

SCHOOLS AND RECREATION

TECHNICAL REPORT NO. 4

A GENERAL PLAN FOR BELMONT, MASS.

PREPARED FOR THE BELMONT PLANNING BOARD

ADAMS, HOWARD & GREELEY, PLANNING CONSULTANTS

FEBRUARY, 1963

S C H O O L S A N D R E C R E A T I O N

This is one of a series of reports on the various elements to be included in a General Plan for Belmont. It presents background material for the plan in a convenient form for review and discussion.

Material in this report may be superceded in a later report or in the General Plan report as a result of such discussions and studies of other elements of the plan which may affect this one.

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Prepared for the BELMONT PLANNING BOARD

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C O N T E N T S

	Page
INTRODUCTION	
 PART I - SCHOOLS	
I Enrollment Trends and Projections	1
II Elementary Schools	7
III Junior High School	15
IV Senior High School	18
V Combined School Programs	19
 PART II - RECREATION FACILITIES	 21

T A B L E S

I School Age Population and Public School Enrollment, 1950 & 1960, with Projections to 1970 & 1980	3
II Projected Public Elementary School Enrollment Distribution - 1970 and 1980	6
III Enrollment Capacity to Elementary Schools	8
IV Alternative School Development Programs	20

I L L U S T R A T I O N S

	Following Page
Fig.1 Enrollment and School Age Trends 1950-1980	3
Fig.2 Approximate Elementary School Districts, 1980	13

APPENDIX A - Projected Population by Age Group, Belmont, 1970 & 1980

APPENDIX B - Inventory of Outdoor Recreation Facilities

I N T R O D U C T I O N

It was stated in Technical Report No. 1 that a major emphasis in the General Plan will be upon the adequacy of and possible improvements in Belmont's community facilities, of which the public school system is the largest and most important. The purpose of this report is to weigh probable future demands on public school facilities in the town and advance solutions which might best meet these demands, taking into account the limited amount of land available for new school sites.

Recreation needs and resources are also included in this report, because of the close relationship between these facilities and school plant requirements.

It is not possible to predict accurately the school and recreation needs of the community for a period as long as twenty years. However, the forecasting of such needs on the best evidence available provides a sound basis for the establishment of priorities and the programming of facilities.

Grateful acknowledgment is given to the extensive assistance rendered by the school administration, especially by Superintendent John W. McGrath and former Attendance Supervisor Eleanor M. Panzlow, both of whom compiled special data for this study.

PART I - SCHOOLS

I. ENROLLMENT TRENDS AND PROJECTIONS

Future school enrollment estimates can be derived from future population estimates after analysis of past enrollment and population trends.

Population Projections

Total population estimates for 1970 and 1980 were made in an earlier report.¹ Based on an appraisal of the likely development of the remaining land in Belmont, it was estimated that the total population would be 30,300 in 1970 and 30,500 in 1980 if the present land development policy of the town is continued.²

For the purpose of estimating future school enrollment in Belmont, the above total population projections were refined to give estimates according to age groups and sex. The refinements were based on an analysis of birth and death rates, migration factors, and trends in numbers of persons per dwelling unit. The resulting projection of population roughly encompassing the school ages (5 through 20) was then used as a guide to future school enrollments (see Table I).

¹ Adams, Howard & Greeley, Alternative Land Development Policies for the Town of Belmont, February 1962, p. 25

² If apartments are built, the report estimated population would increase by only 1,000 more. This possibility is not likely to result in many more children since apartment dwellers generally have relatively few children.

Enrollment Projections

The following school enrollment projections for Belmont are intended only as a rough approximation of over-all trends; detailed projections such as were made in the Ireland report¹ would have required a special school census and more detailed and costly analysis than is possible within the scope of this study.

Table I records public school enrollment estimates in 1970 and 1980 based on the past enrollment as a ratio to population in the nearest corollary age group. The trends are illustrated in Figure 1; there the State School Building Assistance Commission projections are also included for comparison purposes. The projections indicate that enrollment should not greatly exceed present enrollment in the next two decades. This is consistent with the earlier population projections which anticipate a continued decline in the number of persons per dwelling unit and a continued increase in the proportion of older people in the town.

While the enrollment estimates in Table I do not directly consider the effects of private schools on public school enrollment, analysis of available data indicates private school enrollment will maintain approximately the same ratio to public enrollment and thus not significantly affect the latter projections. A direct projection of private school enrollment was not possible because of the lack of consistent historical information with which to establish trends. However, the Ireland report²

¹ Dr. Robert S. Ireland, Belmont Public Schools, March 1954

² Ibid, p.9 and Appendix D

Table I

SCHOOL AGE POPULATION AND PUBLIC SCHOOL ENROLLMENT, 1950 and 1960
WITH PROJECTIONS TO 1970 and 1980

	1950 ^a	1960 ^a	1 9 7 0 ^b		1 9 8 0 ^b	
			High	Low	High	Low
Total Population	27,381	28,715	30,300	30,300	30,500	30,500
Pop. Ages 5-9	1,985	2,197	2,360	2,070	2,320	2,180
K-6 Enrollment	2,100	2,388	2,550	2,200	2,500	2,300
% of Total Pop.	7.7	8.3	8.4	7.3	8.2	7.6
% of Ages 5-9	106.0	109.0	108.0	106.0	108.0	106.0
Pop. Ages 10-14	1,696	2,305	2,650	2,650	2,780	2,600
Jr. High Enroll.	798	1,000	1,100	1,100	1,150	1,075
% of Total Pop.	2.9	3.5	3.6	3.6	3.8	3.5
% of Ages 10-14	47.0	43.0	42.0	42.0	41.0	41.0
Pop. Ages 15-19	1,830	1,891	2,040	2,040	2,100	1,890
Sr. High Enroll. ^c	854	1,032	1,150	1,150	1,175	1,050
% of Total Pop.	3.1	3.6	3.8	3.8	3.9	3.4
% of Ages 15-19	47.0	55.0	56.0	56.0	56.0	56.0

^a Population data from U.S. Census. Enrollment data from annual Report of the Town Officers of Belmont.

