

SUBDIVISION CONTROL IN THE CHICAGO AREA

by

Matthew L. Rockwell, B. Arch.  
Massachusetts Institute of Technology 1938

Submitted to the Dean of the Graduate School  
of Massachusetts Institute of Technology in  
partial fulfillment of the requirements for  
the degree of Master in City Planning

May 23, 1949

Accomplished Out-of-Residence at  
222 West Adams Street, Chicago, Illinois



# STANTON AND ROCKWELL

ARCHITECT-ENGINEERS AND LAND PLANNERS

FRANCIS R. STANTON  
MATTHEW L. ROCKWELL

222 WEST ADAMS ST.  
CHICAGO 6, ILLINOIS  
ANDOVER 5793

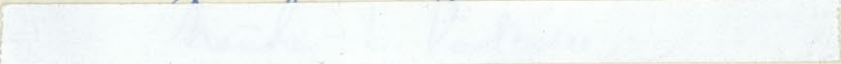
May 17, 1949

Dean of Graduate School  
Massachusetts Institute of Technology  
77 Massachusetts Avenue  
Cambridge 39, Massachusetts

Dear Sir:

There is transmitted herewith copy of my  
Thesis entitled "Subdivision Control in the  
Chicago Area". This work has been accomplished  
out-of-residence in partial fulfillment of the  
requirements of the Institute leading to the  
degree, Master in City Planning.

Very truly yours,

  
Matthew L. Rockwell

MLR:ds  
Enc.

TABLE OF CONTENTS

SUBDIVISION CONTROL in the CHICAGO AREA

SECTION I

Effect of Overexpansion of Subdivided Areas.....5 - 13

Premature development of urban peripheries shows lack of relationship between population requirements and areas reserved for subdivision use. Failure of tax collections creates delinquency problem and raises municipal costs due to overextension of utility connections.

SECTION II

Exercise of Police Power.....14 - 29

Control derived through exercise of police power. Description of existing type of controls such as design and utility standards and the use of the performance bond; the inadequacies of these controls to prevent premature development. Abuse of the public welfare through example of misuse of agricultural lands. Cost measures discussed.

SECTION III

Argument for the Quantitative Approach.....30 - 50

Basic consideration in new development that of demand. Inadequacies of population measures. Attempt to relate population to area requirements. The influence of economic factors. A study of population curves and lack of relation between them and lot recordings, and a consideration of outside influences upon subdivider. Origin study of new purchasers.

SECTION IV

Importance of Qualitative Factor.....51 - 65

Qualitative restrictions a secondary type of control. Influence of Topographic Features on Medinah Terrace properties, Bear Lake Tract and Roselle Highlands.

TABLE OF CONTENTS

Continued

SECTION V

Adaptability of Further Controls.....66 - 78

Discussion and conclusions of potential and further land subdivision controls and the feasibility of their adoption, administration and effect. Included are methods of population correlation, the certificate of public convenience and necessity, government ownership, taxation control and the extended performance bond.

LIST OF FIGURES

FIGURE A	Subdividing Activity & Population Curve, Chicago Region . . . . .	6
A-1	Map of Chicago Region . . . . .	7
A-2	Suburban Population and Recorded Lots, 1870 - 1930. . . . .	43
B	Comparative Growth Areas, Glenview, Ill.. . . . .	45
C	Subdivision Purchasers Origin Map . . . . .	48
D	Original Plat, Medinah Terrace. . . . .	52
E	Revised Plat, Medinah Terrace . . . . .	54
F	Original Plat, Bear Lake Tract. . . . .	56
G	Revised Plat, Bear Lake Trace . . . . .	58
H	Original Plat, Roselle Highlands. . . . .	63
I	Revised Plat, Roselle Highlands . . . . .	64
J	Typical Form of Improvement Bond. . . . .	75

