages, arts, music, a wide variety of craft and occupational fields, broad use of the library, and an extensive range of interest activities. The program should be so arranged that pupils are introduced quite systematically to many phases of man's culture. This broad, exploratory experience is designed to provide a common experience for pupils on the basis of which they will presumably be better able to make decisions and choices in high school. While the exploratory phase of the program is important, the experiences the pupil has in these grades can be of great educational value to him, even when taken in isolation and without reference to preparation for the next level of schooling.

Pupils in these grades usually range in age from 11 to 14. Boys and girls of this age group will vary widely in physical, mental, and social maturity. They are often at their peak of physical activity at this time. Maturing pupils show increasing mental capacity throughout these years, and their intellects should be motivated by a stimulating curriculum. Opportunities for the pupil to evaluate himself and his

capacities should be provided. Such self-understanding is an important facet of the growth pattern, particularly in the development of the pupil along paths that will best assure sound mental health.

The movement into adolescence is accompanied by an increasing desire for greater independence. The school should provide meaningful opportunities for pupils to make their own decisions, as their capacity for independent action increases. In general, this age is rich with enthusiasm and interest and well able to use the great variety of resources that a middle school can offer.

Some of the requirements of a school for these grades are:

1. Great richness of resources of the school. The world of books will hold a primary place; books will increase in usage, as a result of well-stocked libraries and classroom collections. There should be strong emphasis upon creative experiences in art, music, and drama. Varied shop experiences should give pupils the opportunity to gain insight in the applications of electricity, the craftsmanship involved in working with woods and metals, the use of land, the arts involved with homemaking. The sciences will have a rich appeal, and the general science program should offer experiences in plant and animal life, astronomy, mechanics, and a host of other matters offering rich background to pupils.

2. Continued need for guidance, with several teachers participating. These years represent a transition from the elementary school to the relative independence of action in the senior high school.

3. Considerable opportunity for physical activity, with an increasing concern for the development of skills and interests that will carry over into adult life. The physical education program in a large school can afford to give time and space to the development of competence in individual as well as team activities.

4. Provision for multiple usage of certain spaces to allow for a variety of activities that will give pupils an opportunity to acquire skills in getting along with others. The dining area, for example, may be planned for use throughout the day.

There should be opportunities for laboratory experiences in many subject areas. There should be provision for simple dramatic presentations and for speech. Also incorporated in the school should be opportunities for improving comprehension and speed in reading before entrance into high school. A language laboratory for tape recording and listening is desirable. The library should be expanded to include all learning resources: books, magazines, newspapers, motion pictures, film strips, microfilms, pictures, map collections, recordings, and other audio and visual aids. Emphasis should be placed on the use of the library preparatory to the independent work of the high school.

Today the science program must satisfy two goals: (1) it must identify scientifically gifted pupils early and teach them as much as they can learn, and (2) it must give all other pupils the essential background in science which they need to make them scientifically literate. The science program reaches down more and more into the lower grades. Science facilities should be created which will enable pupils to carry on laboratory work in the life and physical sciences. No longer can science teaching be restricted to textbook, recitation, and demonstration, for it is only through experimentation that children are able to understand and appreciate scientific method.

The fine arts should receive full exploration and offer many opportunities for working in different media. The fine arts studio should be equipped for painting, drawing, ceramics, weaving, wood sculpture, and metal and lapidary work. Music opportunities should provide for individual instrumental practice, orchestra and choral groups, and music appreciation. The home arts should be developed in coordination

with fine arts and music as a laboratory unit to expand and develop the concept of the art of living, including family life, child care and development, home planning, design and equipment, selection of furniture and fabrics, arts in food and clothing, home nursing, development of the home as a social and cultural center for the family. Industrial arts should encompass an understanding of man's work and the materials with which he builds, including woods, metals, ceramics, plastics, electricity, and power. This program can fit in well with the fine arts and the home arts.

In physical education, extensive opportunities should be provided for children to discover their interests and aptitudes in many areas. Indoor facilities should provide for gymnastics and team games in the gymnasium and should be adequate for not less than three periods per week per pupil. Outdoor athletic fields should be provided which will allow space for soccer, hockey, baseball, tennis, and touch football.

To provide these facilities for upper elementary pupils in each elementary school would be extremely costly. Further, because of lower enrollments in these schools, special facilities and teachers would have very low utilization.

It would also be possible to include grade five in this junior high, or middle, school program, but at present it has been determined that this would not be an economical path for Middletown. It is possible that, at some future date, the extension of the middle school to include the fifth grade may prove to be advisable.