^b Population data from Adams, Howard & Greeley estimates in Appendix A. Enrollment estimates derived from graphic projections of enrollment and related age group (see Figure 1).

^c Includes Vocational High School and tuition students.

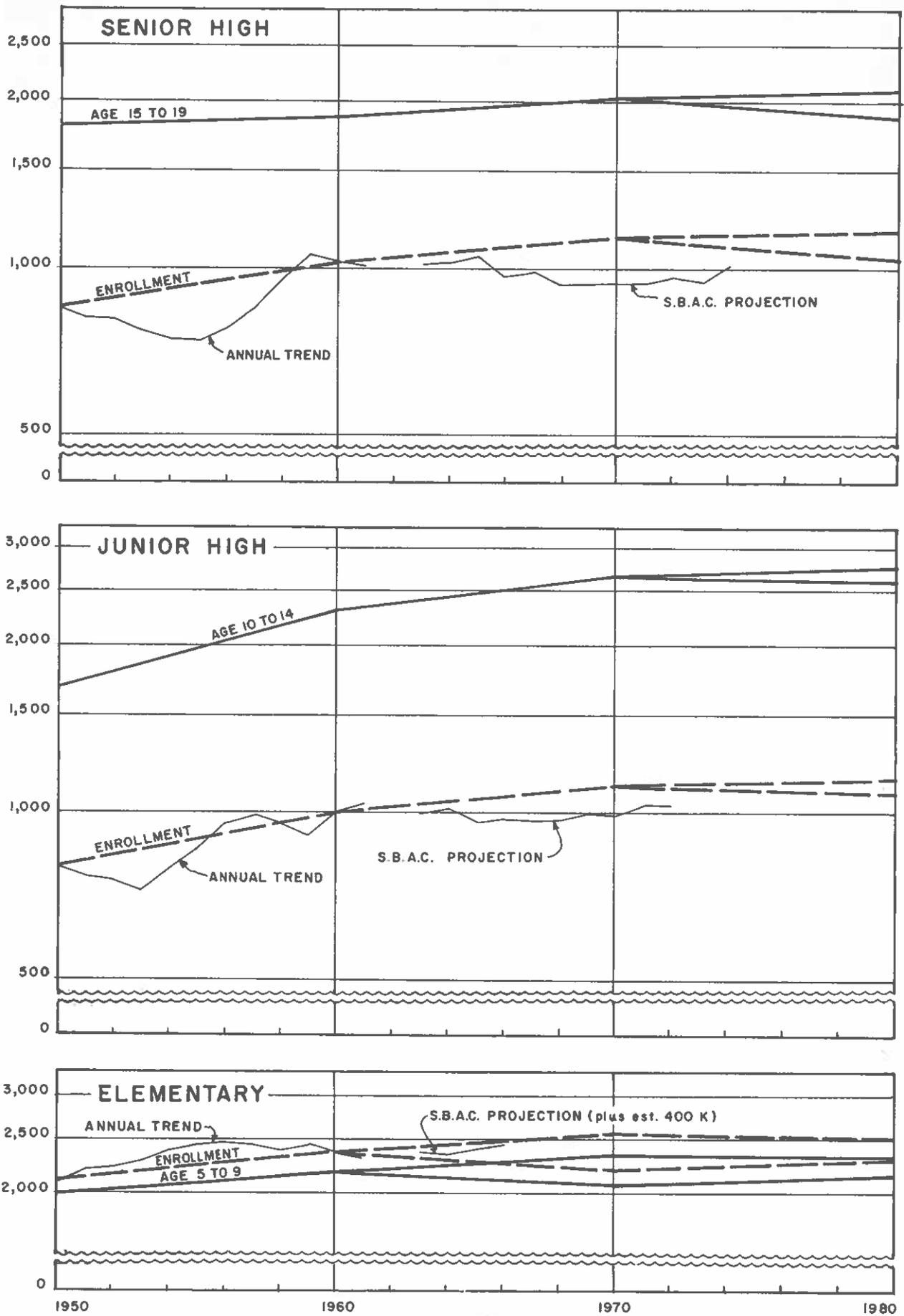


Figure 1.
 ENROLLMENT & SCHOOL AGE TRENDS 1950-1980

assumed that private school enrollments would level off at 1,375 from 1954 through 1964; the fact that actual private school enrollment averaged only 1,300¹ for 1958 through 1961 lends credence to the assumption that private school enrollments will continue to maintain the same ratio to public school enrollments.

Elementary Enrollment Distribution

The future distribution of public elementary school students is of particular concern in the Winn Brook-Belmont Hill area where recent growth has already taxed the capacity of the Winn Brook School.

Future enrollment distribution for existing school districts has not been projected because of (1) lack of sufficient corollary data² and (2) the probability that the districts will undergo some change in the next two decades as a result of population shifts and/or possible new school construction. However, sufficient information was available to project distribution in the two major areas of the town—the Winn

¹ Data from Mrs. Eleanor M. Panzlow, Supervisor of Attendance. Senior high enrollment averaged approximately 250 as projected by Dr. Ireland but junior high and elementary enrollments were below his estimates of 325 and 800 respectively.

² Enrollment projections by school districts could have been made if data on population, public and private school enrollment, and housing trends had been available for each district. However, because school district lines are not the same as census tract lines except along the right-of-way of the Boston & Maine Railroad, comparisons of such data could be made only for the two areas on either side of that line. A new school census, such as was done for the Ireland report, would be necessary to make detailed projections for each district.

Brook-Belmont Hill area north of the Boston & Maine Railroad right-of-way and the balance of the town south of the railroad---which are likely to remain major divisions under any districting plan.

Estimated enrollment in the two districts was derived from past and projected housing and population data recorded in Table II. Enrollment can be expected to continue to increase in the Winn Brook district by several hundred more students while enrollment in the balance of the town will probably decline slightly. Any proposals for future elementary school changes should closely consider this changing pattern of student distribution.