LIST OF TABLES

TABLE I	Estimated Extent of Vacant Lots . . . . .	9
II	Proportion of Tax Delinquent Properties, Harvey, Illinois . . . . .	11
III	Improvements Required Prior to Plat Approval . . . . .	19
IV	Decline in Farm Acreage (Cook County) . . .	25
V	Distribution of Farm Acreage by Crops . . .	25
VI	Motor Vehicle Revenue for Wisconsin High- way Services . . . . .	26
VII	Cost of Services, St. Paul, Minnesota . . .	27
VIII	Average Annual Cost of Government, Evans- ville, Indiana . . . . .	27
IX	Per Family Costs of Government, Wisconsin .	28
X	Population Forecast Comparisons . . . . .	33
XI	Method of Pricing Subdivision . . . . .	41
XII	Origin Area of Purchasers in a Northwest Subdivision. . . . .	49
XIII	Net Return Analysis, Bear Lake Tract. . . .	60

## SECTION I. EFFECT OF OVEREXPANSION OF SUBDIVIDED AREAS

### Introduction

To the extent that the experience of other communities is useful for an understanding of premature subdivisions, such information is here included. This paper, however, is primarily concerned with the experience of Chicago and its environs as it relates both to this general subject and to the possibility of an effective correlation-control between population increases and lot recordings. The majority of illustrative examples is based upon research performed by the writer either specifically for this report or in support of other professional projects similar in subject matter. Where this is not the case, the usual footnote will be explanatory. It should also be mentioned here that although no direct reference is made in the text, a Regional Map is included as Figure A-1.

### Premature Development

The subject of premature land subdivision has been well described in the past few years; research projects have substantiated with poignant factual material these general descriptions. It has been pointed out that in general the current interest in this subject derives from the evil effects of over-activity of the land developers during the period 1920 to 1930; in the Chicago region the peak was reached in 1926 (see Figure A).

The choice examples of this overexpansion are by this time well worn. To provide direct reference, however, one or two are here repeated. In Chicago the pre-World War II