The enrollments in grades six through eight are expected to increase from a present level of about 1,200 to 1,700 by 1971. The present Woodrow Wilson senior high and junior high buildings would be able to accommodate these pupils with

some remodeling and utilizing the present vocational agriculture building for shops. This would have the advantage of consolidating boys and girls in the pre-adolescent group on this campus, avoiding the situation that now exists where both adolescents and pre-adolescent children are involved in the use of common facilities. It also means that the serious deficiencies of the Woodrow Wilson Senior High School would be eliminated in its utilization for junior high school purposes. In using this campus for junior high school, it would be desirable to close Hunting Hill Avenue and, if possible, to extend the site by the acquisition of surrounding property.

A site of 25 acres of land for a second junior high school should be selected in the northwest section of Middletown.

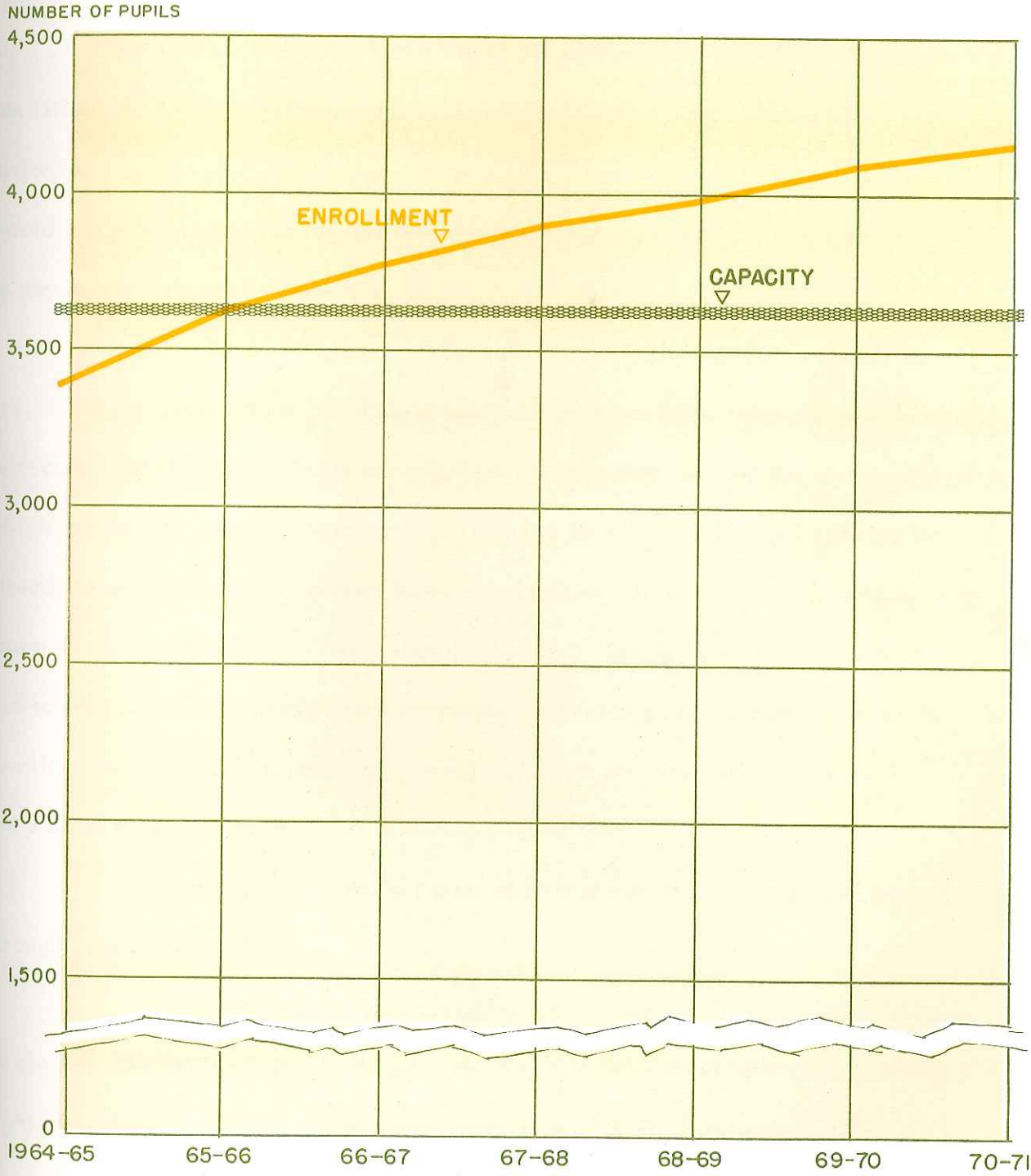
Elementary Schools

Chart 3 shows the relationship between estimated enrollments in kindergarten through grade six and present capacity of all the elementary school buildings, including the obsolete facilities.

