

★ planning advisory service

AMERICAN SOCIETY OF PLANNING OFFICIALS

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CEMETERIES IN THE CITY PLAN *

Men have devised an almost endless number of uses for land, but the one that seems most nearly permanent is its use for interment of the dead. This permanence is reinforced by the phrases used to sell cemetery lots - "perpetual care" and "perpetual charter."

If we are realistic, we may question how long "perpetual" will be. We do know, however, that courts have held that the legal rule against perpetuities does not apply to cemetery funds. Such funds are in the nature of charitable trusts.

Cemetery problems are not frequent occurrences in city planning, but the permanence of the cemetery as a land use makes decisions regarding it unusually important. The city planner knows that any building can be expected to outlive its usefulness in two or three generations. He also knows that if there is civic necessity for the removal of a building, the procedure is comparatively simple, although the cost may be high. This is not true of a cemetery. Not only will the cost be excessive, but legal obstacles can very well make removal impossible!

EXTENT OF CEMETERIES

If the idea of "perpetual care" were pursued far enough, we should eventually use all our land for the interment of the dead and have no land left for the living. While we can be sure this state of affairs will not come about, we have already reached the point at which the distribution of land between the living and the dead is a serious problem.

As far back as 1821, Sir William Scott said in deciding the case of Gilbert v. Buzzard and Boyer (161 English Reports 1342):

"A comparatively small portion of the dead will shoulder out the living and their posterity. The whole environs of this metropolis must be surrounded by a circumvallation of churchyards, perpetually enlarging by becoming themselves surcharged

with bodies; if indeed land owners can be found willing to divert their ground from the beneficial uses of the living to the barren preservation of the dead."

In 1935 the U. S. Department of Commerce published an estimate of 15,000 cemeteries in the United States. There are no official estimates of the acreage contained in these cemeteries. If we assume the conservative figure of one acre per thousand population (see Table I) cemetery land in the United States would be approximately 140,000 acres. Quite probably the greater part lies within city limits.

Little, if any, cemetery land in the United States is used for re-burial. Each year, therefore, more land is used for cemetery purposes. There were 1,445,370 deaths in this country in 1947. Of these, it is estimated that 96% of the bodies were disposed of by burial and 4% by cremation. If we assume the current figure of 620 burials per acre, (see page 13) we required 2,238 acres of cemetery land in 1947.

The actual amount of land, 3-1/2 square miles annually in a nation of 3 million square miles, is of minor importance. The serious aspect is that the cemetery land is for the most part situated in or near our cities, where land is not in oversupply.

Great Britain has a similar but more pressing problem because of the size of its island. J. Henry Lloyd, writing in the May 1950 issue of Town and Country Planning Review, estimates the requirements for cemetery land in Great Britain at 500 acres annually. Greater London alone needs 98 new acres annually. Lloyd does not estimate the existing total cemetery acreage, but he states that municipal cemeteries (a small part of the total) cover 25,000 acres. There are 2,500 acres of municipal cemeteries in the County of London alone.

Comparatively few published city plans have listed cemeteries as a separate land-use classification. They are normally classed as a "semi-public" use, a class which may also include churches, golf clubs, privately-owned amusement parks, private health and charitable institutions, etc. In PLANNING ADVISORY SERVICE Report No. 14 (May 1950) "Urban Land Use", figures on cemeteries were available for only five of 39 areas listed.

Table I lists cemetery areas in several cities, including those listed in the above-mentioned PLANNING ADVISORY SERVICE report. The most complete tabulation available is for the Birmingham (England) and Black Country area. These were taken from Conurbation, the excellent study of that area by the West Midland group.

The use of Table I is limited. There would seem to be a slight inverse correlation between total population and cemetery acres per thousand people. This would be expected because of the trend toward the elimination of cemeteries within city limits.

TABLE I
CEMETERY ACREAGE IN CITIES

CITY	POPULATION	Total Acreage	CEMETERIES			Year of Data
			Acreage	% of Total	Acres per thousand population	
<u>UNITED STATES:</u>						
Chicago, Ill.	3,396,808	137,361	1,294.0	0.9	0.4	1941
Chicago, Ill.	1,099,850	115,520	805.0	0.7	1.4	1890
Chicago, Ill.	29,963	8,966	65.0	0.7	2.2	1850
Detroit, Mich.	1,654,972	89,732	1,166.0	1.3	0.7	1943
Fairfield Town, Ct.	30,000	20,480	82.0	0.4	2.7	1948
Fort Worth, Tex.	165,075	28,707	64.0	0.2	0.4	1940
Grand Forks, N. D.	20,228	2,346	42.2	1.8	2.1	1936
Jacksonville, Ill.	16,352	2,598	65.0	2.5	4.0	1924
Lancaster, Pa.	61,345	2,560	96.0	3.74	1.6	1945
Meridian, Miss.	35,481	6,274	64.5	1.0	1.8	1940
Minneapolis, Minn.	492,370	37,628	586.6	1.56	1.2	1949
Pittsburgh, Pa.	671,659	54,295	834.3	2.5	1.2	1946
Port Huron, Mich.	32,759	4,780	133.0	2.8	4.2	1947
<u>CANADA:</u>						
Winnipeg, Man. (City)	215,814	8,015	227.0	2.8	1.1	1946
Winnipeg (Metr. Area)	276,625	15,645	367.0	5.2	1.3	1946
<u>GREAT BRITAIN:</u>						
Manchester (Present)	704,000	21,688	325.0	1.5	0.5	1945
" (Proposed)	---	---	429.0	1.9	0.6	--
Birmingham	1,052,900				0.3	1948
Smethwick	78,290				0.7	
Dudley	62,100				0.4	
Walsall	107,500				0.5	
West Bromwich	83,150				0.5	
Wolverhampton	147,200				0.3	

There were 18 other incorporated places listed in "Conurbation", ranging in population from 2,836 up to 52,260. Cemetery acreage ranged from 0.0 to 1.0 per thousand population, averaging 0.5 acres per thousand.

In the sample shown in the table, there is an obvious difference between United States and British cities. Cemetery acreage per thousand population is greater on this side of the Atlantic. There are several reasons for this:

- a) Greater supply of land in the U. S. allows a more liberal use.
- b) Burials in churches and churchyards takes care of a negligible portion of U. S. burials.
- c) Intensity of use of cemeteries (through "family" and "common" graves) is higher in Great Britain, in some cases running as much as 6,000 burials per acre.
- d) Cremation, which uses little cemetery land, is more extensively used in Great Britain than in this country.

THE CEMETERY PROBLEM

The first thing that strikes the city planner when he tackles a problem involving a cemetery is that he is faced with pressures, ideas and laws which are not paralleled in any other city planning question. The disposal of the dead is enmeshed in religious doctrine, custom, fear, superstition complicated statutory law, and crusading burial reform. Probably the most important single technique in handling the removal of cemeteries is the delicate public relations job.

Cemetery problems divide generally into two groups: those involving existing cemeteries, and those involving proposed cemeteries.

