TABLE 4

SOUTHBRIDGE SCHOOL STUDY

FUTURE NEEDS

Grades	Peak Year	Pupils	Classrooms Available	*Minimum No. of Rooms Required
1-5	1963-4	855	44	29
6-8	1962-3	515	26	18
9-12	1963-4	597	14 Reg. 8 Special	20 plus
Trade	-	175 to 200	See inventory	CAP-175

* At 30 pupils/class

PROPOSED PROGRAM

School	Housing Grades	Available Classrooms	Required Classrooms
Charlton St.	1-5	10	
Marcy St.	Demolish	-	
West St.	1-5	8	
Mechanic St.	Abandon	-	
Pleasant St.	1-5	4	
Eastford Road	1-5	10	
		32	30 minimum
Wells H. S.	6-8	21	18 minimum
	Special	2	2
	Enriched	3	3
New H. S.	9-12	14 Reg. 8 Special	20 plus

RECREATION

INTRODUCTION

Techniques for projecting and planning park and playground facilities are similar to those used in connection with schools. So also are the relationships of both kinds of planning to the comprehensive city plan. The neighborhood and community are the fundamental planning units. They are the units by which areas of service and characteristics of population can be most easily measured. Therefore, it is important that land use and circulation patterns be established in the city plan, so that community facility planning may have a sound basis. Zoning for population densities is likewise important in recreation planning. The zoning ordinance with its ranges of permissible density is likely to be more effective here because the range of use may be greater in parks than in schools.

RECREATION OBJECTIVES

These objectives usually require more active promotion than those in education, for the organization of school program supporters is usually much solid and vocal, for obvious reasons. Inadequate numbers of school seats can result in the concrete situation of "double shifts", and it is easy to see the point at which the number of children under a single teacher becomes burdensome. The overcrowding of recreation facilities or even the lack of them is often not nearly so apparent.

As a social and economic factor in community desirability, recreation should, however, be recognized as one of the basic needs of the city.

STANDARDS FOR PARK PLANNING

Numerous park departments and planning commissions have established standards for park planning in terms of area per thousand of population, radii of service areas and types of equipment and facilities to be provided. Experience has shown, however, that standards for size of site and of service area should be used only as general guides.

The general rule for the total amount of active recreation area in a city in the form of parks, playfields, and playgrounds is generally considered to be from 2.5 to 3.5 acres per 1,000 population. The total of both active and passive recreational park area is generally recommended to be some five acres per 1,000 people, although some authorities recommend as much as ten acres per 1,000 population.

The generality of these standards is, of course, immediately apparent, since it is possible for the total park area to seem "adequate" and so cloud the fact that there may be poor design or location or deficiencies in specific areas. Standards for specific facilities are much more useful in measuring deficiencies in particular sections of a city, although they too must be adaptable and used with care. Common sense helps a lot.

TYPES OF RECREATIONAL FACILITIES

THE PLAYLOT or TOTLOT

This type of facility is recommended for densely populated areas. In new development they should generally be provided for and maintained privately. Serving preschool children, the playlot's service area may be simply the city block in which it is located. Its size may average 5,000 square feet, with sandbox, swings, climbing bars and similar equipment provided.

PLAYGROUNDS

This facility ideally serves school children under age 15 in an area of a quarter to a half mile radius. Its size will be of two to seven acres, usually on the basis of one acre per 1,000 population. It may have limited indoor facilities and an office area for a supervisor. Out door facilities should include play apparatus and a multiple purpose athletic field.

THE NEIGHBORHOOD PARK or PLAYFIELD

This is usually the basic recreation unit for neighborhoods, combining playground area and passive recreation park space. It may serve as a "center" for a population of from 4,000 to 10,000 with a service area radius of one-half mile or within easy walking distance of every home. Its size may range from eight to twenty acres, at the rate of about two to four acres per 1,000 population. Ideally combined with school facilities, this type of recreation center should include a combination gymnasium and assembly hall, club rooms, arts and craft shops, hobby rooms and service facilities.

SOUTHBRIDGE RECREATION FACILITIES

Southbridge's recreation facilities and programs are under the jurisdiction of two groups: the Recreation Committee and the Recreation Commission. The Recreation Committee is the chief group responsible for recreation. It consists of 20 members comprised of 15 appointees, 3 Park Commissioners, the Building Inspector and the Town Engineer. It is concerned with activities and maintenance of 4 areas: Henry St. Field, West St. Field, the Swimming Pool and Morris St. Field.

The Recreation Commission, connected with the School Department is represented by 2 members of the Recreation Committee in addition to Selectmen and School Committee members. This Committee is in charge of Dresser St. Field and all school playgrounds utilized by the public.

Existing Facilities

Dresser Field is situated adjacent to Southbridge High School and Cole Trade School and functions as the center of all outdoor athletic activities for both schools. In addition, at certain times it is available for public use as a playground from April through November.

Quality and variety of facilities are excellent. On approximately 8 acres of level land area, there is a football field, baseball diamond and Little League diamond. A basketball court and tennis court are both lighted for evening use. Dressing rooms and toilet facilities are available in the Field House on the edge of the Field.

Henry St. Field serves the densely populated lower Worcester St. area. Its size (9 acres) and equipment make it the town's best recreation

area; it serves roughly 550 children between the ages of 6 and 16.

This field is fully equipped to meet a great variety of recreational needs of all age groups. Two softball diamonds, a Lassie League diamond, basketball court, volleyball court and Zel-ball area are used primarily by older children. Tot-lot facilities include sand boxes, slides, jungle gym, seesaws and swings. Ping-Pong tables, quoits courts and benches are provided for older age groups. Toilet facilities and bubblers are also provided for added convenience of patrons.

Organized activities in the summer months are sponsored and supervised by the Recreation Committee.

West St. Field, formerly known as Alumni Field, is a two-acre playground next to the West St. Elementary School. There are approximately 270 families or 900 persons within walking distance, a population far greater than a recreation area of its size should support.

The field consists of a baseball diamond and a Little League diamond. There are toilet facilities provided. Facilities satisfying younger age groups are lacking.

West St. Field could and should be both improved and expanded. The area it serves has experienced abnormal growth in the past few years and potentially looms as attracting residential development in the future.

It is recommended that the following action be taken towards improving this recreation facility:

1. The town acquire and clear a parcel of land north of the field to supplement the existing area.

2. Tot-lot facilities be provided for younger children. An area fenced in with swings, slides, jungle gym and sand-box would add greatly to the usage of this field.
3. Shuffleboard and horseshoe courts be provided for older people on the outskirts of the field. Both are inexpensive to install and easy to maintain.

A Swimming Pool is located just below Dresser Field, roughly southwest of the Central Business District. Prior to its development as the town swimming facility it was called Reservoir No. 1.

Pool area is about 20,000 square feet or roughly 1/2 acre. A bath house has separate dressing rooms and showers for males and females. Ample parking area is also featured.

The Recreation Committee has enforced strict safety measures. A fence completely encircles the Pool to insure safety when it is closed. Lifeguards are well trained and experienced.

In addition to its excellent Swimming Program, the Pool is used for skating in the winter. Areas where depth exceeds 4 feet are roped off for safety precaution. The Skating Program is supervised by the Recreation Committee.

Morris Street Field is presently undeveloped, covering approximately 2 1/2 acres of land in the southeast portion of built-up Southbridge. It was formerly occupied by Federal housing and was acquired by the Recreation Committee several years ago. A number of obstacles, beyond the Committee's control, prevented development until 1962. Plans are currently underway for

grading the field and an appropriation of $2,000 was granted for that purpose.