# POPULATION AND RECORDED LOTS, 1871-1930 CHICAGO REGION

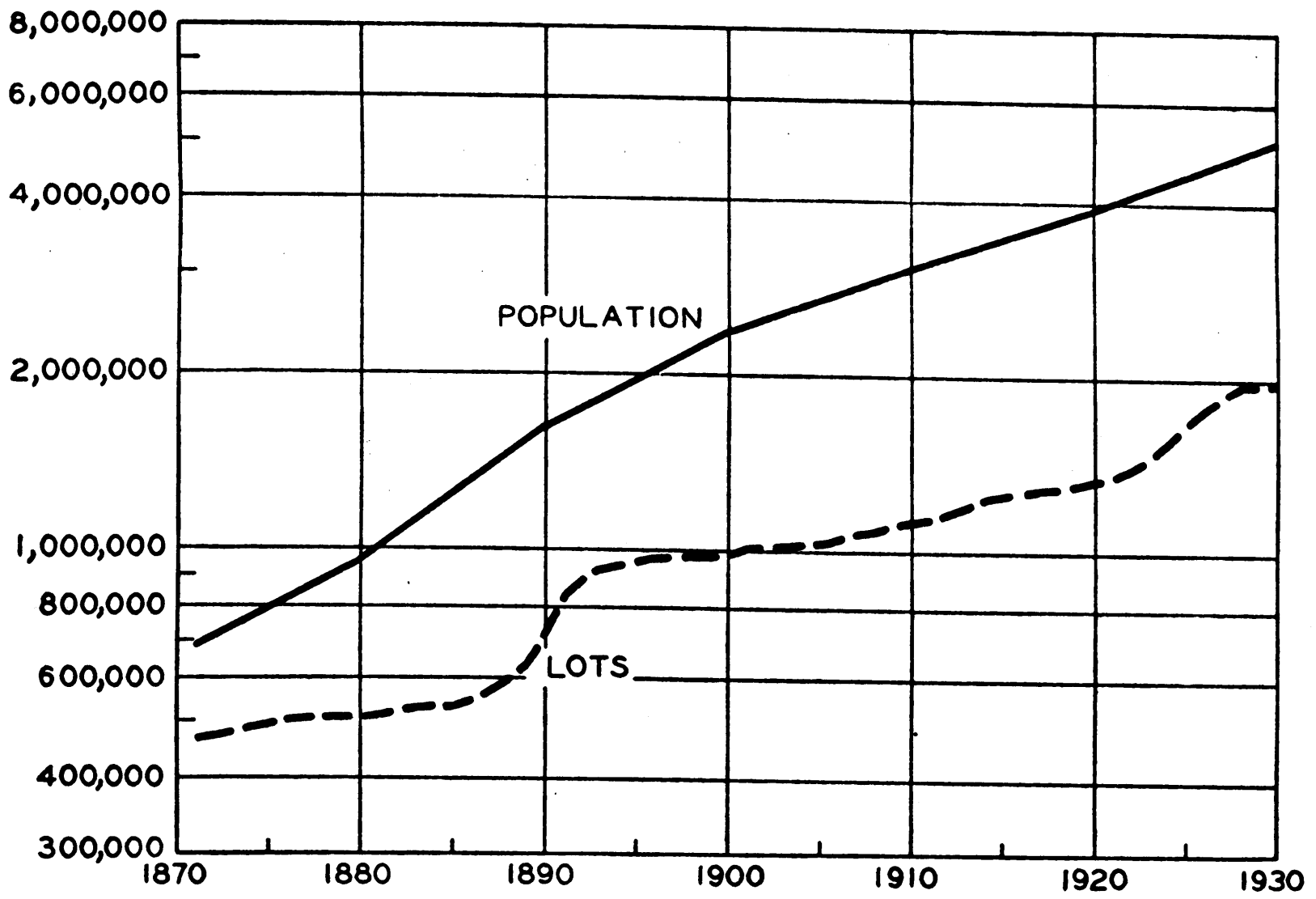


FIGURE A

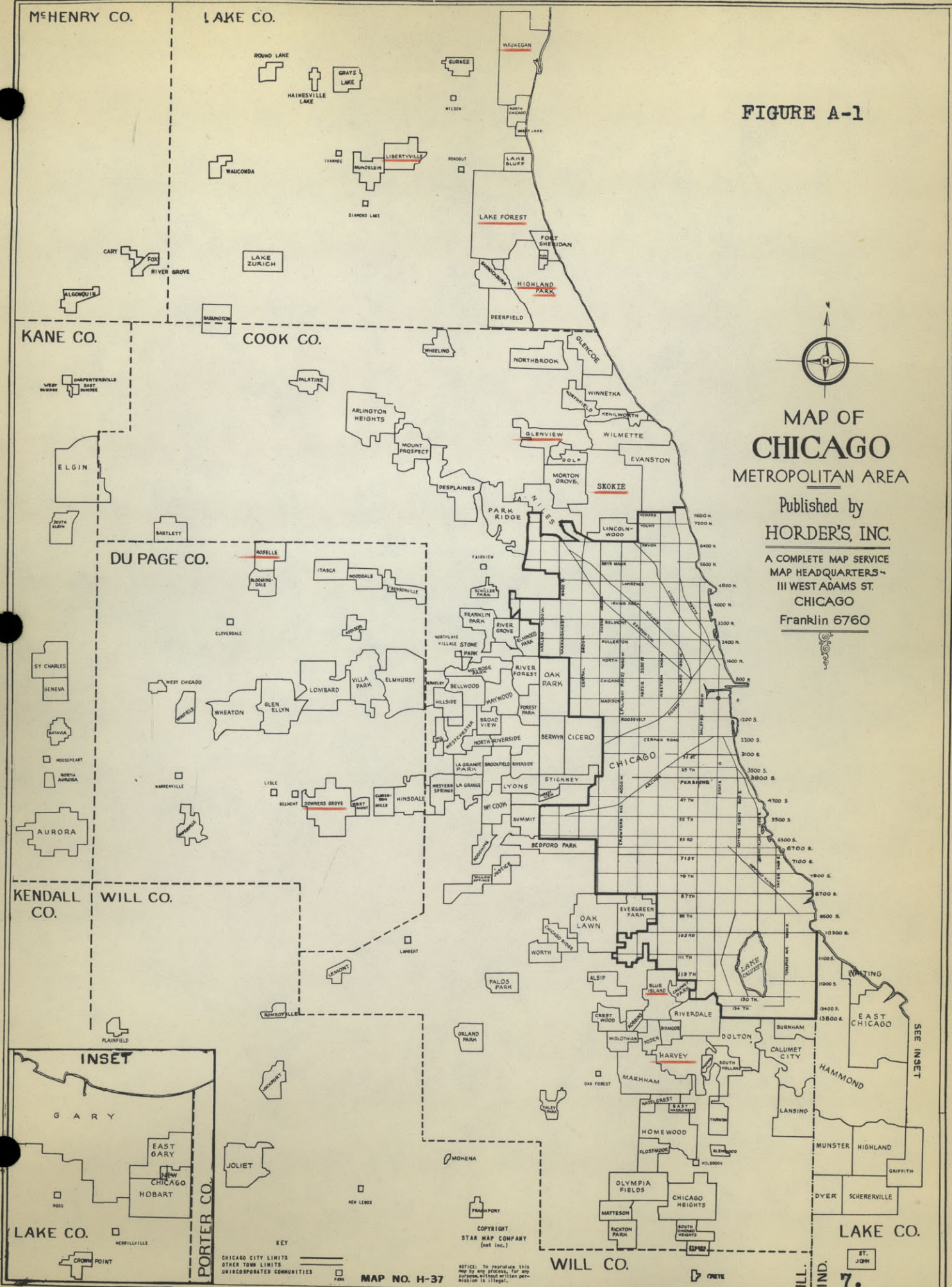
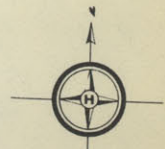