Table II

PROJECTED PUBLIC ELEMENTARY SCHOOL ENROLLMENT DISTRIBUTION, 1970 and 1980

	1950	1960	1970 ^d		1980 ^d	
			High	Low	High	Low
TOTAL ENROLLMENT ^a	2,178	2,345	2,550	2,200	2,500	2,300
NORTH OF RAILROAD ^b						
Enrollment	430	570	760	640	820	710
% of Total Enroll.	20.0	24.0	30.0	29.0	33.0	31.0
No. Dwelling Units	1,417	1,922	2,500	2,500	2,788	2,788
Students/D.U.	.30	.30	.30	.26	.29	.25
Total Population ^c	5,867	7,325	9,070	9,070	9,600	9,600
% of Students	7.3	7.8	8.4	7.1	8.5	7.4
SOUTH OF RAILROAD						
Enrollment	1,748	1,775	1,790	1,560	1,680	1,590
% of Total Enroll.	80.0	76.0	70.0	71.0	67.0	69.0
No. Dwelling Units	6,251	6,865	7,225	7,225	7,369	7,369
Students /D.U.	.28	.26	.25	.22	.23	.23
Total Population	21,514	21,390	21,195	21,195	20,800	20,800
% of students	8.1	8.3	8.5	7.4	8.1	7.6

SOURCE: 1950 and 1960 enrollment data from annual Report of the Town Officers of Belmont. Population and housing data from Adams, Howard & Greeley Alternative Land Development Policies for the Town of Belmont, February 1962, Tables 3 and 4.

^a From Table 1.

^b Enrollment data is for present Winn Brook district only (which excludes the small residential areas west of McLean Hospital) while the housing and population data is for the entire area north of the railroad. Since most of the increased housing and population is expected in the area now covered by the Winn Brook school district, the differences between the two sets of data yield somewhat lower enrollment projections for the north side of the railroad than would have resulted from use of directly comparable data.

^c Includes 350 staff personnel and patients in McLean Hospital.

^d Projections based on extrapolation of past student-population and student per dwelling unit ratios and the proportional adjustment thereof to yield the given total enrollment estimate in each case.

II ELEMENTARY SCHOOLS

The Elementary School Plant

The existing elementary school plant consists of six schools with a total capacity of 2,470 pupils, compared to a total enrollment on October 1, 1962, of 2,408 (See Table III). While the number of pupil stations is sufficient to meet the maximum projected enrollment in Table I, the student load is not evenly distributed—particularly in the area served by the Winn Brook School.

The present six schools are well maintained through a continuous program of physical improvement, but it has been recognized for some years that the three oldest schools—Butler, Payson Park, and Kendall—should be replaced with modern structures as soon as financially practicable. In addition to having served for well over half a century, the Butler and Payson Park schools are on very inadequate sites which cannot be expanded without taking substantial amounts of residential property. It is therefore considered essential that a long-range program of community facilities for Belmont take into account the probability that additions to the elementary school plant will need to be made in order that the above three schools can be retired from service within the next decade or so, for reasons of physical obsolescence alone.

The remaining three schools are structurally sound and are otherwise adequate to serve the community for some time to come—the only questionable one being the Chenery school which is nearly forty years old and is expensive to heat because of its high-ceilinged central auditorium.

Table III
ENROLLMENT CAPACITY OF ELEMENTARY SCHOOLS

School	Year Built	No. of Rooms ^a	Capacity @ 26/room ^b	Enrollment 10/1/62	Average per room
Butler	1890	23 ^c			
Payson Park	1904	16			
Kendall	1913	17			
Chenery	1924	7			
Burbank	1930	<u>14</u>			
Total South of Railroad		77	2,002	1,795	23.3 ^e
Winn Brook	1935	18 ^d	468	613	34.0 ^e
TOTAL TOWN		95	2,470	2,408	25.4

^a Self-contained classrooms only. Excludes special purpose rooms such as library or multi-purpose room.

^b Average official capacity. School Committee policy sets maximum per classroom at 35, with number in excess thereof to be split into two smaller classes. Average of 26 assumes minimum size would be 18.

^c Includes 2 rooms used by supervisory personnel (guidance, attendance, crafts) who could be quartered elsewhere if necessary.

^d In 1962, two crafts rooms and the library were pressed into use as classrooms, for a total of 21 classrooms in use at the cost of sharply curtailed auxiliary facilities.

^e Excluding the two rooms used by supervisory personnel in the Butler school, the average per classroom south of the railroad would be 24.0. Inclusion of the three auxiliary classrooms in the Winn Brook total would reduce its average per classroom to 29.2.

Meeting Future Elementary School Needs

The concern of Belmont's citizens with the problem of the Senior High school has tended to draw attention away from the long-term needs of the elementary school plant. Yet not only are these needs important, but a satisfactory plan to meet these future requirements will be difficult to work out unless it is considered as part of a co-ordinated development program for the entire school system.

If it is accepted that only two schools, Winn Brook and Burbank, are adaptable to modern elementary school requirements, Belmont could seize the opportunity to develop a virtually new educational plant which would be especially designed to meet modern educational standards. Ideally, a comprehensive study by an educational consultant—in which modern educational philosophies and methods would be explored with the community and applied to the local situation—would precede the development of a long-range program of physical facilities. However, in the absence of such a study, the school plant considerations which must be included in the General Plan now in preparation will have to be founded on such basic assumptions as appear most feasible at the present time.

The alternative recommendations for new elementary school facilities which are put forward for consideration at this time are based on the following assumptions:

1. That the Butler, Payson Park, and Kendall schools would be replaced, and the Winn Brook and Burbank schools would be retained.