Existing cemeteries become problems when they fall into dis-use, when their care is neglected, when the land is needed for another use, when they lie in the path of some needed public improvement. The old cemetery may become a health hazard. Even when it is carefully maintained, many persons feel that a cemetery in a neighborhood will depress property values. Municipal administrators dislike cemeteries because they are a part of the ever-increasing list of tax-exempt properties.

Planning for the new cemetery requires determining in the first place whether a cemetery is needed at all. If it is needed, what size should it be? Where can it best be located where it will not be an obstacle to municipal growth, where it will not be a public health hazard? How can it be designed so that it may be used for additional purposes such as recreation? Do cemeteries depress property values, and if so, how can real estate depreciation be minimized? How can the cemetery (and the community!) be protected against future neglect? How can land designated for cemetery use be reclaimed for other uses should the developmental pattern of the community change? How can the planner be sure, when asked to project his estimates for a cemetery fifty to a hundred years or more into the future?

CEMETERY REMOVAL

An old and neglected cemetery may be rehabilitated. If it is not sus-

ceptible to being cleaned up, it may have to be removed. Those cemeteries occupying space desired by the community for other uses may have to be moved, in whole or in part. The most convincing case for moving the cemetery (i.e. the bodies) to another location is when its continued existence and use is a nuisance. The cemetery, however, must be proved to be a nuisance in fact. The universal weight of authority has held that a cemetery is not a nuisance per se. When the cemetery is in fact a nuisance, it may be enjoined. The most frequent proof of nuisance has been connected with the existing or possible pollution of a water supply or of the atmosphere. If it can be proved that a cemetery is a public health hazard, the city will have little difficulty in getting the right to remove it. It is difficult to prove that a cemetery is a health hazard. However, all the early court cases considered the effect of the cemetery on public physical health, while a recent Connecticut decision (on funeral homes) indicated that public mental health should also be considered. The neglect and dis-use of a cemetery for a long time has been grounds for declaring it a nuisance and requiring its removal. Legislative bodies, moved to prohibit all cemeteries within the city limits, have been buttressed in their actions by court rulings that this prohibition may be extended to include compulsory discontinuance of the use of existing cemeteries, together with disinterment and re-burial of the bodies. (See Appendix A for pertinent court case citations.)

EMINENT DOMAIN

If the cemetery is a nuisance, the municipality uses its police power to abate the nuisance. It is a rule of law that damages suffered because of the operation of the police power are not compensable. For this reason, courts will probably stop short of requiring disinterment of an entire cemetery as the method of abating the nuisance. Rather, they would be inclined to order clean-up and less drastic measures. Besides, it is more than likely lesser measures will end a true nuisance.

If civic advance, however, requires removal of all or a part of a cemetery, the method will usually be condemnation. Cities are creatures of the state, having only those powers specifically delegated to them by the state. One of these delegated powers is the right of eminent domain for the purpose of carrying out municipal improvements, such as streets. But unless it is specifically authorized, the city does not generally have the right to condemn cemetery property. In some cases cemeteries are granted general immunity from appropriation by condemnation. In most states, this statutory immunity applies to specific and designated purposes. The majority of states allow taking if consent of the owner is obtained.

In this report, we will not try to list the various details of the applicable state statutes. Amendments to the cemetery laws are frequent and such a tabulation would soon be incorrect. The city planner will need to study the laws in his own state carefully before he can recommend any course of action.

In some instances, it may be necessary to condemn, even though consent is, or can be, obtained. When the City of San Francisco cleared out all

cemeteries within the city limits, no permission was sought from relatives of those interred. The city counsel felt that if, in asking permission, the city had received a single refusal, the policy of the California statute would have been negated. The California law (1923 statutes, Chapter 312, page 46) permits the abandonment of cemeteries and removal of bodies in all cities of more than 100,000 population.

The Tennessee Valley Authority moved thousands of graves in assembling land for its many reservoirs. In most cases the Authority arranged with next of kin for the removal of the bodies to a suitable site. However, when a fee title was involved, the Authority brought a friendly condemnation suit to assure a clear title. Such procedure was also necessary where owners were unknown.

In most cases, cemetery lot "owners" do not actually "own" the land, i.e., have a title in fee simple. Instead, they own burial rights and the fee remains with the cemetery corporation. The value of the fee in such cases is nominal; the damage, when the cemetery is taken, is suffered by the owner of the burial rights. If the land now used for burial might have greater value when subdivided into building lots - and such use were possible under the conditions of ownership - the cemetery corporation might claim such value. Where the land can not be freed of its burial trust, then its value will be that for burial purposes. When the burial trust is removed, (Matter of Albany Street Opening (New York) 11 Wend. 148) the unencumbered title has been held to be worth the value of the fee, less the cost of removal and re-interment of the bodies, plus the cost of new monuments to mark the new graves. (Matter of Board of Transportation of City of New York, 251 N.Y.S. 409)

The cost of moving cemeteries is high. In 1946-47, the City of Baltimore removed 170 bodies at the site of a new airport. Under Maryland statutes, families have the right to select any cemetery in the state for re-burial. The estimated cost for removal and re-burial, including new cemetery lots, was \$58,850 - approximately \$346 per grave.

REHABILITATION

A cemetery may not be in the path of municipal growth nor be a health hazard, yet, because of neglect and dis-use, it is a blight upon the city. The remedy may be rehabilitation and not abandonment and removal. There is no doubt that a neglected, crowded cemetery, similar to other neglected and overcrowded land uses, does depress neighborhoods. Such cemeteries may be in an area marked for redevelopment.

The city planner should analyze the neglected cemetery carefully. He will probably find many, if not all, of the following faults:

- (a) Excessive number of monuments, poorly placed, poorly maintained, poorly designed.

- (b) Excessive roadways and alleys, with varying widths and poor surfacing.
- (c) Poor maintenance of graves and lawns, sunken graves.
- (d) Hodge-podge of landscaping and planting because of a lack of plan and central control.
- (e) Poor and inefficient lot layout and design.
- (f) Abandoned lots and under-utilized lots.
- (g) Lack of maps, burial records, ownership records, cost records.
- (h) Poor administration.
- (i) Insufficient and unplanned financing.

The first step in rehabilitating the neglected cemetery may be to prohibit burial. The city's right to prohibit burial has been generally upheld. (See Appendix A)

The cemetery may already be municipally owned, in which case, the city's right to proceed with rehabilitation is clear. If the cemetery is private, the city must either take over the maintenance (which is possible under most state statutes) or persuade the owners to improve. The last case is, of course, the most difficult.

The second step in rehabilitation is to hire a competent landscape architect to study and recommend a scheme for re-planning and re-planting. At the same time, it will be necessary to assemble all possible maps and records pertaining to the cemetery. Part of the modernization of records will probably require a survey. A topographical survey will undoubtedly be needed to aid the landscape architect.

No attempt will be made in this report to give all the possible details which go into changing the cemetery from an eyesore to an acceptable open space. These will be obvious after a careful study.

The basic error that has led to the neglect of a cemetery is usually poor administration and financing. This is particularly true of municipal cemeteries. The users of such cemeteries have said "It is tax-supported, therefore, it will always be maintained in good condition." This confidence has been ill-advised. Presently, the cemeteries best maintained are those operating under a perpetual care plan. In view of the straitened finances of cities, a similar plan should be used for municipal cemeteries. This plan will be discussed in more detail later.