There are two major issues in the improvement of elementary school facilities that have been used as criteria in establishing the recommendations. First, the small elementary school, consisting of four to eight classrooms, is unsuitable from the point of view of operating the most satisfactory educational program. The enrollments in such schools are so small as to preclude the possibility of grouping and regrouping children according to their individual needs; and, if the system moves toward an ungraded school or the various aspects of team teaching, it will be found that the small

CHART 3

ELEMENTARY ENROLLMENTS AND CAPACITY OF EXISTING SCHOOLS
KINDERGARTEN THROUGH GRADE SIX, 1966-67 THROUGH 1970-71



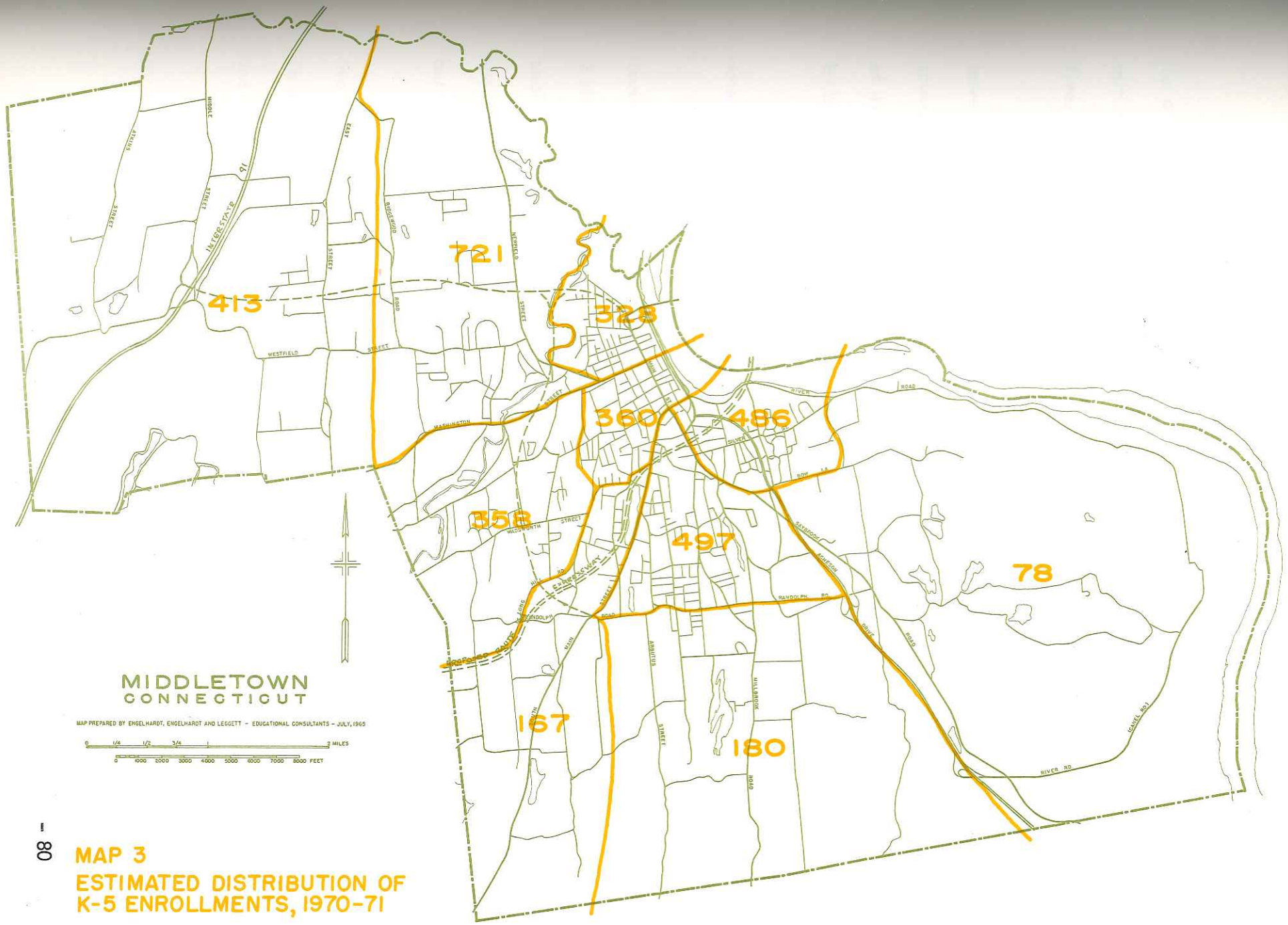
enrollments will not promote the full capabilities of these programs. It has therefore been the attempt to provide recommendations which would enable the expansion of the small schools or their elimination.