2. That the Chenery school, because of its size and location, would be renovated for use as a central school for special classes, e.g., for exceptional children. (The school seems to be ideal for this purpose, as all its classrooms are located around a central meeting room and it is next door to a regular school plant with ready access to special facilities and programs. Also, it is small enough to house special classes and related supervisory and craft rooms in an independent building.)
3. That, as basic school plants, the minimum school size for six grades plus kindergarten should be 14 rooms and the maximum size 21 rooms, providing for 350 to 550 pupils. This appears to be the most widely accepted range at the present time.
4. That an average of 26 pupils per class can be used in evaluating the total classroom need. (Note that, when used in connection with the number of classrooms given above, the net result is the assignment of a certain number of pupils to a site.)
5. That the size of any new elementary school site should as far as possible meet the School Building Assistance Commission's recommended standard of 5 acres plus one acre for each 100 pupils, in order to provide adequate recreational facilities for the pupils and to serve as auxiliary indoor and outdoor recreational facilities for the neighborhood.
6. That schools should be within a one-half mile distance of the homes of as many pupils as possible, in order to minimize the cost of bus transportation and to bring schools and their related facilities in close contact with the neighborhood in which they are located.

On the basis of the above assumptions, it is estimated that a total of 101 classrooms will be needed to meet future enrollment requirements as estimated in Tables I and II. Subtracting the available rooms in the Winn Brook (18), Burbank (14), and Chenery (7) schools, a net requirement of 13 rooms in the Winn Brook-Belmont Hill area and 49 rooms in the area south of the B & M Railroad is derived. The following alternatives are designed to meet this total classroom requirement.

Alternative A

Alternative A calls for the construction of new 14-room schools on Belmont Hill,¹ the Grove Street playground and the present site of the Kendall school, plus a 21-room school on the Pequossette playground.²

This alternative offers the best possible distribution of school sites in view of the assumed minimum school size (which precludes more than four new schools) and the limited sites available for construction (necessitating undesirable overlapping of service radii for schools south of the railroad). Assuming the ultimate development of the town expected by 1980, only 1,400 dwelling units would be outside the half-mile walking distance from a school,³ or 2,000 if all pupils are transported to the proposed school on Belmont Hill because of lack of sidewalks. The illustration of approximate 1980 school districts⁴ in Figure 2 demonstrates that the areas from which pupils would have to be transported

- ¹ A good school and recreation site on Belmont Hill is hard to find because of the lack of connecting streets which could provide access to it from its entire service area. Ideally such a site should be located in the center of its service area away from heavily-travelled streets. The only site which comes close to these criteria is on the north side of Marsh Street, opposite the Belmont Hill School.
- ² Where use of a playground site is proposed for a school, it is concurrently proposed that the present Butler and Payson Park school sites be retained as playgrounds. This would both maintain the present playground acreage and provide better distribution of playground facilities than at present. In the case of the Payson Park site, the new multi-purpose room could be retained as an auxiliary recreation facility on that playground.
- ³ A more complete special school study would estimate future pupil distribution and evaluate location of schools in terms of numbers of pupils outside the half-mile walking distance. The use of dwelling units as a measure of distribution adequacy is an acceptable substitute, despite the fact that there are usually different numbers of pupils per dwelling unit in each neighborhood. Very roughly, 1,400 dwelling units would yield 350 students and 2,000 dwelling units would yield 500 students to be transported by bus.
- ⁴ Note again that the "school districts" are based on the numbers of dwelling units served, and would actually be adjusted somewhat according to the numbers of students in the service area.

by bus are reasonably distributed in relation to the schools that serve them.

The proposal has the further advantage that most of the schools would have only 14 rooms, providing a desirable "safety valve" for expansion to 21-room units in the event that present population trends are reversed and Belmont again has an influx of families with many more school-age children.

If this alternative were adopted, it is recommended that 14-room schools on Belmont Hill and the Pequossette playground be constructed during the six-year period 1964-70, replacing the Butler school,¹ thus increasing the number of classrooms from 95 to 100. In the next decade, new 14-room schools on the Kendall school and Grove Street playground sites would replace the present Kendall and Payson Park schools, and seven classrooms would be added to the Pequossette school, bringing the total number of classrooms to 102.

Alternative B

Alternative B is based on the assumption that a new junior high school would be built on another site (see next section) and that part of the present building could readily be converted for use as a 21-room elementary school. (The large basement area might be used for much-needed supply storage and distribution facilities for the whole school system.) In addition, this alternative calls for the construction of three new 14-room

¹ The Butler school building would be retained until the Kendall school was replaced, in order to provide temporary housing for Kendall students during construction.

elementary schools on Belmont Hill, on the Pequossette playground, and on the site of the present Kendall school.

This scheme is essentially the same as Alternative A except for the substitution of an elementary school accommodated in the present Junior High building rather than the construction of a new school on the Grove Street playground. Its major disadvantage is that approximately 2,000 dwelling units would be outside the half-mile service radius of any elementary school (2,500 if all pupils are transported to the proposed school on Belmont Hill), resulting in a high cost of bus transportation.¹