USE OF DISCONTINUED CEMETERIES.

If a cemetery is discontinued and the bodies removed, the land is, of course, available for any appropriate use. In many cases, the reason for removal is the need of the land for another use. Its use as an airport in Baltimore has been noted. St. Louis recently moved its "Potter's Field" to make way for a housing project. For the most part, public sentiment and the courts have stopped the conversion of cemetery land to commercial purposes. The Missouri Supreme Court has ruled definitely on this point in (Campbell v. Kansas City 161 S.W. 261).

The small cemetery in the built-up section of a city may be the only open space left. On this point C. M. Robinson wrote in Modern Civic Art, (Putnam, New York, 1918. P. 292, 349):

"In many cities -- most strikingly in London -- where land values have become so high as almost to discourage municipal purchases for the creation of open spaces, and where the crowding is so severe that there is excuse for fear that an arbitrary reduction of the habitable area in a given section may increase rather than diminish suffering and the pushing of the urban boundaries into a distance that the poor cannot traverse make pitiful appeal for public open areas, there has been a utilization of ancient graveyards. They are transformed, with excellent sanitary effect, to serve as breathing places, garden spots, and playgrounds. But their location as regards the street plan is obviously without system.

"...Finally, the community use of the cemetery as a park is simply a pathetic confession of the public need of park reservations. Speaking artistically, the cemeteries have lately shown vast improvement. From a type originally comparable to stoneyards they tend to become more and more park-like....But the great significance of a community's park-use of a cemetery is the proof of the need of parks. It is a use to be encouraged and approved, until the park is provided, for all the reasons for which parks are approved."

FORECASTING CEMETERY REQUIREMENTS

When a cemetery is proposed, the city planner's first question is: do we need additional cemetery land? If the answer is yes, the second question asks: how much?

At present cemeteries are usually promoted only when they are needed. But this has not always been true in the past. In the late twenties and early thirties, there was an outbreak of cemetery promotion - it could hardly be called development. These were the rankest kind of speculative schemes. You buy a lot today for \$100. You give the cemetery association an option on your lot, and the cemetery salesman re-sells your lot tomorrow for \$150. The new purchaser in turn gives the association an option on the lot, with the idea of re-selling for

\$200. (See George Washington Memorial Park Cemetery Assn. v. Memorial Development Co. 55 A. 2d 675.)

Of course, such a chainletter scheme fizzles out quickly. But during its heyday, more than 600 cemeteries were "dedicated." It is estimated that some \$20 million was poured into such deals in Southern California alone. Not only has the public been mulcted, but the cities and counties have been left with serious headaches. A few burials have been made in these cemeteries. Large tracts of land have been made "sacred" - tax exempt and difficult to re-use. In at least one case, the courts have held that even though no interments have been made, the sale of burial rights has made the cemetery "now in use" and therefore the land will be granted the customary immunity given to cemeteries. (See: Town of Blooming Grove v. Roselawn Memorial Park Co. 286 N.W. 43.) The financing schemes, when not downright dishonest, were weak and poorly conceived. The cemeteries are neglected and rundown. The results of this promotion will be felt for a long time.

Such schemes are not a menace today. But soon a generation will have passed since the speculative cemetery craze swept the country. Gambling fevers have a habit of recurring at intervals. Some cities were overlooked by the promoters. City administrators need to be on the watch for the return of cemetery speculation.

The get-rich-quick cemetery scheme was sold on the "pre-need" basis. This is simply buying a cemetery lot in advance of the death of any member of the family. There is nothing wrong with a pre-need sale. It is, in fact, the general practice in legitimate cemetery operation. But it is hard to believe that any one man would "need" a hundred burial lots - not a rare purchase during the height of the craze.

Besides forestalling speculative schemes, the city planner should also know when to counsel against perfectly legitimate, but premature, cemetery development. He also may be called upon to study and present a plan for municipal cemeteries.

If it were possible to obtain, the planner should know cemetery requirements for a hundred years in the future. Just how shaky such an estimate would be can best be realized by looking at the growth of some of our cities during the past 100 years. New York, for example, has increased its population more than ten times, Chicago more than 100 times, Los Angeles more than 1,000 times. The Hörnli Gottesacker in Basel, Switzerland, however, contemplates a perpetual cemetery, without the use of additional land. (The Hörnli Gottesacker plan is described later.)

The forecast of cemetery needs will be based on the answers to three questions:

(1) How many burials will there be during the next "n" years?

(2) How many burials can be taken care of in existing cemeteries?

(3) How much new cemetery land will be required?

An estimate of burials must be based on an estimate of deaths, which must in turn be based on an estimate of population. In forecasting cemetery needs, what will "n" be? The planner will have to use his best judgment, and then go a little further. Perhaps he would forecast as far as he feels is reasonable, say 20 years, and then extend the projection as a stable population for 30 years in addition. This would give him a basis for a 50 year forecast. It would be a shaky estimate to use for most purposes, but would probably give him the order of magnitude of his cemetery needs. (The August 1950 report of PLANNING ADVISORY SERVICE will give a full discussion of population forecasting.)

The second step in estimating burials, calls for estimate of the death rate and its application to the population.

In an article in the May 1948, Statistical Bulletin of the Metropolitan Life Insurance Company the future death rate of the United States is discussed. The following extract is quoted from this article:

"Since the beginning of the century the death rate in the United States has dropped more than 40 per cent. In 1900, the rate was 17.2 per one thousand population, by 1940 it was down to 10.7 per one thousand, and in 1947 about 10.1. The prospects are, moreover, that further improvement will be made in the death rate at every period of life, except the older ages. Yet it appears likely that the crude death rate at all ages combined will rise somewhat in future years. How is this paradox to be explained?

"First, it should be noted that if the present death rate of about 10 per one thousand continued, it would ultimately result in an average lifetime of 100 years. In the present state of our knowledge, to expect that the average person will live that long, would be to indulge in wishful thinking. Actually, the average length of life in the United States is now close to 67 years. In a stationary population, the death rate corresponding to this figure would be about 15 per one thousand, a figure half again that currently being experienced. The reason for the much more favorable death rate which now prevails, lies in the high proportion of people at the childhood and early adult ages, the periods of life when mortality is lowest. In time, this high proportion will diminish while the older ages will gain in relative importance. With this rise in average age, the high death rates of the later ages of life will assume increasing weight in the total mortality picture."

On the basis of forecasts of the population of the United States made in 1947 three assumptions of the future death rate were made. According to the least favorable of these the crude death rate for the population as a whole would rise to about 13.5 per one thousand by 1975. Even this rate would be well below the figures recorded at the beginning of this century. The median assumption of future mortality is more likely to represent what will happen. According to this assumption the death rate will rise very gradually to 11 per one thousand around 1960 and further to 12 by 1975.

The national death rate is a crude rate. It cannot be applied immediately to city or area populations, if they embrace less than a million people, and even on this size, it may be inaccurate. The crude national rate will have to be adjusted to correspond with the sex, age, racial and other characteristics of the local population.