FIGURE A-1

# MAP OF CHICAGO METROPOLITAN AREA

Published by  
**HORDER'S, INC.**

A COMPLETE MAP SERVICE  
MAP HEADQUARTERS  
111 WEST ADAMS ST.  
CHICAGO  
Franklin 6760



MAP NO. H-37

COPYRIGHT  
STAR MAP COMPANY  
(not inc.)

NOTICE: To reproduce this map is prohibited, for any purpose, without written permission to the publisher.

ILL. IND. 7.

population was housed on only one-third of all available lots,<sup>(1)</sup> there being nearly 2,000,000 subdivided lots, or enough for 15,000,000 persons; the 1940 census figure for the city was 3,396,808. In Detroit, in 1920, with a population of 1,000,000 and an area of 89 square miles, one-third of the city's (subdivided) area was vacant. In Detroit in 1940, with a population of over 1,500,000 and an increased area of 139 square miles, approximately one-third of the area is still vacant.<sup>(2)</sup> In the Buffalo, New York area in 1934, for the suburban towns adjacent to Buffalo, 79% of the platted area by number of properties, was vacant.<sup>(3)</sup> These then, are spot citations symptomatic of a national uneconomic condition.

There is obviously little harm in expansion per se. The fact that two-thirds of a city's area is unused seems inconsequential and serves only to point up the glaring disparity in correlation between population requirements and the provision of the platted lot. The problem is of course more involved. For example, there is the matter of tax delinquency of the unimproved lot in the suburban expansion area. In Cook County, Illinois, at the present time, of 1,200,000 parcels on the tax rolls, 275,000 are deficient in taxes for one or more years. Of these 275,000 parcels, 100,000 are "no-name" items, apparently abandoned by their owners.<sup>(4)</sup> The problem is further aggravated by the

(1) H.C.Monchow, Seventy Years of Real Estate Subdividing, p.1

(2) W.H.Blucher, Subdivision Development & Control, p.2

(3) P.H.Cornick, Premature Subdivision, p.91

(4) Chicago Daily News, 11/22/48

uneconomic extension of the various utility services to meet the "proposed" needs of the expanded areas. In this regard there is the notorious case of Skokie, Illinois, which was over-developed by speculators in the '20s to the extent that only 10% of the area was inhabited. Figures for this village and other nearby suburban communities are shown in the following table:

TABLE I. ESTIMATED EXTENT OF VACANT LOTS

Municipality	Est. No. of Vacant Lots	Est. Total Vacant Lots Del. 10 yrs. or more	% Del. 10 yrs. or more	% of Del. Lots with sewer and water
Arlington Hgts.	4,500	1,500	33	50
Barrington	4,000	1,000	25	5
Bellwood	3,000	3,000	100	83
Blue Island	800	400	50	95
Calumet City	9,970	7,000	70	100
Chicago Hgts.	1,000-1,500	1,000	67-100	100
Des Plaines	2,500	1,500	60	90
Dolton	8,400	7,200	86	75
Elmwood Park	1,000	800	80	100
Evergreen Pk.	5,000	2,000	40	75
Franklin Pk.	3,500	3,000	86	40
Glencoe	600	400	67	90-100
Harvey	6,500	6,500	100	90
Hazelcrest	3,000	2,000	67	100
Hinsdale	1,500	1,100	73	100
Homewood	2,500	1,000	40	100
La Grange Pk.	3,000	1,000	33	75
Lansing	3,000	3,000	100	90
Lyons	6,000	4,000	67	75
Markham	5,000	2,500	50	96
Midlothian	500	400	80	15
Mt. Prospect	4,000	3,000	75	75
Niles	4,500	1,800	40	50
Northbrook	1,900	1,100	58	15
Northfield	2,500	500	20	75
Park Ridge	5,500	2,000	36	90
Posen	2,575	1,200	46	67
Riverside	600	100-120	17-20	98
Schiller Park	296	197	70	78
Skokie	30,000	18,000	60	95
Stickney	2,000	1,500	75	100
Stone Park	500	200	40	0
Winnetka	1,013	200	20	75
Worth	8,000	2,000	25	0

As indicated above,<sup>(1)</sup> 95% of the Village of Skokie was provided with all utilities, both municipal and private, including water, sewers (oversize, for an apartment population), paved streets, lighting and sidewalks, with unpaid special assessments of 24 million dollars.

#### Failure of Tax Collections

Due to the rather urgent nature of the tax condition mentioned briefly above, considerably more research has been made of this feature of overexpansion than of other effects. It seems appropriate, therefore, to describe this condition to the extent of available information before proceeding further.

Cook County contains, as has been stated, 275,000 vacant parcels of subdivided land which are currently tax delinquent; the majority of them have been improved with the usual services. Unfortunately, the term delinquent has been loosely applied upon occasion. Its actual meaning is "due, but not paid" with reference to a financial obligation which includes all types of taxes. When applied to subdivision discussions, it has come to mean more than just this, since lands which appear in delinquent studies do so by virtue of their long-term failure to produce tax monies. Obviously, the owner whose one-or-two year delinquency is caused by a temporary inability to pay, but who may be expected to pay, is of no substantial concern to the planner. On the other hand, lands which upon observation are in arrears to an extent that

---

(1) Housing Authority of Cook County, Dead Land, p.17

ultimate payment of the due amount cannot be expected, or lands whose owners appear to have lost interest in the property because the amount owed exceeds the value of the property, may be generally classified as "abandoned"; these are of course of prime concern to the successful solution to the problem of overexpansion, and the term delinquent used in this study implies this meaning.

As a conservative characteristic of the Cook County area, figures have been compiled<sup>(1)</sup> for the City of Harvey. These figures show that of a total of 16,490 lots, 40% are vacant. Of this percentage, more than nine-tenths are delinquent and all but a few have sewer and water.

Actually, the most delinquent lots number 6,092. Only a quarter of the 468 city blocks are completely free of abandonment. This data is contained in the following table:<sup>(2)</sup>

---

TABLE II. PROPORTION OF TAX DELINQUENT PROPERTIES  
HARVEY, ILLINOIS

<u>Percent</u> <u>Delinquent</u>	<u>Number</u> <u>of Blocks</u>	<u>Per Cent</u> <u>of Total</u>
0	123	25.3
1-24	107	22.0
25-49	84	17.3
50-74	83	17.0
75-99	68	13.9
100	<u>21</u>	<u>4.5</u>
Total blocks	486	100.0

---

It must be emphasized that of these 6,092 lots, only 251 (4.2%) completely lack improvement of any kind. Of the

---

(1) Housing Authority of Cook County, Dead Land, p.14

(2) Ibid. p.12

remainder, 3,727 lots are fully improved with sewer, water and paving. While the valuation of this land amounts to more than \$2,660,000, the important effect is the cost of maintenance of these improvements, or, where a municipality is financially destitute, the enormous waste of value due to the abandonment of these services. It is this effect of course, which assumes all-importance as the motivating cause for further premature subdivision controls.