Development of Morris Street Field should be a major objective of the Recreation Committee. It is in a densely-populated area greatly in need of recreation facilities. Immediate plans should include drain pipes after regrading has been accomplished. The area should then be furnished with facilities and equipment for basketball, tennis and activities suitable to younger people (i.e., slides, swings, sandboxes, etc.).

It is further a recommendation of this report that the Morris St. Field area be used for major special events such as Carnivals, circuses, etc.

Supplementing the major recreation areas are school playgrounds at Eastford St., Charlton St. and Pleasant St., and several other small areas maintained by the Recreation Commission (School Committee) for public use.

TABLE 1

SOUTHBRIDGE OUTDOOR RECREATION FACILITIES

SUMMARY

MAJOR RECREATION AREAS	AREA
Dresser Field	8.0 Acres
West St. Field (formerly Alumni Field)	2.1
Henry St. Field	8.7
Swimming Pool (and Skating)	6.4
Morris St. Field	2.3
MINOR (NEIGHBORHOOD) RECREATION AREAS	
Eastford School	3.5
Main St.	2.0
Pleasant St. School	1.1
Guelph Wood Rd.	1.4
Walnut St.	2.8
Mechanics St. Park	3.2
Charlton St. School	3.5
Pine and Hamilton Sts.	4.8
TOTAL AREA	49.8 Acres

LIBRARY

Jacob Edwards Memorial Library serves the entire town. Constructed in 1914, it was wholly financed with funds donated by Jacob Edwards whose endowment trust continues to provide annual income supplementing public funds for library operation and maintenance. This report of existing library facilities and service has been greatly assisted by the findings and recommendations of the Massachusetts Division of Library Extension, Boston, in their survey of Southbridge's Library submitted in April of 1960.

Building and Location

The Library is a two-story, brick framed structure situated on Main Street on the eastern side of the Central Business District. Its design is attractive and functional, both inside and out. It is in excellent condition, its interior having been completely remodeled about ten years ago.

The main floor consists of a large reading room with tables, a circulation design, book shelves and stacks, and a makeshift cubicle serving as the Librarian's office.

The lower level, with access to Foster Street, consists of Children's reading room which combines as a meeting room for special and group programs; a small room devoted to music and the arts; and book stack area.

The building is conveniently located within walking distance of the good majority of Southbridge's most populated areas. Moreover, its

proximity to the Central Business District attacts shoppers, employees and pedestrians. In back of the library on Foster Street, there are 36 off street parking spaces provided for library patrons.

Circulation

Library circulation has been on the increase in Southbridge even though it is still considerably lower per capita than other Massachusetts towns (see Table 1). In 1961, total circulation was 95,000 or 5.7 per capita. One factor attributing to this low level of circulation appears to be a relatively low level of formal education characteristic of Southbridge's population.

Yet, in the past seven years, it is important to note that library circulation has increased by 15% while total population has decreased by -4%. With increased library use by all age groups particularly those bent on self-educating themselves, library facilities must be sufficient to meet increasing needs.

Financial Support

Financial support of the library comes partially from income of the Jacob Edwards endowment fund (approximately 25%) and partially from appropriations of the General Fund (about 75%). Library expenditures last year (1962) were $1.82 per capita of which $0.46 derived from trust income and $1.46 from the General Fund.

Table 1 shows comparative per capita expenditures for selected towns. Clearly, Southbridge is well below the average in this group and, when compared with minimum standard suggested by the American Library Association for towns ($3.00 per capita), Southbridge's library support becomes yet more inadequate.

There is no doubt that Southbridge is not providing the library service it should because its budget is too low.

Current Needs

Southbridge's library was evaluated in 1960 in a study conducted by the Massachusetts Division of Library Extension, Boston. As a result, a number of recommendations were made for additional facilities to the library plant.

Wing Addition to the Library building to include a large meeting room for group programs, ample space for administrative offices and provision of private study cubicles.

Bookmobile to service outlying areas. A study made by Mrs. Tien, Head Librarian, indicated that the number of library users in rural areas of Southbridge (i. e., outside of the built-up sections) was increasing rapidly. Since Southbridge's population is too small to warrant branch libraries, the most effective means for serving those potential users in outlying districts is by Bookmobile.

Increasing the Library Budget. The total budget appropriation for library service must be increased gradually commensurate with increasing library use. In doing so, gradually Southbridge may expect to bring its total library service up to an acceptable standard demanded of its population size.

The above recommendations have been made after careful examination of the town's financial capacity to support them. In the section, Capital Budget Program, suggested scheduling of the improvements will be made to phase in with all other major projects recommended for "funded" financing.

TABLE 1

LIBRARY CHARACTERISTICS 1959 FOR SOUTHBRIDGE AND SELECTED COMMUNITIES OF SIMILAR POPULATION

	Population '55	Expenditures Per Capita	Circulation[1.] Per Capita
Southbridge	17,271	$1.82	5.4
Andover	14,535	5.00	12.0
Auburn	12,442	2.53	7.4
Fairhaven	13,376	2.58	7.1
Marblehead	15,908	3.97	9.6
Northbridge	10,626	2.35	9.5
Shrewsbury	13,103	2.45	4.7
Webster	13,934	1.72	5.6

1. Circulation Per Capita = No. Volumes Borrowed ÷ Total Population.

POLICE DEPARTMENT

The Police Department is housed in the first floor and basement of an old renovated school building off Main Street in the center of town. The building, some 10 years old, is brick-frame and in sound condition. The second or top floor is occupied by the First District Court, Worcester County, on a lease arrangement with the town. A two-stall garage is attached to the building at basement level and, due to irregular topography, leads out to Foster Street.

Space utilized by the Police Department is extremely cramped. The booking desk, for example, is in full view of the waiting room which merely consists of several benches in the main lobby. This makes embarrassing scenes (particularly in the case of arrested drunks) impossible to avoid. Fingerprinting and mug photography is carried out in a room of closet size. Policemen's dressing and rest room is crowded with lockers and benches rendering an atmosphere hardly conducive to leisure rest. While four male prisoner cells are situated in seclusion on the ground floor, the three female cells are located next to the court room on the top floor without proper seclusion required of such quarters.

With four cruiser cars, a boat and numerous signs and other miscellaneous equipment requiring sheltered storage space, the Department's two-stall garage is entirely inadequate. It houses only two cruisers, the other two cars, boat and miscellaneous equipment are stored in the Globe Village section, some mile or two from headquarters.

Parking facilities are meager and inefficiently located in front of the building. The building, being set back approximately 500 feet from

Main Street and connected with a narrow road accommodating only one car one-way, is situated on such a small plot of land that proper parking accommodations are badly needed.

Accessibility to major streets is a further inadequacy plaguing Police Department performance. In addition to the narrow road leading into the building, vehicles entering or exiting must be extremely cautious to avoid pedestrians on Main Street sidewalks. This causes definite danger as well as an impediment to smooth and expedient response to situations of immediacy.

It is clear for these reasons that Southbridge's Police Department lacks adequate facilities for carrying out its normal functions efficiently. Curiously, the situation has long been recognized. Some fifteen years ago, plans were underway to relocate the Department into better quarters. Unfortunately, action, at that time, was interrupted and Southbridge today is still faced with this major problem.

Recommendations

Southbridge appears to have two possible courses of action in solving the problem. They are offered here with their relative merit for consideration:

1. Construction of a new Police Department providing adequate space and storage area and located conveniently and efficiently. Prime site possibility could be at the old Marcy Street School. This would stimulate additional hike in the tax rate. In view of Southbridge's current tax rate and low level of assessed valuations, this possibility appears to be economically undesirable at this time.

2. Improvements of existing building including additional garage space, utilization of the top floor now occupied by the District Court, and widening of the entrance driveway from Main Street to the building. This possibility is not without its disadvantages, however, The District Court would have to be relocated (possibly outside of Southbridge) and negotiation for disputed land on either side of the driveway would have to be made with the Baptist Church.