The computation of deaths, after estimating population and death rate, will follow the general form shown below in Table II

TABLE II
SAMPLE CALCULATION OF DEATHS

<u>Year</u>	<u>Population</u>	<u>Death Rate*</u>	<u>Deaths</u>
1950	100,000	10.6	--
1960	112,500	10.2	--
1950-60 Ave.	106,250	10.4	1,105
1950-60 Total	--	--	11,050
1970	120,000	13.2	--
1960-70 Ave.	116,250	11.7	1,360
1960-70 Total	--	--	13,600
2000	120,000	15.0	--
1970-2000 Ave.	120,000	14.1	1,692
1970-2000 Total	--	--	50,760
1950-2000 Total	--	--	75,410

To translate the number of deaths into number of burials is the next problem. There are two important factors affecting the number of burials. The first of these is "foreign" burials. A substantial proportion of the inhabitants of large cities are buried elsewhere. The recent rapid growth of such cities because of in-migration will only serve to strengthen such habits. People request that their bodies be sent "home" for interment. Hare and Hare have indicated (The Cemetery Handbook (2nd Ed.) p. 202) that in a city of 20,000, the city planner might expect 100% burial, i.e., the number of burials elsewhere would be offset by the number of bodies returned from elsewhere to the city. The planner will need to compare the deaths and burials in his city during the past 20 or 30 years, to get an idea of the extent of out-shipment of bodies.

The second factor affecting an estimate of burials is the cremation of bodies. This method of disposal of the dead is increasing. Table III shows the figures for the United States, and the growth of the practise.

*Fictitious rates - used for illustration only.

TABLE III

CREMATION IN THE UNITED STATES

Period	Number of Crematories	Average Annual Number of Cremations
1876-84	2	4
1899-1903	28	3,595
1909-1913	51	9,741
1919-1923	87	18,162
1929-1933	118	34,439
1944	207	55,000

A most recent estimate is that cremation is used in about four percent of all funerals in America. ("Are Funerals Being Commercialized," Information Service Bulletin, November 4, 1944, Federal Council of Churches of Christ in America.) We may expect this percentage to increase rapidly, if the experience in Europe can be taken as any criterion. In England, the number of crematories increased fourfold from 1933 to 1942. In 1940 the percentage of cremations in Birmingham, England, was 10.6; in London, 14.6; in Manchester, 17.0; in Newcastle, 24.0. In Basel, Switzerland, 48.1% of the bodies were disposed of by cremation in 1941.

Although it may not be possible to go so far into an estimate of cremations, it should be noted that certain religious faiths, notably the Catholic, forbid cremation. It is interesting, therefore, to learn that in Basel, where there is recorded a 48.1% cremation rate, at least 33.2% of the population are members of religious faiths which do not permit cremation.

There is danger in projecting burial habits and custom far into the future. For example, **burial** expenses are rising. One of the arguments used in Great Britain to promote cremation is that it is less expensive. This could certainly influence persons toward its use. In the United States, the difference in cost is not so great. In this country, the difference can be calculated by setting off the cost of cremation and disposal of the ashes against the cost of the cemetery lot. Funeral costs, including coffin and embalming, are the same up to the point of final disposal. If the "single-grave" burial lot is used, the difference is not great.

It is also questionable as to how long religious and social customs will hold. The experience in Basel, cited above, would indicate that as much as 77% of the population not affected by strict religious sanctions, would turn to cremation as the method of disposal of the dead.

The disposal of the ashes of cremation, sometimes called "cremains," does require some cemetery land. In some cases regular cemetery lots are used.

Most of the disposal is in a special building, called a "columbarium," in which the ashes are placed in urns, to be kept in individual niches. In some cemeteries the ashes are spread over a "garden of repose," especially set aside and dedicated for the purpose.

After the planner has estimated the number of burials in his city for the selected period, refining the estimate as well as he is able, his next step is to translate the figures into cemetery land requirements.

The proportion of cemetery area available for burials will vary widely. Hare and Hare (The Cemetery Handbook (2nd Ed.) p. 200) have listed cemeteries ranging from thirteen saleable lots (20 feet by 20 feet) per gross acre, to 72.5 lots per gross acre. They offer from their experience the average figure of 62 lots per gross acre on an 80 acre cemetery. Ordinarily, smaller cemeteries devote a greater portion of the area to non-burial purposes - drives, service buildings, chapel, landscaping, etc. Rugged terrain and low land may decrease the usable area on large sites. On the other hand, churchyards used for cemeteries, and certain small sectarian cemeteries will have a more intensive use.

Menhinick (The Cemetery Handbook (2nd Ed.) p. 217) gives the following as the distribution of land use in a typical 80-acre cemetery:

Roads	- 10 to 15%
Paths	- 10 to 12%
Lakes	- 3%
Saleable lots	- 70 to 77%

Hare and Hare estimate the number of burials on a 20-foot square lot as ten - or from their figures, 620 burials per gross acre in an 80-acre cemetery. The lower cost "single-grave" sections in the cemetery will provide more burials than this. The average single-grave occupies 20 to 25 square feet (2-1/2 - 3 feet by 8 feet). The burials per acre devoted to single-graves will probably be around 1,000.

In laying out cemeteries as well as in estimating cemetery land requirements, the single-grave section requires careful study. The single-grave is the cheapest in the cemetery. Usually the sections are in the least desirable part of the cemetery. This is normally the lowest usable part, in view of the premium on hills and high spots. Most single-graves are purchased after the death of the individual, few are bought "pre-need."

Because they are cheaper, single-graves will be more in demand from families in the lower income groups. Thus, cemetery land requirements are definitely tied in with the average income in a city.

To offset the intensive use of the single-grave areas, many family lots are never more than half filled, the unused portion being landscaped, or occupied

by a monument. The very large lots of the wealthy are even less intensively used.

What part of the city's future requirements will be supplied by existing cemeteries? The answer to this question is determined by the unused capacity in existing cemeteries. While susceptible of more accurate analysis than the problem of total burials, the question forces the planner to use his judgment on many points.

Single-grave areas will probably be used to capacity. Small lots, one-fourth or one-half the standard 20 feet by 20 feet, will also be fully used. Larger lots, which are still unsold, will be used to 75% or less of capacity. Unused portions of lots already sold are even less likely to be used to capacity. A large block of cemetery land owned by a burial association or a lodge, while eventually it may be completely used, is unavailable to the general public. The planner will need to discuss with the cemetery superintendent the future use of each cemetery,

Any survey of cemeteries must consider sectarian cemeteries. Some large cemeteries, both municipal and private, have sectarian areas, but in large cities, certain religious faiths have their own cemeteries. The same is true of different races. The planner must be familiar with the religious and racial distribution within his city. Unused capacity in a sectarian cemetery will not be available to non-members of the sect. Nor will unused capacity in a non-sectarian cemetery satisfy the requirements of all races and religions.