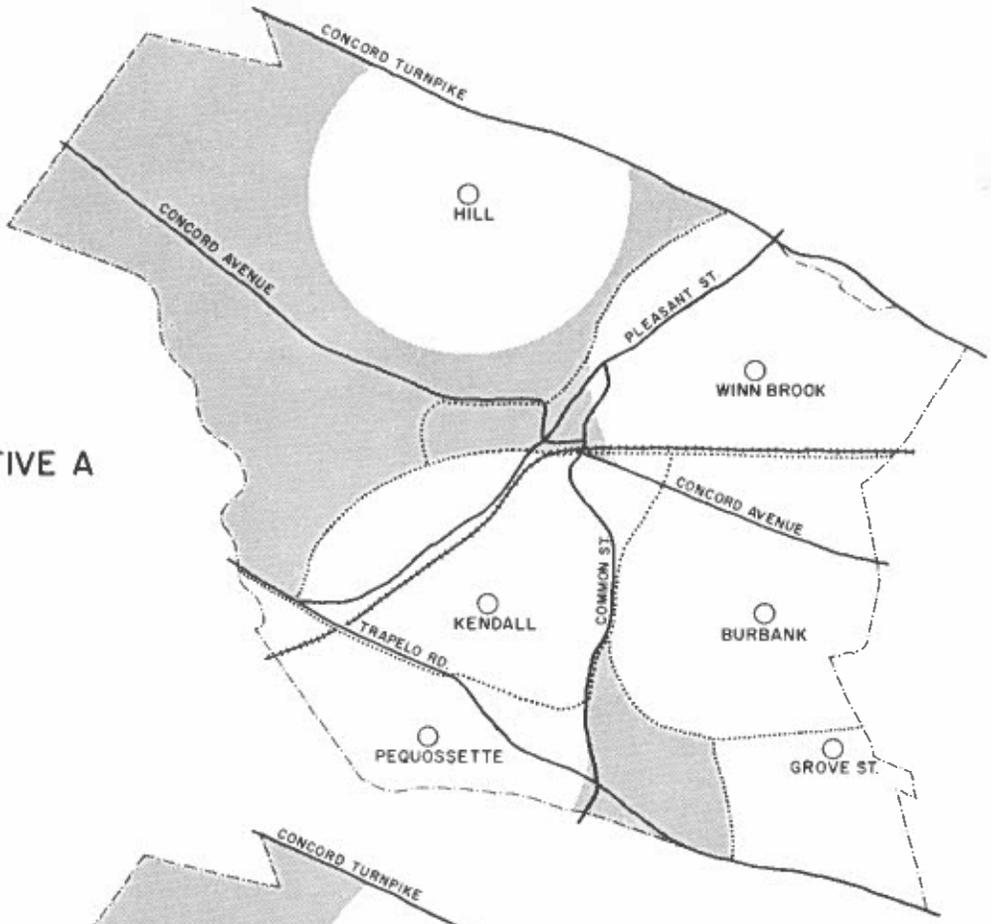
If this alternative were adopted, it is recommended that a 14-room school be built on Belmont Hill and the Junior High school be converted to elementary school use during the six-year period 1964-70, replacing the Butler school, thus increasing the total number of classrooms from 95 to 107. In the next decade, new 14-room schools would be built on the Pequossette playground and Kendall school sites, replacing the present Kendall and Payson Park schools and providing a total of 102 classrooms.

Other Alternatives

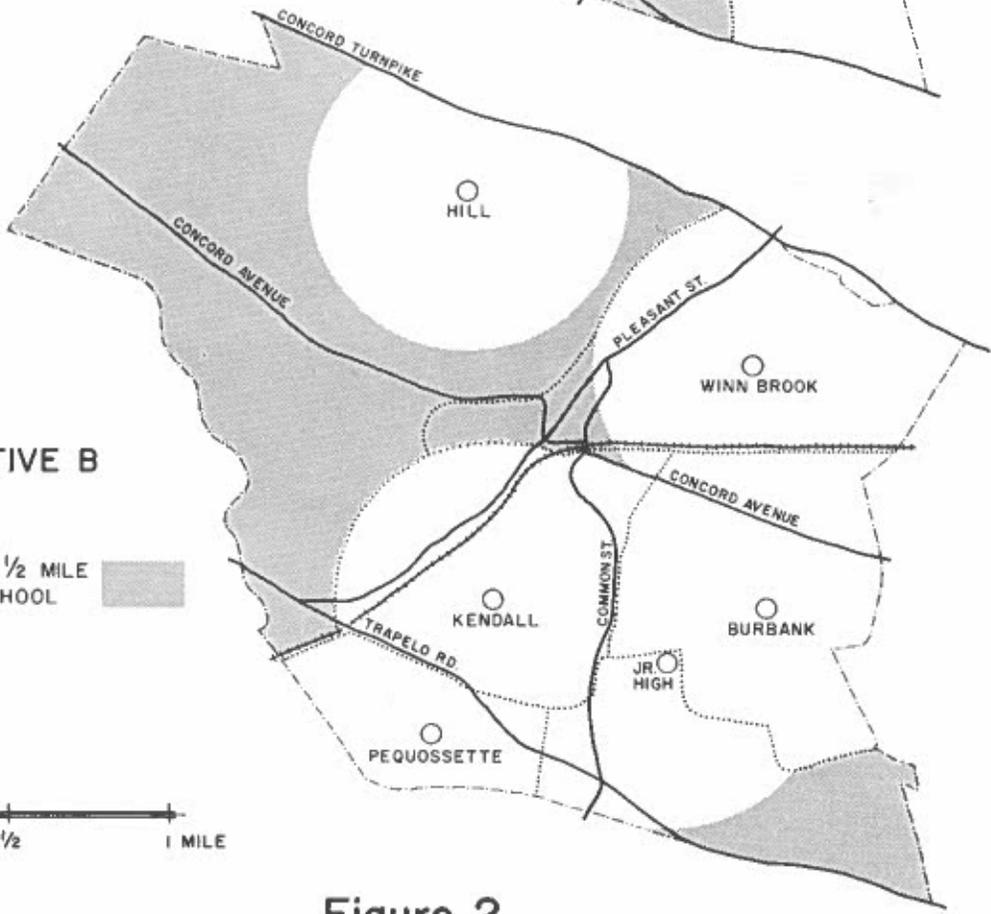
A number of other alternative schemes were considered for meeting the future elementary school building needs, all of which were based on the eventual elimination of the existing Butler, Kendall, and Payson Park schools. These included the following:

¹ Very roughly, 2,000 dwelling units would yield 500 students and 2,600 dwelling units would yield 650 students to be transported by bus.