The planners definitely favor the latter alternative since it is more economical while providing improvements which would adequately bring facilities up to normal standard. It is hoped that consideration be affected in the immediate future so that improvements may be begun as early as possible.

FIRE DEPARTMENT

Southbridge's Fire Department is centrally located in a brick-frame building on Elm Street. This station serves the entire town. The only sub-station, previously situated in the Globe section, was abandoned several years ago when it was felt that the Elm Street Headquarters was sufficient to handle all apparatus and efficiently cover the entire town.

The most recent inspection of Southbridge's Fire Protection facilities made by the National Board of Fire Underwriters ranked Southbridge in the "2B" category. In general, this indicates "above average" protection facilities. Analysis conducted by the planners, considered all facilities were excellent and measured up to all requirements of safety and coverage.

Building

Headquarters building was erected in 1898 and consists of 3 stories. Ample space for office, rest rooms and storage is provided. Building structure is of sound original construction and is extraordinarily well-maintained inside and out. Its central location permits easy access to all built-up portions of town.

Equipment and Personnel

Fire Department personnel consist of 24 permanent fire fighters supplemented by 22 auxiliary men.

Major equipment includes:

2 Ambulances

2 Forest Fire Trucks

1 Jeep

1 500-Gallon Crash Truck

1 Service Truck

1 Rescue Truck

3 Pumps

1 Ladder Truck

1 Chief's Car

Calibre of equipment and personnel is considered excellent by the National Board of Fire Underwriters.

Fire Inspection

Fire inspection of all buildings, residential and non-residential, is conducted on a regular as well as "complaints" basis. This practice assures inspection of each building structure at least every two years and insures a maximum safety check throughout all built-up areas.

Recommendations

In view of the above conditions, existing facilities and programs, are sufficient for serving Southbridge's needs with excellent fire protection. Therefore, no recommendations are made in connection with the Master Plan.

PUBLIC UTILITIES

WATER SUPPLY INVENTORY

Introduction

Southbridge's water is supplied by the Southbridge Water Supply Company, a privately owned utility. It supplies approximately 95% of the population and all industrial and commercial properties.

Total water consumption is estimated at 1.4 million gallons per day (mgd) of which approximately 65% is residential, the remaining 35% consumed by commercial businesses, industries and public properties. Total safe yield is estimated at 1.75 mgd. Per capita consumption can be roughly estimated at 80 gallons per day, a figure which compares favorably with standards established by the American Public Health Association (normal comsumption varies between 50 - 100 gallons per capita per day in sound neighborhoods).

Existing Water Supply System

Source

The primary sources of water for the Supply Company are three reservoirs originating from Hatchet Brook (Reservoirs Nos. 3, 4, 5). These are located in the southwesterly portion of town which is of comparatively high elevation in relation to built-up areas allowing water flow by gravity from the reservoirs through supply mains into a distribution system.

Distribution System

The service area is defined on Exhibit W-1. Due to marked differences in elevation inherent in the area, the distribution system

consists of two pressure zones: Low-Service System, serving the major portion of town and a High-Service System, serving southwesterly portions as well as an area on the north side of the river (near Pleasant Street).

The Low-Service System is supplied from Reservoirs Nos. 3 and 4. (No. 3 during the summer months, and No. 4 during winter.) Supply mains consist of 16, 24 and 26-inch pipe extending from the reservoirs northeasterly to South Street, along South Street to West Street, thence tying into the distribution system.

Reservoir No. 5 is the sole source for the High-Service System receiving fortification from Hatchet Pond. The supply main consists of 20-inch and 16-inch pipe. The 20-inch line leaves Reservoir No. 5 and follows the eastern edge of Reservoir No. 4 where it connects with the 16-inch pipe. This parallels the Low-Service line to the distribution system.

Filtration

In accordance with Massachusetts State Regulations, all water is chlorinated below the dam at Reservoir No. 3. Facilities for metering include an alternate system and flow recorders housed at the end of the dam. Chlorination is automatically controlled by venturi meters in the High- and Low-Service mains.

Recent Improvements

In 1948 and again in 1958, the Southbridge Water Supply Company engaged the services of Metcalf & Eddy, Engineers, Boston, to investigate the need for additions to the town's water supply system. In April, 1959, a report was submitted outlining specific recommendations made by the

engineering firm for improvements in the near and distant future. As a basis for future recommendations, projections were made to estimate future population and industrial expansions to Year 2000.

As a result of this study, the past few years have seen considerable capital expenditure on the part of the Supply Company to expand and improve its present facilities. Improvements completed or underway, other than regular maintenance made including minor installations, since 1959, are:

1. Installation of High-Service 10-inch main to Morris Street from Lebanon Hill Road.
2. Purchase and renovation of building at 70 Foster Street providing space for office, shop and garage.
3. Replacement of 6-inch main in Pleasant Street with 10-inch main.
4. Installation of 16-inch main in Worcester Street to supplement 6-inch main.
5. Cleaning and cementing of 16-inch line (Low-Service System) from Reservoir No. 3 dam to West Street.
6. Installation of 24-inch, Low-Service main and 20-inch High-Service main to replace sections of two existing 16-inch mains within flooded area of Westville Flood Control Reservoir.
7. Construction of booster pumping station on Dennison Cross Road and a stand pipe on Dennison Hill for water service in Dennison District of Southbridge.

Future Needs

Existing water quality, supply and distribution system are considered

adequate to serve Southbridge's requirements for the near-distant future. (As a promotional feature for industrial development, for example, it has been the conclusion of several industrial firms planning to locate in Southbridge that the water supply system was excellent.) This conclusion is based upon optimistic estimates of population and industrial growth within the next five years. Assuming that Southbridge will experience abnormal growth (particularly in the event of industrial development), in all probability an additional source of water will have to be developed. In anticipation of this event, the Southbridge Water Supply Company has established two alternatives:

The first and most feasible source appears to be Breakneck Brook watershed in Sturbridge. Tapping it will require endorsement of Sturbridge via town meeting vote. It appears that when the need arises, such approval could be secured.

Quinebaug River looms as the other alternative. This would have the advantage of lying within Southbridge and near built-up areas. Potential disadvantages, seen at the present time are two: estimated development costs are extremely high (in excess of $1 million) and, throughout New England in general, there has long been public feeling against the use of such waters.[1] The latter drawback could be corrected by public education and publicity illustrating the purification procedures planned for utilization of this source. It is possible, however, that other sources could be developed more economically.

Additional equipment required of the distribution system will be provided by the Southbridge Water Supply Company, when needed, which has

1. The use of the Merrimack River in the Lowell-Lawrence area was accepted after some public dispute.

successfully put into effect a program for identifying future requirements of all types. In view of such satisfactory conditions, no recommendations have been made in connection with the Master Plan.

SEWERAGE DISPOSAL SYSTEM

Existing System

The existing sewerage system serving Southbridge consists of approximately 35 miles of sewer pipe and a complete sewerage treatment plant.

The treatment plant is located in the southeast portion of town away from built up areas. It employs a grit chamber, raw sewage pumps, duplicate Imhoff tanks, two circular highrate trickling filters, two final settling tanks, recirculation pumps and pre- and post-chlorination.

The collection system is divided into three main drainage systems and two minor systems (referred to as "primary" and "secondary" in Southbridge). The southerly system consists of approximately 10 miles of mains and laterals which contribute to a 20-inch main sewer in East Main Street just east of the Mechanics Street intersection. This system operates normally and experiences no supercharging or overflowing, under normal conditions. Surcharging problems were eliminated successfully when lines were cleaned several years ago; the system, therefore, is considered adequate.