If we continue the example in Table II, in simplified form the method of estimating land needs would look like this:

Total number of deaths (1950-2000)	75,410
Net loss from foreign burials (15%)	11,312
Difference	64,098
Estimated cremations (10%)	6,410
Total burials	57,688
Existing cemetery capacity	15,000
Additional burial sites needed	42,688
Additional cemetery land needed (@ 620 burials per acre)	68.8 acres

But, the final answer is not quite so simple as it appears. It is highly probable that if the 68.8 acres were developed, there would be a need for more cemeteries within thirty years, perhaps within twenty years. This is a result of the advanced buying of cemetery lots. Although many lots are purchased at the time of the first death in a family, the final burial in the lot may be fifty, one hundred, or even more years later. In the interval, the lot is removed from the market. There should at all times be a substantial margin of lots in the control of the cemetery association,

It will be seen that the fifty or more year estimate, while still a difficult task, is necessary if the planner is to arrive at the order of magnitude of

enter into the calculation. Perhaps there will be neither the time to make an exhaustive study nor the necessity for one, but a realization of the various factors presented here should help with the problem.

CONSIDERATIONS IN LOCATION

The problems associated with a cemetery are many. Because of this, there may be a temptation for municipal officials to relegate the cemetery to an area outside the city limits. Cities do have the right to prohibit burial within the city limits. However, the courts do not look with favor on the prohibition of cemeteries where the area is sparsely settled, and where, therefore, little danger to human life or health could result. (See Appendix A.)

The use of negative control of location, however, is limited in value. "Outside the city limits" is no answer if the planning is for a county, for a metropolitan area, or for a region. It is a shortsighted solution for even those who are only concerned with the area within city corporate boundary lines. Many cities may be expected to grow and annex additional land. In the future, these cities may be faced with annexing a previously banned cemetery, or the logical direction of city growth may be thwarted by the presence of the cemetery.

A cemetery should be considered as a necessary part of a community, and its location should be carefully planned. At the beginning of this report, it was pointed out that in urban land use statistical summaries, cemeteries are rarely listed separately. They are normally included under "semi-public open spaces." The significance of this grouping is that the cemetery does serve as an open space, and it should be considered as benefiting the city because of this. In some communities, cemeteries may be combined with certain park and recreation uses. In others, where cemeteries are located on the periphery of communities, the cemetery can be an asset in civic design, if there is any advantage to the greenbelt concept. In fact, the cemetery (not combined with recreational uses) has a certain advantage over the public park in that it is not a focus for as much traffic as a popular city park would be.

In passing judgment on the location of a new cemetery, the city planner must ask two basic questions. First, is the proposed location one which does not interfere with and better still, is it one which even aids, a good and logical development of the city? Second, is the proposed location one which will give reasonable assurance that the cemetery will be a successful venture?

It is necessary, before the first question can be answered, that there be the most complete knowledge possible as to what is a good and logical pattern for the future growth of the city. In other words, there should be a master plan. The relative immobility of a cemetery, once established, makes it important for the planner to extend this plan, in some phases, far into the future. It is especially desirable for him to project the major thoroughfare and land-use plans as far as possible.

Cemeteries have interfered most seriously and most frequently with the street pattern. Serious obstacles, caused by cemeteries, in extending desirable traffic routes, have been met in Akron, Baltimore, Detroit, El Paso, Houston, New Orleans, San Francisco, and Springfield, Massachusetts, to name only a few cities. In Chicago, one area occupied by a cemetery was so greatly needed for recreation that the city was forced to move the bodies and to convert that area to recreation - it is now part of Lincoln Park. In spite of this experience, two cemeteries were later located a short distance to the north, right in the path of the logical development of the street system.

The new cemetery then, should be placed so as to avoid obstruction to the opening of future streets, particularly, to avoid obstructing the arterial routes. If it is absolutely necessary to locate athwart a proposed thoroughfare, a liberal right-of-way through the cemetery for the eventual route should be reserved.

Present-day traffic gives a weak basis for predicting traffic flow fifty to one hundred years hence. The planner will hesitate to estimate more than twelve or fifteen years into the future. Yet he will have to try some sort of guess.

To minimize interference with unforeseen additions to the thoroughfare network, the cemetery should preferably be rectangular in shape, rather than square. If the long axis of the rectangle is placed parallel to radiating thoroughfares, the possibility of eventual interference should be lessened. It is well to require the dedication of rights-of-way for cross streets at intervals through the cemetery, even though they may never be used. Ample reservation for future street widening should be made along all boundaries wherever it is at all probable a future street might be placed.

In reserving areas for future streets or for future widening, it is not unreasonable to ask that the dedication contemplate eventual street widths considerably in excess of those generally used at the time the cemetery is established. Most new cemeteries will be located in rural areas. It is considerably less than fifty years since the accepted standard for rural highway rights-of-way was two rods - thirty-three feet. At present, one hundred fifty feet as the required width of a secondary rural highway is not considered excessive. For this reason, it is recommended that the minimum width of road through or around a new cemetery be two hundred feet or more. In the case of boundary streets and roads, of course, the cemetery would be expected to reserve only half the street width.

The planner's second basic question related to the effect of the location on the success of the cemetery.

No more than forty years ago it was thought that access by public transportation was necessary. For the urban cemetery this meant, at the least, street-car access. Railroad access was desirable. The automobile has made this no longer true. There should be access by a principal thoroughfare, although the cemetery need not be immediately adjacent to the thoroughfare,

The most successful cemetery will be one with natural topographic beauty. In this, the cemetery would be a competitor with the naturalistic public park. Such sites are not always available, but when they are, their best use may be for a park. If they are to be used as park sites, purchase or options on the land should be made by the municipality. Courts do not look with favor on reservations for park purposes made by fiat.

Writers have unanimously recommended residential or rural sections as suitable areas for cemeteries. The emotional attitude of the public towards cemeteries is against placing them in or near commercial and industrial development. Some years ago, a cemetery in LaSalle, Illinois was located adjacent to a vacant industrial district. A cement plant was built in the industrial area and the dust from the factory soon killed all the vegetation in the cemetery, destroying its value for cemetery use.

Cemeteries are preferably located on high ground. This is also dictated by public sentiment. If there is even a small hill, or a small difference in elevation within a cemetery, the more costly lots will be those on the highest ground.

The cemetery should not be placed so as to interfere with the watersheds of lakes or streams, which later may be needed for water supply. It is very doubtful that with modern burial methods there is any danger, but the sentiment against possible pollution is strong.

ZONING PRACTISE

The location of cemeteries is most frequently controlled through the zoning ordinance. Generally, the location is either controlled broadly, that is, the cemetery is permitted to go anywhere within certain zones; or it is controlled specifically - the specific location of any new cemetery is passed on by the plan commission or the board of appeals. Under some state laws, the specific location must be passed on by another body. In New York, for example, the county board of supervisors has exclusive authority to determine the location of a cemetery.

E. M. Bassett said in his book, Zoning:

"Cemeteries should ordinarily be allowed in residential districts. It is shocking to the sensibilities of the living to bury their relatives in business or industrial districts."

This view is generally held by city planners. It is also the expressed view of the courts. (*City of Wichita v. Schwertner*, 286 Pac. 266; *Gordon v. Commissioners of Montgomery County*, 164 A. 676; *Town of Babylon v. Wellwood Cemetery Assn.* (*New York Law Journal*, Nov. 25, 1935.) *Fierst v. William Penn Memorial Corporation*, 166 A. 761.) However, at least one court has declared that a cemetery is a commercial use. (*North Side Property Owners Assn. v. Hillside Memorial Park*, 161 P. 2d 618.) As we have noted, the

zoning ordinance may permit cemeteries anywhere in certain districts, or it may class them as a special use, requiring a separate ruling on each cemetery. Table IV is a sample of the districts in which cemeteries are permitted by various zoning ordinances. In some of these, additional approval and permission for each individual cemetery is also required.