The second major factor lies in the abandonment of unfit or obsolete facilities that do not lend themselves to economical improvement. Along with these major factors, consideration has been given to the proper location of schools which would avoid overlapping of logical attendance areas and yet which would serve insofar as possible as neighborhood schools.

For the lower grades of elementary school, the demands on facilities are, of course, most simple. In these grades most of the activity takes place within the self-contained classroom. There are requirements, however, beyond the classroom which are not being met in Middletown. The need for adequate library facilities has already been mentioned and cannot be overemphasized. Ample indoor and outdoor play space should be provided in every elementary school. Storage and work space for art and science will be required. More satisfactory provision should also be made for the auxiliary services, such as remedial reading and music practice, which now use in many cases makeshift spaces.

Map 3 indicates the anticipated distribution of children in kindergarten through grade five in 1970.

It is recommended that Eckersley Hall, Hubbard, and Long Hill Schools be closed. The Stillman site should be extended, and an addition of a kindergarten and eight classrooms be made to this building along with a library, playroom, and provision



MAP 3
ESTIMATED DISTRIBUTION OF K-5 ENROLLMENTS, 1970-71

for art-science work and storage space and small group work. This addition would permit Stillman to care for the pupils in its neighborhood area in kindergarten through grade five. When this is done, it will be possible to close Central School.

Bielefield, which now has a kindergarten and eight classrooms, should have an addition of a kindergarten and seven classrooms, plus library, playroom, art-science and small group space. This will bring it up to satisfactory capacity. Because of its location, this school will be able to accept pupils who will need to be transported by bus from the southern part of the district.

Farm Hill School should have its site extended, looking toward the time when it may be necessary to add five more classrooms and a kindergarten.

The Hubbard School will need to be replaced to serve the neighborhood immediately around its present location. The new building will require 20 classrooms, 2 kindergartens, combination assembly-cafeteria, playroom, library, art-science and small group space, and offices. It is also being recommended that four classrooms for special education be added to this building. Site selection in the area will be difficult, but the attempt should be made to secure not less than 15 acres.

Because of the enrollments in the Spencer area, it is recommended that two classrooms be added to this building to raise its capacity to four classrooms per grade. To improve the special facilities the addition should include also a library, playroom, and art-science space.

Recommendation is being made to add a playroom to Macdonough School. It is also suggested that the present special classroom be converted to a library and that

the present library be used for conference and small group work. Art-science storage-work space might be created out of a corner of the large kindergarten.

Moody and Snow should be able to take care of the pupils in their respective areas.

The additions will bring the total capacity of the elementary schools up to 3,710; in 1970-71 the anticipated enrollment will be 3,588 pupils. This leeway is necessary to make allowance for changes in distribution of children from year to year and also for preschool classes.

Two additional sites for elementary schools should be secured, looking toward the need for new elementary schools in the northwest and in the south during the coming decade. The sites should have at least 15 acres of land each; one should be located in the Westfield area and the other east of Long Hill in the Arbutus Street area.

Transportation

The implementation of the central senior and central junior high schools will mean some increase in transportation. At present, the town is transporting approximately 2,700 pupils in elementary and secondary grades. It is estimated that the central locations for junior and senior high schools would increase the amount of transportation by 1,100 pupils. Although it would be reasonable to expect considerably more efficiency in transportation both in mileage and time required for travel, utilizing the present cost of $43 per pupil less state aid it is indicated that the additional transportation would cost $25,000 per year. This, of course, would be more than offset by the educational advantages and the economies of the centralized facilities.

V

PRIORITIES AND COSTS

Map 4 presents the recommended school building program. It is suggested that the following priorities be established.