The central system serves the central portion of town and comprises of some 20 miles of sewer mains and laterals. It enters the 20-inch main trunk sewer at East Main Street. Prior to 1959, this system was plagued by frequent surcharging and overflowing occurring in the Crystal Street sewer in the vicinity of North Street and Mechanics Street. The trouble was corrected mainly by pipe-cleaning in 1959. The system now is adequate with a maximum

estimated capacity of 5 million gallons per day.

The third system serves the northern section of Southbridge's developed land area. It consists of roughly 5 miles of main and laterals emptying into the 20-inch main trunk at Main Street. The system appears to have adequate capacity except for some minor surcharging in that section between North and Main Streets. Our examination of Fay, Spofford & Thorndike's report (March, 1959) indicates that, during their field studies, there was evidence of surcharging of the system in the vicinity of North and Main Streets only when the main trunk sewers in East Main Street were flowing partly full. Since the East Main St. sewer is the main trunk of the system and is located just east of the troubled area in Mechanics Street, it would appear that there was a temporary obstruction at the Mechanics St. sewer. Another alternative could be that the entire system connected to the Mechanics St. main was contributing at a faster rate than the designed time rate of the other two systems. Nevertheless, the present capacity of the system appears to be entirely adequate.

Two smaller systems are connected to the 20-inch main trunk sewer in East Main Street. The first serves a small area between Warren Street and Morris Street eventually connecting to the main trunk sewer in two places at the intersection of Morris and Main Streets, as well as at the intersection of Chestnut and Main Streets. Its capacity is satisfactory.

The second minor system services the built up areas along North Woodstock Street. It ties into the main trunk sewer at East Main Street just below the intersection of East Main Street and North Woodstock Street. This system also appears to have adequate capacity at the present time.

Industrial Waste

Industrial wastes from American Optical are inorganic in nature and do not affect the biochemical oxygen demand (B. O. D)[1]. of the Quinebaug River into which it is deposited. Because of its large volume, it is given primary treatment at the plant and then pumped into the Quinebaug River at a point below the Company's dam.

Sanitary wastes from the plant are taken into the town sewerage system at various connections in Mechanic Street and East Main Street. They are treated at the town treatment plant.

Wastes deriving from the Mill Street Industrial area are generally high in the B. O. D. but, because of its location (remote from the treatment plant) and the excessive costs which would be incurred should it be tied into the town's sewerage system. They are pumped into the Quinebaug River. A certain amount of undesirable pollution is the result of this situation.

Conclusions

Considering the improvements made in the town sewerage system since 1957 and the general decline in population during the same period, there appears to be more than adequate capacity both in the system and the treatment plant at the present time. However, when heavy infiltration occurs simultaneously with high contribution from the three major systems, there could be some minor surcharging in the vicinity of Mechanics Street. The remainder of the system should be adequate for the next 15 years with normal maintenance.

1. Biochemical oxygen demand (B. O. D.) = the oxygen required for the oxidation through biological or chemical agencies of the organic matter and oxidizable inorganic matter contained therein.

DRAINAGE REVIEW

Drainage systems are a natural function of topography and precipitation. The watersheds of the highlands feed the low lands and form lakes and rivers that are familiar to all of us. When these watersheds are developed, their runoff conditions are altered and, assuch, much be handled by substitutions made by man to divert waters from their natural course to one which is more desirable to the development. Evidence of the natural drainage system, however, usually forms the basis of the man-made system.

The first storm drainage system in Southbridge was much like that of most New England communities. It consisted of a series of culverts that continued the natural runoff pattern when roads or other structures interferred with its flow.

As the community continued to develop, additional diversion of flow was required and water had to be carried for longer distances. It was then necessary to develop a piped system. This system was designed to pick up storm water from various collections conducting it to the river or various brooks.

In Southbridge, because of ideal topographic conditions, the existing storm drainage system has remained relatively simple. The system has been developed so that it consists of several small drainage areas. Each area is serviced by a series of laterals. The laterals in turn empty into short sub-mains or directly into a brook that acts as a main or sub-main. These brooks then contribute to Quinebaug River. The Quinebaug River consequently acts as the main drain of the system while Cohasse Brook, Nuisance Brook,

McKinstry Brook and Cody Brook act as sub-mains. While these brooks and rivers can satisfactorily be substituted for the main and sub-mains of the more detailed system, they still require maintenance to maintain their efficiency.

Cohasse Brook has recently been dredged to some extent but additional work is required if it is to maintain efficient service. Recently, the town engineer has produced a detailed project report for immediate consideration of the local governing body.

Nuisance Brook needs no immediate attention. Its present capacity is adequate primarily because 60% of its flow has been diverted to the Quinebaug River. The diversion was made from a point just south of the first reservoir. It has relieved the pressure on the sub-main under Main Street, and there is now adequate capacity in this area.

Dean and McKinstry Brooks require additional work to satisfy flood condition requirements. At this time, however, under normal conditions they function adequately. Cody Brook requires additional work to handle flood load conditions.

Normally, it is the function of the town engineering department to design and maintain the drainage system. In Southbridge, this work is being carried out very capably by the present incumbent of that office. It is the duty of the Planning Board to analyze the existing system and recommend improvements that will make the system more compatible with the future land use development of the community.

At present, however, it is felt that the existing systems provide

adequate service.

It must therefore be recognized that the existing system whereby small drainage area are connected directly to the natural drainage system and the elements of the natural system are substituted for main and sub-main has worked adequately. It is therefore recommended that future expansion of this system follow the existing pattern.

ZONING & SUBDIVISION

SUBDIVISION REGULATIONS

A complete set of "Rules and Regulations Governing the Subdivision of Land in Southbridge, Massachusetts" was presented to the Master Plan Committee and Planning Board in February of 1963.

ZONING

General

Zoning is the subdivision of a community into districts for the purpose of regulating the use of land and buildings, the height and/or bulk of structures, the proportion of a lot that may be covered by structures and, in some cases, density of population.

Of special importance to the Master Plan is the function of zoning as an instrument to give effect to those portions of the Plan concerned with lands under private ownership. Any comprehensive zoning by-law revision should have applicability on a town-wide basis, and be guided by the land use proposals of the Master Plan.

Southbridge's present zoning by-law was accepted by town meeting in 1958. This by-law divides the town into seven districts, as follows:

1. Single-Family Residence
2. Two-Family Residence
3. Multiple-Family Residence
4. Retail Business
5. General Business
6. Light Industry
7. Heavy Industry

These seven districts are regulated, subject to requirements of usage and area, height, setback, side and rear-yard dimensions. A tabular summary of these requirements follows:

District	Use	Area*	Frontage	Height	Setback
1		7,500	75'	2 1/2s or 35'	30'
2		2,500 per family	50'	"	20'
3		600 per family	50'	4s or 50'	15'
4		No. reg.	No. reg.	4s or 60'	
5		"	"	"	
6		"	"	6s or 80'	20' to 30'
7		"	"	"	"

District	Side Yard	Rear Yard
1	10' & 15'	25% or 30'
2	10'	25% plus
3	5'	15% plus
4	None (c)	Loading Room
5	None (c)	Loading Room
6	None (c)	25' to 40'
7	None (c)	25' to 40'

*Principal Building Ground Coverage:

Single Family - 20%
Two Family - 30%
Multi-Family - 35%

Note: In other than single-family districts a minimum area of 5,000 and a frontage of 50' is required for all dwellings.

ZONING MAP - LAND USE

The existing Zoning Map (1958) is, to some extent, indicative of the use of land in Southbridge. (Note Land Use Section of this Report.)