TABLE I V
CEMETERIES IN ZONING ORDINANCES

City or County	Date of Ordinance	Highest District Permitting Cemeteries*
Arlington County, Virginia	1942	R-20 (First residential)
Boston, Massachusetts	1939	Single residence (First residential)
Burbank, California	1948	Cemetery zone only.
Cambridge, Massachusetts	1939	Single residence (First residential)
Dayton, Ohio	1939	Residence A (First residential)
Evanston, Illinois	1940	J-Unrestricted District
Fairfax County, Virginia	1945	Rural Residence (First residential)
Hamilton County, Ohio	1949	Residence A <u>Only</u> (First residential)
Kansas City, Missouri	1941	U-4 (Light Industrial)
Minneapolis, Minnesota	1948	12-A Residence (First residential)
Montgomery County, Ohio	1949	R-1 Suburban residence (First residential)
New Orleans, Louisiana	1944	A Residence (Third residential)
Prince George's County, Maryland	1948	R-A Agricultural Residential <u>Only</u>
Puerto Rico	1946	R-1 (First residential)
Santa Clara County, California	1945	Agricultural Districts <u>Only</u>
San Diego County, California	1940	Roadside Agricultural (All zones)

*The word "highest" is used in the old sense, i.e., the "highest" use of land is residential and districts and uses are graded "down" through commercial to heavy manufacturing and unrestricted. In these ordinances (unless otherwise noted) any use permitted in one district is also permitted in all "lower" districts. Current zoning thought discards the "high-low" concept of uses.

Many zoning ordinances contain no references to cemeteries. In some cities, other ordinances are in effect prohibiting cemeteries within the city limits, so that zoning control is unnecessary. In other cases, the authority is, by state law, vested in another agency, so that zoning is not appropriate. If the authority rests elsewhere, the zoning ordinance may not preempt it. (Town of Babylon v. Wellwood Cemetery Assn. (New York Law Journal, Nov. 25, 1935.)

Because new cemeteries are infrequent, because they normally require a large tract of land, and because of the unusual problems, they are often covered in zoning ordinances as a "special use." The procedure is to require that the plan for the cemetery be approved by the board of zoning appeals, or sometimes by the plan commission. In the majority of ordinances the new cemetery may be put in any district, if the location gets proper approval. It is customary to hold a public hearing on the proposed site, although this may not be mandatory.

Even when the zoning ordinance lists cemeteries as a permitted use in certain zones, the special approval is frequently required.

The following, from the proposed Providence, Rhode Island ordinance is typical of the wording.

"Section 27 - Special Exceptions

"The following special exceptions may be permitted in any zone when such uses are deemed essential or desirable to the public convenience or welfare and are in harmony with the various elements or objectives of the Master Plan and if their location is first approved by the Board (of Review)....

1. Airport or aircraft landing field.
2. Cemetery.
3. Local governmental enterprise.
4. Motor vehicle or rail terminal.
5. Educational institution."

Some zoning ordinances contain standards with which the proposed cemetery must comply. The following is from the Hamilton County, Ohio ordinance:

Article VI "A" Residence District

(Uses permitted)

"Sec. 62.7 Cemeteries, including mausoleums, provided that mausoleums shall be at least 200 feet from every street line and the adjoining lots in Residence Districts, and provided further that any new cemetery shall contain an area of 20 acres or more. "

More elaborate standards are provided in the Aurora, New York ordinance.

"Subdivision 10 Vary Ordinance. The Board of Appeals, after due notice and public hearing may, in specific cases and subject to appropriate conditions....

(h) Grant in appropriate cases a cemetery or airfield in a 'Residential

A, B or C district' or in an 'Industrial F District,' (But not in apartment or business districts. Ed. Note) provided:

"1. There are filed with such application the consents in writing duly acknowledged of the owners of record of 50 per cent, measured lineally around the boundaries, of the property contiguous to the property for which such permit is sought.*

"2. At least 10 days notice of such pending application is given by mail by the Secretary of such Board of Appeals to all persons recorded on the last preceding assessment roll as owning property within 2500 feet of the property for which such permit is sought....

"3. No graves within such cemetery area or structure within such air-field shall be nearer than 100 feet to any property line, and that such 100 foot strip along the edges of any such cemetery shall be suitably landscaped and planted so as to screen such cemetery from view so far as practicable.

"4. No interment shall be made in any cemetery or other place of burial within 250 feet horizontal measurement from the high water mark or precipitous bank of any lake, pond or reservoir or of any spring, stream or water source within the Town of Aurora."

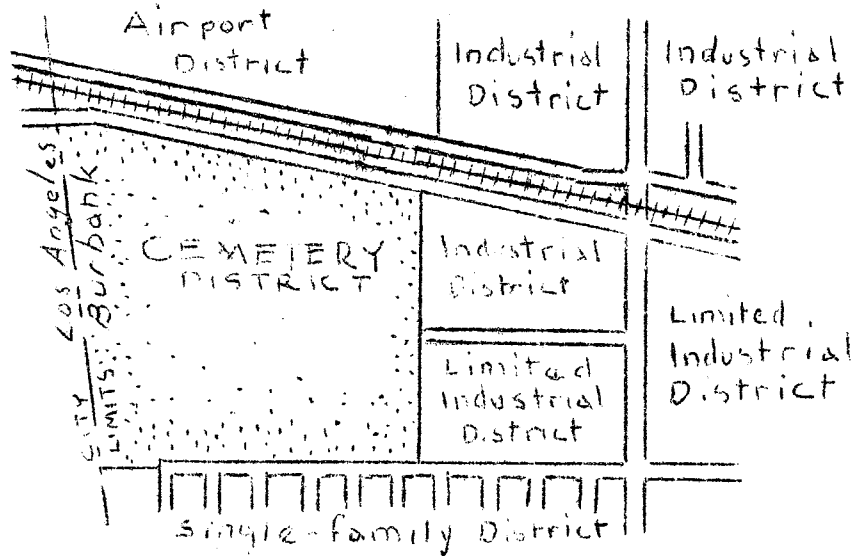
Specified minimum distances from residences or commercial establishments have been upheld by the courts (See: Eastman v. Hampstead, 20 A. 975; Stevens v. Manchester, 63 N.H. 390.) The Cincinnati zoning ordinance permits cemeteries, crematories and public mausoleums in its two-family (and "lower") districts, provided that crematories and public mausoleums shall be at least 200 feet from every street and 300 feet from every adjoining lot in any residence district not used for a similar purpose.

The Burbank, California, ordinance is unusual in that it sets up a separate "cemetery zone." There is only one such zone in the city. The text of the ordinance (as amended to 1948) relating to the zone is as follows:

"Cemetery Zone

"Section 16 (a) It shall be unlawful for any person, firm or corporation to bury or inter, or cause to be buried or interred, the dead body of any human being except within those certain districts in the said City of Burbank described in the Cemetery Zone, the boundaries of which are set forth upon the Zone Map hereinbefore referred to."