Still another unfortunate effect, particularly at a time of housing shortages, is the inability of the public to purchase land hopelessly encumbered with taxes. In general, this may as a corollary mean that the tax-free land is poorly serviced; also that the tax delinquent lands which are heavy on the hands of the township tax rolls remain so. It was shown, for example, in the study referred to above that in the City of Harvey, Illinois, where 557 houses were built during 1940-1948, an additional 543 homes would have been built during those years if delinquent but desirable building sites had not been so encumbered. Furthermore, it is estimated that during these years Harvey would have received additional revenue because of this building amounting to about \$64,000, exclusive of sums recaptured in process of foreclosure.

That this problem is not alone peculiar to the Chicago area may be learned by reference to other authorities, among whom P. H. Cornick's research for the State of New York is most impressive. As one typical example of the latter's

findings is the situation discovered in the town of Pittsford, New York, where a subdivision of 202 lots was isolated for study purposes. In 1934 these lots were assessed for about \$62,300 or about four times higher per acre than eight years earlier when no storm or sanitary sewers had been available. In the same year there were arrears of general town and county special district and school taxes against these properties amounting to approximately \$104,500; still due were over \$252,900 of known future special assessment installments on the sewer system. In addition, there was still the cost of pavements, water mains, and sidewalks to come, and at the time of writing, occupants as well. (1)

The brief examples contained in this section are intended only to be indicative of the enormity of the abuse suffered by the average community and therefore the individual taxpayer because of premature subdivision. That the problem is not yet being effectively solved will be made more apparent later in this report; that the controls to date act only as temporary checks will also be more apparent. That a more drastic type of control is needed will become the thesis of this report and will involve the proposal of suggested solutions. To reach this point it will be necessary to study the application of the police power in past experiences which have at least indirect bearing on the subject.

---

(1) Cornick, op. cit., p.153

## SECTION II. EXERCISE OF POLICE POWER

The Supreme Court of the United States has referred to the police power by stating that "the police power of a state embraces regulations designed to promote the public convenience or the general prosperity, as well as regulations designed to promote the public health, the public morals, or the public safety".<sup>(1)</sup> It is the application of this power which permits the state to deprive the individual of his unrestricted use of his property without the necessity of compensation. Thus through the formation of a zoning ordinance an area district may be established placing an individual's property in a residential classification with a value of but \$30 a foot, when a commercial use would have resulted in a value of \$125 a foot.<sup>(2)</sup>

Specifically, a zoning ordinance establishes land use districts in either rural or urban surroundings where only certain specified activities, such as commercial, residential, etc. may be carried out, presumably upon the basis of a comprehensive plan for the use of property within a given area. The objective of zoning as conceived in its birthplace, New York City, has been stated to be:

"The protection of values of privately owned properties against the intrusion of types of land use which would adversely affect the net incomes from, and the values of these properties."

---

(1) Chicago D&Q Ry. Co. vs. Drainage Commissions, 200 U.S. 561, 592.

(2) Reschke vs. Village of Winnetka, 363 Ill. 478, 2 NE 2d 718 (1936)

(3) Cornick, op. cit., p.232



Yet a broader statement of objective would certainly include some mention of the rational land-use pattern which a community would hope to achieve through the adoption of a zoning ordinance.