Present zoning divides the community as follows:

Zoning District	Approximate Area (Acres)	Percentage of Total
1 Residence - Single Family	10,832	84
2 Residence - Two Family	1,000	8.4
3 Residence - Multi-Family	100	0.7
4 Business - Retail	56	0.4
5 Business General	185	1.4
6 Industry - Light	120	1.0
7 Industry - Heavy	583	4.2

General Commentary

Any zoning by-law should be subjected to regular reviews with regard to the experiences encountered in its operation, difficulties and results it has produced or failed to produce, as well as changes in the community. The review should be based on whether the by-law is contributing to desirable development or improvement of conditions.

In Southbridge the zoning by-law has not, in your consultant's opinion, contributed to major development or improvement, although it has certainly aided in residential development of certain areas, especially in the smaller home category.

On the following pages are listed the basic objectives relative to zoning. In addition, a series of general recommendations have been made and are

contained in this section.

Recommendations and revisions will be presented to the Planning Board along with necessary tools for effectuation.

Basic Objectives in Revisions of Zoning By-Law

Listed below are recommended objectives to be considered in revising or altering the existing by-law:

1. Conformance and assistance in achieving basic objectives of Master Plan.
2. Revision of area and use requirement to account for utility problems. More specifically lots which do not have municipal sewerage and/or water supply should be large enough to handle these items, without future necessity of constructing municipal utilities requiring large capital expenditures.

   It is recommended that consideration be given to 25,000 to 50,000 square foot area requirements in these specific zones, with necessary percolation test requirements for sanitary use.
3. Revision of sections referring to existing and non-conforming use to clarify and strengthen these sections. New sections should prevent reconstruction and alteration to new uses which are not intended.
4. Addition to the by-law of requirements for vehicular storage (parking) off-street. These requirements should include residential, commercial (business) and industrial uses.

   Off-street loading requirements for commercial and

industrial components, based on gross floor area, are strongly recommended.

It should be noted that requirements in residential areas for auto parking indicate reduction in lot coverage by structures and thus suggest larger minimum lot sizes.

5. Intermingling of uses should be avoided by strengthening the by-law to prohibit residential development in industrial zones.

Regulations regarding auto service stations should be enlarged to prohibit service stations entirely in residential districts and to provide for restrictions as to setback, driveways, illumination, etc.

6. Restrictions can and should be established and related to use, since it is almost impossible to create the number of zones necessary to properly restrict the usage of land.

7. Consideration should be given to addition of a Neighborhood Business Zone. This type of zone must have requirements of use, setback and off-street parking related to the residential area it serves.

At present this type of development becomes more of a mixture of uses, rather than serving the needs of an area.

Suggested Specifics

1. Enlarge the number of residential zones to provide large lot zoning for areas not served by sewerage, water and drainage facilities. A suggested system for enlarging the zoning districts follows:

A. Single Family Residence Districts

District	Minimum Lot Size	Minimum Frontage	Building Coverage	Off-Street Parking Req.
RA-1 (Areas not served by utilities)	50,000 SF	150'-200'	25%	One space per dwelling unit
RA-2 (Areas not served by water, but having good sewage disposal on property)	25,000 SF	120'	23%	One space per dwelling unit
RA-3 Areas served by all utilities	7,500 SF	75'	33 1/3%	One space per dwelling unit

B. Single- and Two-Family Districts

District	Minimum Lot Size	Minimum Frontage	Building Coverage	Off-Street Parking Req.
RB-1 Areas served by all utilities	5,000 SF (single fam.)	50'	25%	One Space Per Dwelling Unit
	6,000 SF (two fam.)	60'	30%	

C. Single, Two, and Multi-Family Districts

District	Minimum Lot Size	Minimum Frontage	Building Coverage	Off-Street Parking Req.
RC-1 Areas served by all utilities & good transportation	5,000 SF Single Family	50'	25%	One Space per Dwelling Unit
	6,000 SF Two Family	60'	30%	One Space per Dwelling Unit
	3,000 SF - 1st 600 SF - ea. add. unit Multi-Family	None	40%	One Space per Dwelling Unit

Note: Parking ratios may govern lot sizes.

D. Business Districts

District	Minimum Lot Size	Minimum Frontage	Building Coverage	Off-Street Parking Req.
Business - 1 Neighborhood	12,500	100	80%	One Space per 350 sq. ft. of gross ground floor area.
Business - 2 Retail Business	None	None	None	One Space for each 500 sq. ft. of gross floor area.
Business - 3 General Business	None	None	None	One Space for each 500 sq. ft. of gross floor area.

Note: Loading bays shall be required off-street in ration to gross floor area.

E. Industrial

District	Minimum Lot Size	Minimum Frontage	Building Coverage	Off-Street Parking Req.
E-1 Light Industry	None	None	See yard requirements	One space per 800 sq. ft. of gross floor area.
E-2 Heavy Industry	None	None	See yard requirements	One space per 1,000 sq. ft. of gross floor area.

Note: Loading bays shall be required off-street in ration to gross floor area.

It is further recommended that Southbridge consider an industrial use criteria section, similar to subdivision control regulations and incorporating specific degrees of regulation relative to noise, smoke, odor, etc.

AREA OF INFLUENCE

AREA OF INFLUENCE

Remarkable changes which have occurred in the past 50 years - particularly in transportation and technology - have rendered our cities and towns increasingly dependent upon larger spheres of influence in which they are contained. In any given community economic, social and cultural interdependency with surrounding towns, the region, the State or other areas of significant context is of vital planning consideration. Those factors of a broader framework which affect Southbridge's development are highlighted in this section.

Southbridge's location in southcentral Massachusetts on the Connecticut border and 22 miles from Worcester (City) places it just out of reach of the "Greater Worcester Economic Area". Similarly, it is not officially considered a part of the Worcester Standard Metropolitan Statistical Area (SMSA). Regardless, the central city of Worcester plays an important role on Southbridge economically and culturally.

Southbridge citizens rely on downtown Worcester for many retail goods particularly durable goods (e.g., furniture) and apparel. Worcester provides the entertainment hub of the area offering a variety of theaters, sporting events, restaurants and museums. Higher education and special night courses available in the city are conveniently accessible to Southbridge residents.

Worcester City functions as the financial center for communities in the southcentral portion of the State. Southbridge's corporate and individual needs for major banking, real estate and insurance services are largely

satisfied in Worcester. This role is typical of many other "central cities" throughout the country in our modern society where service industries are centralized in major urban areas to provide complete and efficient accommodation to "satellite" communities.

Within the sphere of Worcester County, there have been trends which indicate impact upon the development of Southbridge. The County's economy, like that of Southbridge, is strongly oriented towards manufacturing. Historically, textiles dominated the economy, attracting a substantial population of unskilled and semi-skilled labor into the entire area. Out-migration of the textile industry in the 40's forced the area to revitalize its economy by attracting new industry adaptable to its existing labor force.

Today, after a period of economic stagnation, the Worcester County area appears to be on the threshold of economic improvement. With major highway advantages (Massachusetts Turnpike, and Route 290, Route 495, in particular), strategic geographical location close to large market areas (Boston, Providence, Hartford, New York), and improving skills in an abundant labor force, the area could look forward to a manufacturing revitalization it has not enjoyed in years.

In a more immediate context, Southbridge's relation to surrounding communities is less significant. Sturbridge, Charlton and Dudley in Massachusetts are predominantly rural communities with little industrial development. Of similar character, Connecticut's Woodstock and Union are very sparsely developed. Southbridge has always been the industrial bulwark of this small "sub-area". Until recently, it also functioned as the

regional shopping center for residents of these neighboring towns. Over the past 10 years, however, it has been evident that retail sales have been lost to more modern and convenient shopping facilities in Webster.