*The legality of such provision is questionable. See Gillete v. Tyson, 122 S. 830; Spies v. Board of Appeals, 168 N.E. 220; McCown v. Gose, 51 S.W. 2d 251; Koos v. Sanders (111 Sup. Ct. 6/24/32); Atkies v. West, 226 N.Y.S. 335; Dupont et al. v. Liquor Control Commission, 2 Zoning Digest 45, 71 A. 2d 84.



BURBANK, CALIFORNIA, CEMETERY ZONE

For court decisions upholding the control of cemeteries through zoning see Appendix A.

MEMORIAL PARKS

For the most part new cemeteries, and extensions to old cemeteries, are being developed as "memorial parks." The chief characteristics of such development are the prohibition of above-surface monuments, tombstones and grave markers, and the retention of a natural setting. Developers of memorial parks claim that the value of surrounding property is increased because of such cemeteries.

Insufficient data are available to prove the claim, but it is a likely assumption. Open spaces that seem reasonably permanent enhance the value of residential property. The "constant reminders of death," as tombstones are usually termed in legal arguments, are probably the worst offenders in the eyes of the neighbors.

If a new cemetery does not plan to forbid the marble grave markers, the city planner should insist on liberal screen planting along all boundaries. The evil is lessened by such planting. E. T. Hartman, in discussing the development of Westview Cemetery in Lexington, Massachusetts, wrote: "It had been argued elsewhere that a cemetery could be developed with a screen of shrubs and trees to cut off views of the interior from houses and travelers in the vicinity. The Lexington committee believed that the right thing to do was to develop nothing that needed to be hidden." (American City, October 1938. P. 57.)

The well-designed park type cemetery does not need to be screened. Indeed, it is less offensive if it is not surrounded by an impenetrable hedge that

shouts "Here is a cemetery!"

CREMATORIES

Zoning commissions have looked askance at crematories. Without knowing anything about them, the commissions have been inclined to think of them as nuisances, to be completely prohibited, or to be sent to industrial areas. The Toledo zoning ordinance places them in the light industrial district, while Lucas County, Ohio, sends them to the heavy industrial district. Evanston would also have them in the light industrial district and Chicago places them in the manufacturing zone.

A crematory is not a nuisance per se. It does not offend by the emission of fumes or gases. It is doubtful that the crematory has ever been offensive in the United States since the first one was erected in 1876. If it is a nuisance in fact, it will be because it is an unpleasant reminder of death.

The location of the crematory should be controlled by zoning regulations. Where it is to be built by itself, or as an adjunct to an undertaking establishment, it should probably be considered the same type of use as the undertaking establishment, and it has been so held by the court. (*Abbey Land Co. v. San Mateo County*, 136 P. 1068) However, as an appropriate accessory use in a cemetery, the New York courts have classed both the crematory and the columbarium as cemetery uses. (*Moore v. U. S. Cremation Co.*, 9 N. E. 2d 795.)

HÖRNLI GOTTESACKER

The City Council of Basel, Switzerland decided in 1919 that the four existing cemeteries in the city were unsightly and were using valuable space. They adopted a new scheme for disposal of the dead which was finally put into commission in 1932.

They selected a wooded hill, known as the Hörnli, on the edge of the city, as a site for the development. The council purchased a 500,000 square meter (125 acres) tract of land. They announced that after the development was operating, there would be no more burials in the other four cemeteries. Furthermore, the existing cemeteries would be maintained as such only until 1952, after which the council would use the land for whatever purposes it wished.

All burials and cremation are handled by a municipal authority. If the family is unable to pay, all expenses are handled by the city; including a simple coffin and marker. The grave is free. Simple markers are allowed, after their design has been approved by an Advisory Panel.

Burial is made in each grave once in twenty years. All graves are maintained free for twenty years. At the end of that time the family has to buy the grave and pay for maintenance at a high price, or the grave is again used for burial. There are a good many other regulations at Hörnli which are not applicable

to this report. One of them requires that the funeral procession form at the cemetery, rather than parade through the city. All services, with rare exceptions, are performed in the buildings on the grounds.

The Hörnli plan is believed to solve the cemetery problem of the city forever. No additional cemetery land will ever be required.

PERPETUAL CARE

For obvious reasons, neglected cemeteries create problems and become nuisances. Cemeteries become neglected because they have been poorly financed.

There can be no doubt that leaving the care of graves to the lot owners, that is, to the owners of the burial rights, always results in neglect. Proper care must be a responsibility of the cemetery association or authority and it must be soundly financed. The care should not be financed out of profits on the sale of burial rights, nor has it proved successful to pay for it from taxes.

The only successful method for assuring continuing maintenance is the "perpetual care" fund. This is a trust fund and only the earnings may be used to pay for maintenance.

Perpetual care costs are generally calculated by one of two methods. The charge may be a percentage of the lot cost, or it may be a flat rate per square foot of land sold for burial purposes. Since the cost of maintaining a cemetery lot does not depend upon the price paid for it, the flat rate per square foot is the more equitable way to charge. The average cost throughout the country is about 50 cents per square foot, although small cemeteries with fewer buildings or without lawn sprinkling may be able to operate on half this amount. Where the percentage of lot price is used, it may vary from ten to twenty-five percent. In Minnesota, a state law requires that 20% of the income from the sale of lots be set aside for perpetual care.

One weakness has begun to show up in the perpetual care plan. Earnings on perpetual care funds have dropped and maintenance costs, particularly for labor, have risen. If this trend continues, the ability of the funds to provide perpetual care is speculative.

The details of financing and administration are beyond the scope of this study. They are important, however, and the city planner should exert every effort to see that a new cemetery proposal is examined in every detail possible.

APPENDIX A

COURT DECISIONS REGARDING CEMETERIES

The growth of the city has been held to be a proper reason for prohibiting cemeteries.

See: Campbell v. Kansas City, 13 S. W. 897.

Went v. Methodist Protestant Church, 30 N.Y.S. 157. Affirmed
44 N. E. 1129.

In at least two cases, the courts have said that cemeteries might be prohibited because of the encroachment on the area by the living.

See: Presbyterian Church v. New York, 5 Cow. 538.
Kincaid's Appeal, 66 Penn. 411.

Courts do not look with favor on the prohibition of cemeteries where the area is sparsely settled.

See: Los Angeles County v. Hollywood Cemetery Association, 57 Pac.
153.

Brian v. Mayor and Aldermen of the City of Birmingham, 45 S. 922.

Hume v. Laurel Hill Cemetery, 142 Fed. 552.

Lake View v. Rosehill Cemetery Company, 70 Ill. 191.

Wygant v. McLauchlan, 64 Pac. 867.

Morton v. Roman Catholic Church Society of Salamanca, 105
N.Y.S. 1100.

Park Hill Development Company v. City of Evansville, 130 N.E. 645.

Where there is no existing nuisance and one is not threatened, prohibition of burial will not be upheld.

See: Rosehill Cemetery Co. v. Chicago, 185 N.E. 170.