ALTERNATIVE A



ALTERNATIVE B



AREAS OVER 1/2 MILE FROM ANY SCHOOL

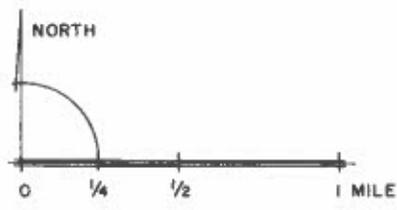


Figure 2
APPROXIMATE ELEMENTARY SCHOOL DISTRICTS, 1980

1. The construction of three new 21-room schools on the Grove Street and Pequossette playgrounds and the present site of the Kendall school. This alternative has the advantage of one less new building. However, with all the buildings except Burbank at the peak desirable size, there would be no "safety valve" for accommodating an enrollment beyond the maximum presently projected; and pupils from the Belmont Hill area would have to be assigned to three different elementary schools.
2. The use of the present Junior High building as two separately-administered elementary schools with only two new 14-room schools—on the Pequossette playground and Kendall school sites. This reduces the number of new elementary school buildings to two, and provides for maximum use of the present Junior High building should this facility be located elsewhere. However, this alternative has many disadvantages, such as the creation of an elementary school plant double the desirable maximum size on a site which would be small in relation to total enrollment, use of the building to its full capacity with no space flexibility for future educational innovations, and an awkward distribution of pupils (with about 2,800 dwelling units outside the prescribed half-mile radius) which would necessitate the transportation of pupils from opposite ends of the town to the Junior High building.
3. The housing of all Grades 4, 5 and 6 in the present Junior High building; the construction of three new 8-room schools on the Pequossette playground and on the present sites of the Kendall and Payson Park schools; and an addition of four rooms to the Burbank school. All these schools plus the Winn Brook school would become primary schools housing only kindergartens and Grades 1 through 3. Here again the disadvantages would appear to far outweigh the advantages, with extremely high transportation costs, an uneven distribution of pupils in relation to the schools they attend, and a fully-taxed building for Grades 4 through 6 with little opportunity for taking advantage of modern educational techniques.

III JUNIOR HIGH SCHOOL

The Belmont Junior High school, completed in 1929, is currently being used to its full capacity and additional space is needed to broaden its educational program. As is already well known from extensive discussion of the high school problem, the capacity of a secondary school building constantly shrinks as more and more space is devoted to the special facilities and new teaching methods required by modern educational standards.

Essentially, a secondary school consists of a large number of "interchangeable" classrooms which can be used for general teaching purposes plus a smaller number of specialized classrooms which are intended to be used for specific purposes, such as labs and gyms.

In a report specially prepared for this study, Acting Superintendent John W. McGrath found that all of the 34 interchangeable classrooms and 15 of the 16 specialized rooms are currently being used. The present space is so fully utilized that immediately desirable educational program improvements would require three more specialized rooms than are now available.¹

The report goes on to note that these requirements are based on the present enrollment of 976 students and "any change in total enrollment,

¹ Needed additional specialized rooms were identified as Craft, Typing-Business, General Science Laboratory, Developmental Reading Laboratory, and Guidance Laboratory. Of these five, the Developmental Reading Laboratory would utilize the current Printing Shop which is now used only for storage, and the Crafts Room would take over the present "Lecture-Playroom" in the basement, leaving a net of three rooms for which there is now no available space.

elective areas of study, increases in any grades, additions of offerings to program or change in desired class size would have a tendency to alter this figure upward . . . In short, it can be stated that in terms of present program offerings the building is being used to about 100% utilization if desired class size (which is not constant in all instances) is kept in mind . . ."

By State standards, maximum secondary school building utilization should be 80% to allow programming flexibility and to afford a "safety factor" for surges in enrollment. In addition to over-utilization of classroom space, the building lacks small and large rooms for general conference and seminar class purposes. Finally, the present "auditorium," being nothing more than a large room partitioned out of a portion of the basement, lacks any of the requirements for an auditorium or for the dramatics, speech and communications programs.

The junior high site on Washington Street is also below standard for such a facility. As pointed out in the following section on recreation, the site does not have adequate playfield space, and such space as there is must be shared with the elementary school. Finally, there is no off-street parking space for teachers and visitors nor off-street school bus loading space, which problems are compounded by the narrowness of both Washington Street and Oakley Road.

Table I indicates that junior high enrollment is expected to average about 1,100 in the next two decades. As enrollment increases and new space-consuming educational techniques evolve, the junior high will be

increasingly under pressure for more space; but the amount of space needed to meet educational requirements over the next two decades cannot be determined without a detailed analysis of such programs—an effort which is beyond the scope of this study. It is sufficient to observe that additional space beyond that now available will be needed in the near future and to consider ways in which this need might be met.

Option No. 1

One solution for providing additional space would obviously be to add to the present building. The principal advantage would be one of economy in construction cost. The site problems would be intensified and students would continue to have to be transported elsewhere for outdoor athletic programs.

Option No. 2

The alternative, which coincides with Alternative B of the preceding elementary school study, would be to construct a new junior high building. A good location for such a building would be within the Clay Pit Pond area, where there would be ample space and ready access to the extensive playfield facilities proposed in the following section on Recreation.

The construction of a new building would be costly, but it would have the advantages of adequate outdoor space for all purposes plus modern internal design readily adaptable to evolving improvements in educational techniques.

IV SENIOR HIGH SCHOOL

For the past several years the School Committee has given considerable attention to the need for expanding or replacing the senior high school plant. In 1962 the Town Meeting authorized the expenditure of funds for the preparation of architectural plans and specifications for an addition to the present building, and a request for an appropriation to cover its construction will be put before the Town Meeting in March by the Belmont Senior High School Study Committee.

The final report on the General Plan to be published later in the year will consider the senior high school problem in the light of whatever action the Town Meeting may take.

V C O M B I N E D S C H O O L P R O G R A M S

The preceding sections separately appraise alternative school development programs at the elementary and junior high levels. In this concluding section, the major alternatives are combined in Table IV to show the inter-relationships between them. Table IV also indicates the approximate costs of the alternatives, which will be an important factor in their consideration.

An advantage of any of the alternatives is that they can be implemented without disrupting the on-going educational program (i.e., a new building can be built before an existing one has to be eliminated; the only exception is the Kendall school and, in this case, it is presumed that once the Butler school is replaced by a new school on the Pequossette playground it could be used temporarily to house the Kendall students while a new building is constructed on the site of the old one).