Economic revitalization in the Worcester County area is expected to be slow in the next decade or so. In an area which has experienced a period of economic decline or stagnation, it is highly unlikely that any significant growth of industry or population will occur until after a period of stabilization. Considerable study has been made recently, both regional and local in scope, to assess the potential of the area in terms of future economic growth. Much of the speculation made has centered around the success to which the Worcester area retains and encourages the healthy elements of its manufacturing base by working with management in an effort to collectively provide a better climate in which to do business. Among the more important objectives are to increase labor skills with technical retraining programs to encourage industrial site development in suburban communities, and to encourage the expansion of industries offering higher wages.

The extent to which Southbridge shares in any such growth of the general area is difficult to measure at this time. However, there are significant generalizations which are worthy of mention concerning Southbridge's possible place in the scheme of future developments. Southbridge has one major asset which makes it less dependent upon the economic development of the Worcester area - American Optical Company. The marked loss of employment in the area's metal working industries, the chief manufacturing category, had far more impact on other satellite

communities than on Southbridge. And, it is reasonable to assume that specialization in optical goods manufacturing places Southbridge in a unique and favorable position within the area so long as American Optical Company remains in the town.

Should the Worcester area realize, in the future, economic improvements stimulating population growth, Southbridge stands a competitive chance (with other communities) of usurping residential development as well as industrial growth on its vast areas of vacant land. Within the context of prospective area growth, however, Southbridge must realize the importance of immediate courses of action for attaining its share of positive growth. This will mean vigorous promotion of those assets it has to attract selective types of industry compatible with its labor force, transportation networks and site availability. It will mean a substantial program to improve the physical condition of the downtown shopping district through urban renewal and collective private initiative to produce an environment suitable to the modern shopper. It will mean controlling the vast acreage of land now vacant to create residential lots acceptable to prospective families moving into the area.

Throughout the Master Plan, references are made, where applicable, to similarities and dissimilarities of Southbridge, neighboring communities, the Worcester area and the State. There is little doubt that, in every area of Southbridge's past development outside influences have shaped growth or lack of growth. Future planning decisions in Southbridge will not be effective unless an accurate assessment of the potential in the region, to a large extent, the State and the Nation, to a smaller extent, is considered.

FUTURE LAND USE

FUTURE LAND USE

The proposed future land use for the Town of Southbridge is predicated on material compiled through the completion and through coordination of the following separate but closely related studies: Population Analysis; Land Use Cost and Income Analysis; Existing Land Use; Economic Base Analysis; and Highway Traffic and Parking Analysis.

Basically, Southbridge is a town of moderate population density within the developed area of the community. The developed area further contains local and regional commercial area, heavy and light industrial development. The town is a typical New England industrial community with one basic industry shaping the character and nature of the economy. It is in the best interests of the community to encourage the continuation of this present trend of development with a properly planned program that will produce the following objectives:

First, to encourage a moderate amount of new, diversified industry, oriented to the existing skills of the regional labor force. The new industry should be of a selective nature, with the ability to provide increasingly better job opportunities for the existing and future labor force. It is highly important that for the most part this new industry be compatible with the existing major industry, American Optical Company, and preferably those industries that use the finished product or supply the raw material to the major industry. It is also important that the major industry be advised of this type of program so that they may recommend industries that would tend to stabilize the future of the American Optical Company in Southbridge.

A second major objective of this plan is to encourage a moderate increase in regional shopping facilities adequately serviced by off-street parking, maximum ease of traffic movement within the shopping areas and increased accessibility to major highway networks of the State.

The first step in the development of the above objectives would be the development of better service road access to Routes 12, 15 and 20 and the Massachusetts Turnpike. This can be accomplished with the cooperation of neighboring communities. It is highly important that the intersection of Mashapaug Road and Route 15 be maintained and improved. It is also important that further study be given to the improvement of Route 131 or for the addition of truck climbing lanes.

While the Traffic and Parking section of this plan explains the above requirements, it is important, at this point, to recommend that the entire business district should be included in a detailed study for Community Renewal. It should also be pointed out that while this type of semi-regional complex is restricted to the demands of the surrounding population, they can generally be stimulated by better street patterns, new and better stores and increased accessibility.

A third major objective is to present methods of relieving residential densities in the central residential area, to eliminate residential units from the central business district and to eliminate physical and incipient blight from both residential and non-residential areas.

A fourth major objective is to continue to develop a coordinated recreational system which will offer passive as well as active recreational

facilities to all age groups throughout the community.

The realization of the above objectives can only be accomplished through the coordinated efforts of the local law-enforcement group and the rehabilitation, stabilization and urban renewal forces working with government and private capital. The addition of whole-hearted citizen participation in this program will result in increased security and a generally improved way of life for the people of this community.

Residential Land Use

One facet of a community's general impression is created by the appearance of its residential areas, for, in a town such as Southbridge, these areas are by far the largest single users of developed land. As all elements of the community must be considered in partnership with each other it is necessary that good residential areas attractively designed, well served by transportation and other community services, can regenerate themselves generation after generation and thereby keep pressure for similar activity on other real estate values in the community. This then is one of the basic elements of planning. For as long as the residential areas are functional and attractive, the population will tend to stabilize itself within the community.

As technical advancements place new requirements on residential elements, the process of rehabilitation and renewal becomes a continuous procedure. In Southbridge, as in most of our older communities, the problems are many and, as we shall see, they vary from section to section.

Therefore, the creation and re-creation of better residential areas will depend upon the community's ability to utilize the many "tools" at hand. These techniques include the following:

1. The establishment of buffer zones to separate residential use from other incompatible uses.
2. The elimination of blight from residential and non-residential areas through the use of community renewal.
3. The development of a compatible arrangement of different types of land use to form cohesive areas or neighborhoods.
4. Development of adequate commercial areas properly serviced with off-street parking facilities to attract a reasonable portion of the effective buying income of the community.
5. Adequate schools and recreational facilities.
6. Development of a logical plan to reduce population densities especially in the central district.

Residential requirements are determined by the community's existing and future growth potential, the average household size, the desired population densities, the amount of buildage land available and the number of units that can be rehabilitated within the existing community structure. In Southbridge the population forecast indicates that the population will continue to decrease until 1970. It should then begin to increase and reach a total figure of approximately 17,500 people by 1980. During the period of decline two trends will be noticed and should be encouraged. First, the population density in the central part of the town will decrease. This will be caused by the fact that it is no longer desirable or necessary for a population to nest around its principal place of employment. This out-migration will be assisted by the fact that these units are the least desirable in the community and better

transportation facilities encourage the spread of population to the undeveloped areas of the town. Therefore, if the community can continue to supply adequate services part of the present out-migration can be accommodated in the outlying sections of the town. It should be obvious, at this point, that reasonable large lot requirements should be enforced in all new subdivisions. Large lots, 10,000 square feet and over, and other open space techniques act as a deterrent to residential blight.

Adding to the future residential land use requirement is the trend toward smaller households (requiring more units per 1,000 population). Therefore, if the total population of Southbridge reaches approximately 18,000 by 1980 the residential land use should show an increase of approximately 100 acres. Most of this development will be devoted to single family residential units, some areas will encourage two family developments but there appears to be no real pressure to develop three-family or multiple family structures. It is therefore believed that much of the future residential areas should be zoned for single family use.

It should also be noted that the existing multiple family structures in Southbridge are in good condition and with reasonable maintenance could outlast the scope of this. However, it is for the best interests of the town that this type of development be carefully controlled and generally confined to existing areas.

Housing for the Elderly

Based on the population age-sex pyramid and the socio-economic element of the Land Use Cost and Income Study, it would appear that a well

designed public housing complex is a real necessity for the future development of Southbridge.