Priority I (immediately)

a. Construction of a new senior high school on a new site for 2,000 students

b. Replacement of Hubbard Elementary School on a new site

c. Additions to Bielefield, Macdonough, Spencer, and Stillman Schools

d. Acquisition of sites for two new elementary schools and a junior high school

e. Extension of Farm Hill site

Priority II (upon completion of new senior high school)

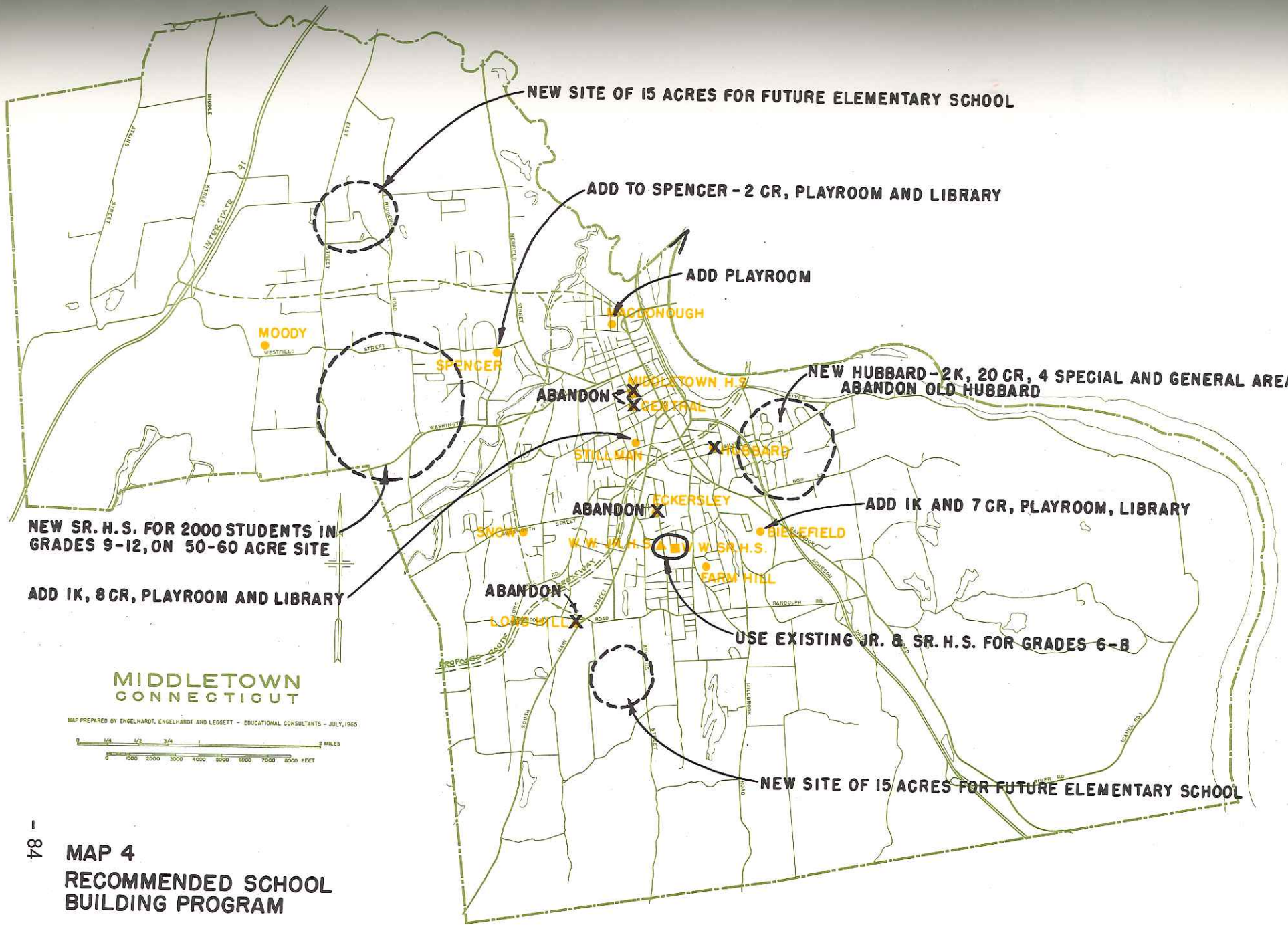
a. Remodeling of present Woodrow Wilson complex for use as a junior high school; closing of Hunting Hill Avenue; addition to site

b. Abandonment of Central, Eckersley Hall, present Hubbard, Long Hill, and Middletown High Schools

Priority III (after 1970)

a. Construction of a new elementary school in the Westfield area; size to be determined at a later date

b. Addition to Farm Hill School



MAP 4

RECOMMENDED SCHOOL BUILDING PROGRAM

Cost of Priority I

The costs for Priority I are presented below. A figure of $24 per square foot has been used to cover cost of construction, site development, fees, and equipment.

New Senior High School	$6,720,000
New Hubbard School	1,440,000
Additions to	
Bielefield	501,600
Macdonough	60,000
Spencer	278,400
Stillman	532,800
Estimated allowance for land	250,000
Total Estimated Cost	$9,782,800