It is obviously desirable that agreement be reached on a school development program as soon as possible. Pressure for additional space is already being felt at the Junior and Senior High schools and the Winn Brook school. Probably no program can meet all of the desirable criteria, and the choice will have to be confined to the most acceptable of several alternatives. But most important is the fact that an opportunity will exist for substantial reconstruction of the total school plant over the next two decades, and all new construction should proceed according to a long-range school development plan.

Meanwhile, for general planning purposes, it appears fairly certain that with the addition of one recreation site on Belmont Hill (which could serve also as a school site) any likely school and recreation program can utilize existing school and recreation sites in one combination or another.

ALTERNATIVE SCHOOL DEVELOPMENT PROGRAMS

	Alternatives		Approximate Cost ¹ of Alternatives
	A	B	
	(No. rooms in each school)		
ELEMENTARY			
<u>Existing</u>			
Winn Brook	18	18	
Burbank	14	14	
Chenery	7	7	
<u>Proposed</u>			
Hill	14	14	750,000
Pequossette P.G.	21	14	1,050,000 (21)
Kendall	14	14	800,000 (14)
Grove Street P.G.	14		800,000 (14)
Jr. High Building as single K-6		21	250,000
SECONDARY			
Option #1	x		
Add to Jr. High			1,000,000
Add to Sr. High			1,500,000
Option #2		x	
Add to Sr. High			1,500,000
New Jr. High			3,500,000
RELATIVE TOTAL CAPITAL COST			
Elementary Only	3,400,000	2,600,000	
K-6 plus Option #1	5,900,000	-	
K-6 plus Option #2	-	7,600,000	

¹While the general reaction of preliminary reviewers has been that these cost estimates are very low for Belmont, they are based on actual cost experience for new construction in other communities and may be considered realistic. In any event, the estimates can at least be used to evaluate the relative cost of one alternative as compared to another. (Note that for the proposed Pequossette, Kendall, and Grove Street schools the estimate includes \$50,000 for demolition of the replaced building.) All figures exclude site preparation costs, which may vary considerably from one site to another.

PART II - RECREATION FACILITIES

In a community of its size and character, Belmont is generally well served by a large number of widely distributed recreation grounds. The following sections are devoted to an appraisal of the adequacy of the town's facilities for active and passive recreation in meeting present and future needs.

Playgrounds and playfields for active recreation are now administered by the Playground Department, except for small play areas immediately adjacent to various schools. The latter are operated by the School Department and are so small in area that they have not been included in the inventory of available space.

Playgrounds

Playgrounds provide neighborhood play facilities, including play apparatus, ball field, tennis courts, and shuffleboard, for children between six and fifteen years of age. It is desirable that they be within a half-mile safe walking distance of children's homes. Belmont's playground land (37.6 acres, excluding the Concord Avenue playfields) equals the amount recommended by the National Recreation Association of one acre per 800 persons. This assumes that the total acreage is available for neighborhood playground purposes. However, due to the inadequacy of playfield space, some of the playgrounds are used by the senior and junior high schools so that the adequacy of the Grove Street, Winn Brook,

and Chenery-Junior High playgrounds is greatly reduced. A study of the playground distribution indicated that the facilities south of the B & M Railroad are adequate, the majority of homes having more than one playground of adequate size within a half-mile. The one playground in the Belmont Hill-Winn Brook area is of adequate size for the population that is within the desirable service area, but about 11 per cent of the population resides on Belmont Hill beyond the maximum desirable radius from any playground.

In the preceding section of this monograph, the probable need for an elementary school on Belmont Hill was indicated. Even if the town decides not to build a school there, a playground in this general location is considered to be desirable. Based on the estimated future population of the Hill, a playground of at least six acres should be provided. As noted previously, the only feasible site in terms of access to the most heavily populated areas is the north side of Marsh Street opposite the Belmont Hill School. This site—of approximately seven acres and containing only one house—should be acquired as soon as possible to preclude any further residential development.

If the Pequossette or Grove Street playgrounds are used as locations for new elementary schools, the present Burbank and Payson Park school sites should be converted to playground use in order to maintain the present acreage of playground space and provide for a better distribution of play areas. In each case, the new school should be built at one side of the playground so as not to disrupt the area available for play.

In addition, since the Pequossette playground is in one of the most densely populated areas of the town, it is recommended that it be enlarged to include the existing private way which enters from Trapelo Road, assuring adequate area for two baseball diamonds should a new school be constructed on the Maple Street frontage.

Many Belmont citizens apparently feel that, on the basis of existing use of playgrounds, the town does not need as much space as it has for this purpose. Actually, however, much more of the space would be utilized if each playground were well maintained and fully equipped with play apparatus and areas for ball games, tennis, shuffleboard, and ice skating.

Playfields

Playfields are designed for use by high school age youths and by adults. They should include formal areas for field games including baseball, football, soccer, and field hockey as well as ice hockey rinks, tennis courts, dressing rooms, and parking space.

The only land in Belmont used exclusively for playfields are the Concord Avenue grounds. These grounds are well located but inadequate in size. Some playgrounds are now used to augment the shortage of playfield space under the high school athletic program. By National Recreation Association standards, at least 36 acres are needed for a town the size of Belmont, whereas the available area, including the additional practice field now being developed, is only 13.9 acres.

Additional land is clearly desirable for high school athletic activities. The present grounds now have only one field each for football, soccer, and field hockey, with a football practice field now being readied near the Clay Pit Pond; high school teams must now use the Winn Brook and Grove Street playgrounds as supplemental fields. To be adequate for high school use, at least two additional practice fields are necessary, which would double as two baseball and softball diamonds in the spring. A substantial off-street parking area, accommodating at least 100 cars, is also needed to alleviate the present dangerous parking situation along Concord Avenue. To completely release the Grove Street and Chenery-Junior High playgrounds from playfield use, additional facilities would also be needed for the junior high school athletic program. As long as it remains in its present location, the Junior High school must, for the sake of convenience, continue to use the adjacent play areas; but use of the Grove Street field could be suspended if comparable facilities were made available at the Concord Avenue playfield.