It is therefore estimated that approximately 2 to 5 acres should be developed for this purpose. While the selection of a site for this type of housing is the recognized duty of the local Housing Authority; the future land use plan delineates one area that lends itself admirably to this type of development. The delineated site is located between Main Street and the railroad. This site was selected because it is located close to the major facilities required by the aged segment of the community's population. It is adjacent to a small park equipped with benches and shade trees and generally used for inactive recreation. It is close to the local public library and within easy walking distance to the shopping district and churches of all principal denomination. The local hospital and all other community facilities are within convenient distance to the site.

It is recognized that there are some drawbacks to this site. Therefore, it will require acquisition, demolition and careful planning to preserve the good points and minimize the negative ones.

Public Housing (Low-Medium Income Housing)

The socio-economic analysis also recommends that the Town of Southbridge will require some low to medium income housing units. Again it is recognized that the location of the sites for this type of development is the duty of the local Housing Authority. However, the future land use plan determination indicates one site for their consideration. This site is located between Cole Forrest and Warren Street, in the south central part of the community. It is further recommended that these units be of the single or

well designed duplex type of housing so that they will blend with the future growth of this area. This site was selected because the natural ground appears to be buildable within the economic limits of these units. It is close to recreational facilities required by the young adults and their young families that usually inhabit these developments. It is within a reasonable distance to local shopping facilities and churches and houses of worship. The site apparently can be sewered and the local water supply is available, and drainage should offer no real problem.

COMMERCIAL LAND USE

The Future Land Use Plan (FLU) indicates little more land for commercial uses than is currently being used. This is predicated on the conviction that ample land area is devoted to this type use to adequately serve future population needs. The quality of shopping facilities on this land, however, must be improved to compete as a regional shopping center. Southbridge's decline in retail sales began with the recent innovation of the "modern" shopping center adaptable to the increasing demands of today's shopper for convenience of access and off-street parking, attractive stores and wider selection of merchandise. The Central Business District gradually began to lose its appeal to the regional shopper to the point where today Southbridge stands at a critical crossroad of decision. Either the CBD must be revitalized or drastic realities will be felt in the loss of retail sales, employment opportunities and, more important, tax revenues from declining property values in the downtown area.

Physical analysis of downtown indicated an alarming percentage of vacancies beginning to appear in second and third floor areas of commercial buildings. The ratio of customer floor space to off-street parking space was inadequate by minimum standards. Land Use Cost and Income Studies concluded that the Central Business District be considered for Community Renewal. It is re-emphasized here that the future of this area will depend greatly upon local initiative to use all Federal, State, local and private funds for a comprehensive program of corrective action to bring the Central Business District into a modern perspective with current shopping habits.

To achieve success requires whole-hearted support of individual merchants, local merchant groups and the Chamber of Commerce. To consolidate all pertinent parties into a collective group functioning toward singular goals on the improvement of the Central Business District, it is recommended that a Downtown Improvement Committee be established. Membership would include local merchants, representation from the Planning Board and Redevelopment Authority and the Chamber of Commerce. Objectives should be defined on the basis of realistic solution to existing problems.

INDUSTRIAL LAND USE

The development of the future industrial land use areas for the Town of Southbridge is predicated on the results of several separate but closely related studies. These studies are: Economic Base; Circulation and Parking and Employment Trends.

These studies indicate that 58.2% of the employed population in 1960 was employed in manufacturing. This represents a drop from 68% in 1950, and has important significance when compared with the larger population of 1950. It is clear then that the job opportunities in the largest field of employment in the community are decreasing faster than the population decrease. Counteracting this effect, to some degree, is a slight increase in the minor fields of employment opportunity. While this counter activity is encouraging, much more is needed.

The principal existing industries of Southbridge show a surprising degree of diversification in activity. Those industries, however, employing the largest number of people are the optical goods with American Optical Company the principal employer of the area.

It is interesting to note that large employers are in Optical goods, Electronic tools and Hardware items. With the exception of Optical goods, whose manufacturing is peculiar to Southbridge, the other principal elements of the community's industrial structure are among the fastest growth industries in the region. It is also interesting to note that the industrial corridor of the past (the Railroad) parallels the proposed industrial and commercial corridor of the future, Main Street, Central Street and Mechanics Street. It is indicated that the strongest stimulant to the industrial development

for the community in the continued development of better transportation facilities, particularly those that act as service corridors to the areas delineated for Future Industrial Use.

It is recommended that the best way to develop these areas is to develop a strong Industrial Commission with adequate funds for advertising, research and development. It is also extremely important to include on the Commission at least one official from the American Optical Company. The dexterity of the labor pool and their diversified skills indicates that the hardware, tools, electronics and fabricated metals should become a larger element in the industrial structure of this community.

Heavy Industry

Existing heavy industrial areas plus a small amount of additional land has been delineated on the Future Land Use Plan. This study indicates that with the exception of fabricated metal the future growth in this field will be realtively minor in comparison to the expected growth in light industry. It is also felt that some of the older heavy industrial firms will go out of existence thus leaving additional area for newer firms of this type. Heavy industrial areas have been confined to those sections that can be serviced by rail as well as highway transportation facilities.

Heavy industries are generally concerned with the predominance of raw material, foundry works, fabricated metals, machine shops and similar enterprises. These are generally considered to be large bulk low cost category and are, therefore, located adjacent to transportation facilities that can handle their product at competitive rates.

It is estimated that existing land area allocated for this use is approximately 127 acres and that future needs until 1980 will require approximately 200 additional acres.

Land space recommended for use industrially in future Southbridge is predominantly along Worcester Street and East and West Main Street. Prime land for potential industrial development is seen in two separate areas: east, between Ashland and East Main Streets (the former site of Southbridge Finishing Company) and west, between Quinebaug River and West Main Street, across from Pleasant Street. Both sites offer level topography, access to major transportation routes, and water power.

CAPITAL BUDGET PROGRAM

CAPITAL BUDGET PROGRAM

A Capital Budget Program is an orderly schedule for the expenditure of Town funds for public improvement, deemed necessary for maintaining community health. It is essentially a Planning Board function aimed at assuring that:

a. Town funds will be spent on "first-things-first".

b. Improvements will be undertaken without causing an unrealistic burden on the Town's financial capacity.

c. Town funds will be spent for improvements in accordance with its overall Comprehensive Plan for future development.

d. Projects will be undertaken on a coordinated basis to insure the continuity of a total development program.

e. The Town will be informed that certain projects and expenditures are to be expected.

f. Improvements will be financed by borrowing conforming with those legal regulations established by the State of Massachusetts for municipalities.

The Capital Budget Program prescribed for Southbridge is limited to projects which are within its authority and financial capacity to undertake. It is confined to capital expenditures only and does not include those budget items submitted by various departments which must be voted upon individually. Similarly, maintenance and replacement expenditures, or those occurring at regular intervals and provided for in normal department operating budgets, are not included in the Program.

This report describes each project recommended for financing. In determining a financial schedule feasible for Southbridge, consideration has been given to the Town's financial capacity. Important criteria involved here are: Tax base; tax rate; and current debt, all of which are covered separately.

Project costs, in most cases, are estimated without detailed engineering studies and, therefore, may only serve as a rough guide. The timing and priority of individual projects were established on the basis of greatest need, cost and compatibility with the overall plan for future development of Southbridge.

The Capital Budget Program focuses on the six-year period: 1964 - 1969. Beyond this span, there are many variables and uncertainties which could potentially affect a longer definitive program. A realistic usefulness of a longer plan could not be justified.

It is good practice for a community to reassess its Capital Budget Program every five years. This practice will insure continuity and make it possible for new capital improvements to be scheduled uniformly in the Capital Budget Program.