Wygant v. McLauchlan, 64 P. 867.

Ex Parte, George T. Bohen, 47 P. 55.

Payne V. Wayland, 109 N. W. 203.

Union Cemetery Association v. City of Kansas City, 161 S.W. 261.

The neglect and disuse of a cemetery for a long time may be grounds for declaring it a nuisance and requiring its removal.

See: Scovill v. McMahon, 26 A. 479.

Young v. Mahoney County, 51 Fed. 585; reversed on other grounds,
59 Fed. 96.

Contra: Woodstock Burial Ground Assn. v. Hager, 35 A. 341.

Prohibition of cemeteries may be extended to include compulsory discontinuance of the use of existing cemeteries and the disinterment and re-burial of the bodies.

See: Kincaid's Appeal, 66 Penn. 411.
Campbell v. Kansas City, 13 S.W. 897.
Sohier v. Trinity Church, 109 Mass. 1.
Brian v. Mayor and Aldermen of the City of Birmingham, 45 S. 922.
Scovill v. McMahon, 26 A. 479.
Young v. Mahoning County, 51 Fed. 585. Reversed on other grounds, 59 Fed. 96.
Humphrey v. Front Street Methodist Episcopal Church, 13 S. E. 793.
Hornblow v. Masonic Cemetery Association of City and County of San Francisco, 214 P. 978.
Went v. Methodist-Protestant Church, 30 N.Y.S. 157. Affirmed 44 N.E. 1129.
Craigs v. Pittsburgh First Presbyterian Church, 88 Penn. 42.
Bogert v. City of Indianapolis, 13 Ind. 134.
Masonic Cemetery Association v. Gamage, 38 Fed. 2d 950.
Seale v. Masonic Cemetery Association, 18 P. 2d 667.

The possibility that mental health would be a valid consideration for prohibiting a cemetery might be drawn by analogy from certain cases regarding funeral homes.

See: Jack et al. v. Torrant et al., 2 Zoning Digest 90, 71 A. 2d 705.
Arthur v. Virkler, 258 N.Y.S. 886.
Laughlin Wood & Co. v. Cooney, 126 S. 864.
Cunningham v. Miller, 189 N.W. 531.
Jordan v. Nesmith, 269 P. 1096.
Williams v. Montgomery, 186 S. 302.
See also, 87 A.L.R. 1062; 54 Am. Jur. 513 #7;3Cooley, Torts (4th Ed.) 180 #435.

The control of cemetery location through the zoning ordinance has been generally upheld.

See: City of Wichita v. Schwertner, 286 P. 266.
Foster v. Mayor of City of Beverly, 53 N.E. 2d 693.
Holy Sepulchre Cemetery v. Town of Greece, 79 N.Y.S. 2d 683.
Patterson v. Board of Supervisors of Los Angeles County, 180 P. 2d 945.
Bryan v. Birmingham, 45 S. 922.
Austin v. Austin City Cemetery Assn. 28 S.W. 528.

The police power is not so restricted as to confine police power regulation to public health, but it may also include the power to insure in any respect such economic conditions as an advancing civilization of a highly complex nature requires.

Where the village was carrying a heavy tax burden and cemeteries, which do not pay taxes, and already cover 7% of the total incorporated area, then the village under its police power might prohibit both the establishment and enlargement of cemeteries by a zoning ordinance in order to (a) insure proper economic conditions; (b) secure the prosperity of the village; and (c) to insure the proper diversion and symmetrical development of the village area. (See *Beth Hamredesh Anshe, Calicia Congregation v. Village of Brooklyn*, 65 N.E. 2d 298, - Ohio, 1946.)

APPENDIX B

BIBLIOGRAPHY

AMERICAN CEMETERY LAW, compiled by A. L. H. Street, n.d. 532pp. \$6.00.
(A state-by-state analysis of laws and court opinions. The lack of any designation of date limits the usefulness of the volume.)

... Park and Cemetery Publishing Co., Madison, Wisconsin.

ARE FUNERALS BEING COMMERCIALIZED? In Information Service Bulletin, Vol. XXIII No. 36, November 4, 1944. (Concerned principally with lowering burial costs.)

... Federal Council of Churches of Christ in America, 297 Fourth Avenue, New York City 10, N. Y.

CEMETERIES AS NUISANCES. By Leon L. Lancaster. In Notre Dame Lawyer, Vol. 15 pp.144-8, January 1940.

CEMETERY HANDBOOK AND BUYERS GUIDE. Annually since 1935 (Devoted principally to proceedings of annual conference of National Cemetery Association, formerly the American Cemetery Owners Association.)

... National Cemetery Association, Martin F. Gaudian,
Executive Secretary, 1427 Eye Street, Washington, D. C.

DISPOSAL OF THE DEAD, Report No. 25, September 1943. Mimeo, 18pp. (Preliminary report, elaborated in Broadsheets 17 and 18, listed below.)

DISPOSAL OF THE DEAD, PART I - PART II. Broadsheet, 17, 18. 8pp. (A discussion of burial reform. Contains complete description of Hörnli Gottesalker and regulations covering burial in Basel.)

... Association for Planning and Regional Reconstruction,
34 Gordon Square, London, W. C. 1.

EARTH TO EARTH, by J. Henry Lloyd, In Town and Country Planning, Vol. XVIII, No. 73. May 1950. (Discusses excessive use of land in English cemeteries.)

... Town and Country Planning, 28 King Street,
Convent Garden, London, W. L. 2.

MODERN PARK CEMETERIES, By H. E. Weed, 1912, 194pp.

... R. J. Haight, Chicago, Illinois.

THE CEMETERY HANDBOOK, Second Edition, n.d. 520pp. \$12.00. (Special articles on every aspect of cemetery operation and maintenance. Major headings cover general reference; accounting and business management; perpetual care; planning, planting and design; remodeling and improvement; lawns and lawn care; grading, drainage, and roadbuilding; entrances, fences and buildings; trees and shrubs; and monuments and mausoleums.)

... Park and Cemetery Publishing Co., 114 South ^{Correll} Canal Street, Madison, Wisconsin.

THE LAW OF CADAVERS, By Percival E. Jackson, 2nd Ed. 1949. 734pp. \$12.00. (The outstanding authority on the law pertaining to the disposal of the dead.)

... Prentice-Hall, Inc. 70 Fifth Avenue, New York City 11, N. Y.

THE LOVED ONE, By Evelyn Waugh. 1949, 164pp. (Satirizes the flamboyant practises of some modern cemeteries.)

... Little, Brown and Co., 34 Beacon Street, Boston 6, Mass.

PERIODICALS

AMERICAN CEMETERY. Monthly, \$3.00. per year. Publisher, Kates-Boylston Publications, 330 West 42nd Street, New York City 18.

CANADIAN CEMETERY SERVICE AND MEMORIAL CRAFTSMAN. Quarterly. \$2.00 per year. Publisher, James O'Hagan & Co., 60 Front Street, W.1, Toronto, Ontario, Canada.

MODERN CEMETERY. Monthly. \$3.00 per year. Publisher, O. H. Sample; 526 W. State Street, Rockford, Illinois.

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