Other needed recreation facilities which could be located at the Concord Avenue site include: a large indoor swimming pool for year-round use (augmenting the Underwood Pool) and a skating rink which would be convenient to the high school and eliminate the need for continued use of the Belmont Hill School rink.

At the present time, the Playground Department has no central storage garage, its equipment and vehicles being scattered in various places. The Concord Avenue playfield, as the largest recreation area, would be

the logical location for a new central garage and storage building to serve all the Department's needs. The facility might be built beneath permanent stadium seats to conserve space.

Public rest room facilities, now totally inadequate, should be included in one of the proposed new buildings, preferably the one which would be nearest the stadium.

All of these needs and possibilities can be met at the Concord Avenue site by use of the area behind the Clay Pit Pond and the town-owned Penny land.

Community Center

Community Centers have meeting rooms, hobby shops, and other indoor recreation facilities, sometimes including a gymnasium. Whereas playgrounds and playfields cater particularly to the young, community centers serve both young and old and thus are a very important element of the town's recreation facilities.

To some extent, school halls and gymnasiums and the Town Hall auditorium meet present requirements for meeting space, but are not as suitable for specialized programs, such as hobby shops, because of lack of storage space and other required facilities.

The new library to be built on Concord Avenue presumably will include a number of meeting rooms, possibly some with specialized facilities for music and reading groups and clubs. Additional facilities should be available in the town for crafts and other groups. Lounge and informal meeting facilities for older citizens might also prove highly desirable.

The need for more extensive community center facilities in Belmont is currently receiving attention by a large group of citizens. Their informal survey verifies that a considerable shortage of desired facilities of this type exists.

A new community center might be provided in several locations, depending upon decisions concerning other community facilities.

1. Should the Town Hall be abandoned as town office space, it might be converted into a community center serving many different groups, provided there is a desire to preserve the building.
2. The most logical place for a new community center structure would be on the Concord Avenue playgrounds, rounding out the facilities there to include indoor as well as outdoor recreation programs.

Parks

In addition to having two M.D.C. parks within its boundaries Belmont has the thirty-six acre Concord Avenue Park for its residents. While this is sufficient to meet recommended standards, much of it—not now developed—probably will be used eventually for other purposes as indicated above.

With an increasing portion of its population consisting of older people, a wider distribution of pleasant and not necessarily very large parks might prove popular for passive recreation. The Underwood Estate in the center of the town is a highly logical park area which would complement the new library and be convenient to many residents. Should

it become available by gift or purchase, much of its present natural character and some of the existing houses could be preserved. An outdoor amphitheater could be provided, replacing the one earlier proposed for the Concord Avenue Park, and walkways and formal gardens along Wellington Brook could greatly enhance the library setting. Should demand arise in particular neighborhoods, small local parks could be provided by using portions of the larger playgrounds—appropriately landscaped with trees, shrubs, gardens, walks, and benches.

The present large amount of undeveloped land of scenic value on Belmont Hill is a great amenity to the town. The metropolitan area is continually losing more and more of such natural amenities, with their opportunities for nature study and other forms of passive recreation. The town could preserve some of this open area through acquisition or regulation. So important is such open space now considered to urban areas that 70 per cent of the cost of acquiring it can be met, within certain limits, by state and federal aid. Arrangements are also possible, through the use of easements and the purchase of development rights, to leave title to such land in the hands of the present owners while still making it available for public use.

Appendix A

PROJECTED POPULATION BY AGE GROUP, BELMONT, 1970 and 1980

	1960 ^a	1 9 7 0 ^b		1 9 8 0 ^b	
		High	Low	High	Low
0 - 4	2,331	2,400	2,120	2,310	1,990
5 - 9	2,197	2,360	2,070	2,320	2,180
10 - 14	2,305	2,650	2,650	2,780	2,600
15 - 19	1,891	2,040	2,040	2,100	1,890
20 - 24	1,380	1,190	1,190	1,280	1,490
25 - 29	1,628	1,710	1,750	1,550	1,590
30 - 34	1,614	1,180	1,230	1,250	1,300
35 - 39	1,720	1,720	1,760	1,880	1,930
40 - 44	1,771	1,700	1,760	1,350	1,410
45 - 49	1,989	2,030	2,150	2,010	2,060
50 - 54	2,149	2,070	2,060	1,960	2,030
55 - 59	2,055	2,060	2,120	2,040	2,100
60 - 64	1,922	2,160	2,220	2,030	2,100
65 - 69	1,508	1,720	1,770	1,620	1,680
70 - 74	1,035	1,460	1,510	1,580	1,630
75 - 79	647	1,020	1,040	1,210	1,250
80 - 84	350	510	530	760	780
85 and over	223	280	290	450	470
TOTALS	28,715	30,260	30,260	30,480	30,480

^a U.S. Census

^b High and low projections are based on high and low birth rate assumptions (17.7 and 15.7 per thousand population in 1970; 19.0 and 16.9 per thousand in 1980). These assumptions affect only the distribution by age group, not the total population.

APPENDIX B

INVENTORY OF OUTDOOR RECREATION FACILITIES

<u>Location</u>	<u>Area in Acres</u>
<u>Playgrounds</u>	
Burbank School	1.54
Butler School	1.82
Winn Brook School	5.55
Chenery and Jr. High Schools	2.42
Underwood Playground	3.20
Grove Street Playground	10.30
Pequossette Playground	7.89
Town Field	<u>4.84</u>
Total Playground Acreage	37.56
<u>Playfields</u>	
Concord Avenue	12.05
Concord Avenue Addition	<u>1.84</u>
Total Playfield Acreage	13.89
<u>Parks</u>	
Concord Avenue	36.22