Tax Base

Southbridge's budget derives almost 85% of its total revenue from property taxes. The remaining 15% is derived from excise taxes, reimbursements, parking meters and other miscellaneous sources. This breakdown has been consistent in past years. There is good reason to assume that the major income source, that of property taxes, will continue to provide most of Southbridge's revenue in the future.

Assessed property valuations comprise the wealth of a community in terms of providing tax revenues for municipal services. Experience has shown that a high per capita tax base (i.e., total assessed valuations divided by total population) generally provides better services at lower tax rates. On the other hand, tax rates will be high and services sometimes of low quality in communities where a moderate tax base per capita is strained by public service loads.

A comparison of Southbridge's 1960 per capita assessed valuations with Webster, and municipalities in both Worcester County and Massachusetts, indicates Southbridge's tax base is well below average, as shown below.

TABLE 1

Assessed Valuations Per Capita, 1960

Southbridge, Webster, Worcester County, Massachusetts

Area	Assessed Valuations Per Capita
Southbridge	$1,149.00
Webster	1,670.00
Worcester County	1,561.00
Massachusetts	1,914.00

The average assessed valuation per capita of these areas $1,573.

It is recommended that the Town hire consultants to revalue all properties and prepare an assessor's map for the Town of Southbridge. We estimate that this cost would be in the vicinity of $35,000. This is based upon costs of comparative size of similar projects in other New England communities.

An estimate of future total valuations for the six-year Capital Budget Program was based upon the following facts and assumptions.

(1) During the past five years the total assessed valuations have increased by an average of $300,000 per year.

TABLE 2

Southbridge Total Assessed Valuations - 1958 - 1962

Year	Assessed Valuations (Excluding Motor Vehicles) ($000)
1958	$18,479
1959	18,689
1960	18,992
1961	19,402
1962	19,667

2. Physical improvements of commercial properties in the downtown area, resulting from Urban Renewal activities will add approximately $500,000 to the tax rolls by 1967.

Predicted total assessed valuations for the Capital Budget period of 1964 - 1969 are as follows:

TABLE 3

Estimated Assess Valuation Southbridge: 1964 - 1969

Year	Excl. Motor Vehicles	Inc. Motor Vehicles
1964	$20,300,000	$25,400,000
1965	20,600,000	26,000,000
1966	21,900,000	26,500,000
1967	22,400,000	27,000,000
1968	22,700,000	27,500,000
1969	23,000,000	27,000,000

Tax Rate

Tax rates, in healthy and growing communities, are affected by; (1) an increasingly high level of governmental service; (2) a generally inflationary level of the economy and; (3) capital improvements required to restore, renew or create needed public facilities.

Southbridge's tax rate, based upon assessed valuations, was $86.60 in 1962. Adjusted to full market value, the "equalized tax rate" becomes $25.98. A look at comparable rates over the past five years shows that a gradual increase has taken place during each year since 1960.

TABLE 4

Southbridge Actual and Equalized

Tax Rates Compared, 1958 - 1962

Year	Tax Rate	"Equalized Tax Rate"
1958	$74.60	$22.38
1959	74.20	22.26
1960	79.00	23.70
1961	82.50	24.75
1962	86.60	25.98

The average yearly increase on the actual tax rate over the past five years has been $2.97 with a jump of $4.10 in 1962. In "Equalized" terms (i.e., tax rate based upon full market value of taxable property), Southbridge's tax rate is not excessive in comparison to other towns of similar population.

Table 3, "Summary-Recommended Capital Budget Program, 1964 - 1969" depicts the effect of additional expenditures for proposed Capital Improvements on the annual tax rate. The slight increase called for each year should be considered minimal compared to the importance of additional facilities benefitting the Town and its people.

Current Debt Service

During the past five years, Southbridge's borrowing has been moderate. Aside from two school loans (one "Inside" the debt limit and the other "Outside"),

financial policy has tended to avoid borrowing for costly improvements.

At the close of 1962, Southbridge's net debt was $1,116,000 or $68 per capita. This figure is relatively low, however, but is characteristic of older towns which have experienced little growth in the past few decades. Since per capita net debt figures vary considerably from town to town, a more useful index for determining safe borrowing capacity is the ratio of indebtedness to full taxable value. Southbridge's net debt in 1962 was 5.67 (5.67% of total assessed valuation) which is considered "very safe"[1] and indicates that the town can absorb more borrowing immediately without injuring its safe borrowing capacity.

In addition to the Town's "safe" borrowing capacity, Southbridge enjoys a favorable bond rating (Moody's AA) which will enable future borrowing at lower interest rates. Estimated interest rates included in the Proposed Debt part of the "Summary-Recommended Capital Budget Program" are based upon current bond ratings and municipal borrowing situations under present conditions (March, 1963).

Conclusion

In designing the Capital Budget Program, every effort has been made to consider the attitude and desires of Southbridge's citizens. Not a single project has any hope for realization without citizen support. It is our opinion that the Program meets the most important of Southbridge's needs both economically and socially while remaining well within its financial capacity. Thus, it should merit careful consideration as a guide to the future development of Southbridge.

1. 10% or lower = safe
   10% - 15% = doubtful
   15% or more = hazardous

TABLE 5

SOUTHBRIDGE

SUMMARY - RECOMMENDED CAPITAL BUDGET PROGRAM

1964 - 1969

Type Financing [1]		Total Project Cost		Interest Rate	'64 P & I [2]	'65 P & I	'66 P & I	'67 P & I	'68 P & I	'69 P & I	Later
	Estimated Assessed Valuat. (Inc. Motor Vehicles - Millions of $)				$25.4	$26.0	$26.5	$27.0	$27.5	$28.0	
	CURRENT DEBT (Inside Debt Limit)										
GOB	School - 60'-80'	$800,000	@	3.5%	$63,800	$62,400	$61,400	$59,600	$58,200	$56,800	
GOB	New Town Barn - 60'-65'	60,000	@	2.5%	12,600	12,300	- -	- -			
GOB	Airport Loan - 59'-64'	50,000	@	3.0%	10,150	- -	- -	- -			
	Sub-Total				$86,550	$74,700	$61,400	$59,600	$58,200	$56,800	
	Tax Increment				$3.41	$2.88	$2.32	$2.21	$2.13	$2.06	
	PROPOSED DEBT (Est.)										
SHC	Off-Street Parking - 64'-71'	$40,000	@	2.6%	$6,040	$5,910	$5,780	$5,650	$5,520	$5,390	
SHC	Police Sta. Addit. - 65'-68'	20,000	@	2.6%		5,520	5,390	5,260	5,130	- -	
SHC	Police Sta. Renov. - 66'-72'	35,000	@	2.6%			5,910	5,780	5,650	5,520	
	Recreation Improvements:										
GR	Morris St. Field - 64'-65'	20,000		-	$10,000	$10,000					
GR	West St. Field - 65'-66	20,000		-		10,000	10,000				
GR	Revaluation	45,000		-			15,000	15,000	15,000		
RF	Community Renewal Program (Southbridge's Share)	8,000		-	$8,000						
	FUTURE										
SHC	Library Addition	$45,000									$45,000
SHC	Bookmobile	20,000									20,000
GOB	New Town Hall	220,000									220,000
	Sub-Totals				$24,040	$31,430	$42,080	$31,660	$28,300	$10,910	
	Tax Increments (Proposed Debt)				$0.94	$1.22	$1.58	$1.17	$1.03	$0.39	
	GRAND TOTALS -				$110,590	$106,130	$103,480	$91,260	$86,500	$67,710	
	Tax Increment (Current & Proposed Debt)				$4.35	$4.10	$3.90	$3.38	$3.16	$2.45	

1. GR - General Revenue
GOB - General Obligation Bond
FA - Federal Aid
SHC - State House Coupon Note
RF - Reserve Fund

2. Principal and Interest