While fathered originally in urban areas, zoning has in recent years been successfully applied in rural areas. One of the more unusual types of rural ordinances, which has a bearing upon this matter, is the typical county ordinance of the nearby northern Wisconsin area. This illustration is especially pertinent because it not only performs the usually accepted function of zoning, but also because it indicates clearly a progressive and liberal application of the police power to protect average Wisconsin taxpayers from the disproportionate relief and tax delinquent loads imposed by the failure of certain farmers to realize sufficient return from their property to meet their public obligations. These particular ordinances were the result of local community action in the "cut-over" timber region of this State. The action taken was the end result of (a) "the extensive depletion of the original great resource of the region, namely, the forests", and (b) "the too great prevalence of an ill-advised land that is definitely unsuitable for farm crops".<sup>(1)</sup>

By appropriate studies of the Region it was shown that the rural inhabitants of this cut-over area had ceased to be self-supporting, due primarily to the sub-marginal soil, and had of consequence been unable to meet the tax levy providing

---

(1) Wisconsin State Planning Board, The Cutover Region of Wisconsin, p.1

for their typical local necessities such as roads, schools and utilities. That they had become a burden on society is illustrated by the fact that in 1938 the State allotted 63% of its relief funds to this area where only 18% of the state's population lived. (1)

Proposals for correction of this situation centered principally on the encouraged relocation of these inhabitants to more suitable living and sustaining areas. Proponents of this action emphasized that the relocation needed not to be permanent, but was rather intended to be necessary during the formative period of an extensive forestry program, which was secondarily to provide employment for the people of the Region. The relocation was effectuated for future settlers by the enactment of ordinances "restricting and determining the areas...in which agriculture, forestry, and recreation may be conducted, the location of roads, schools, trades and industries, and the location of buildings, designed for specified uses, and the establishment of districts for such purposes..." (2)

The ordinance further provided for only two districts, one for forestry and recreation and the other for unrestricted purposes. These latter were defined as "any building...occupied by any person...tending to establish a legal residence." Reference to the map attached to this ordinance indicates in general that the unrestricted districts are

---

(1) Wisconsin State Planning Board, The Cutover Region of Wisconsin, p.114

(2) Marinette County, Wisconsin, Zoning Ordinance

generally those contiguous to the settled areas. Non-conforming users received the usual treatment of tolerance until the use was terminated.

While it is recognized that the Wisconsin experience is not conclusive, since the end result desired was not immediately attainable, it is felt that the situation is especially illustrative of the broader interpretation of the police power and may therefore be used in support of any more unusual proposals for subdivision control than those now in use. This Wisconsin situation is especially useful in illustrating the reference to the general prosperity, already cited, but also the "economic welfare...of the community", as recognized by at least one State Supreme Court, that of California, which stated:(1)

"What was at one time regarded as an improper exercise of the police power may now, because of changed conditions, be recognized as a legitimate exercise of that power... In its inception, police power was closely concerned with preservation of the public peace, safety, morale, and health, without specific regard to the 'general welfare'. The increasing complexity of our civilization and institutions later gave rise to cases wherein the promotion of the public welfare was held by the courts to be a legitimate object for the exercise of police power. As our civic life has developed so has the definition of 'public welfare', until it has been held to embrace regulations 'to promote the economic welfare, public convenience and general prosperity of the community'. In brief, 'there is nothing known to the law that keeps more in step with human progress than does the exercise of this power'. (Miller vs. Board Public Works Los Angeles (1925 Cal.) 234 Pacific 381)" (1)

---

(1) N.F.Baker, Legal Aspects of Zoning, p.117

### Description of Existing Controls

The grant of subdivision control by the various State legislatures is an extension of the police power to the individual community, generally accomplished by withholding the right of a land owner to sell property according to a recorded plat until approval has been obtained by a specific authority. Generally the subdivision control power is included within municipal enabling acts which provide for the creation of a city plan commission, as is the case in Illinois. Occasionally, a separate statute may provide for the control, as illustrated by the following excerpt from the Wisconsin Platting and Sanitation Code:

"236.143 Subdivision control, in populous counties.  
(1) DECLARATION OF LEGISLATIVE INTENT. The purpose of this section is to promote the public health, safety, and the general welfare of the community and the regulations authorized to be made are designed to lessen congestion in the streets and highways and further the orderly layout and use of land; to secure safety from fire, panic and other dangers; to promote health and the general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; to facilitate adequate provision for transportation, water, sewerage, schools, parks, playgrounds and other public requirements."

The above powers may be said to be "qualitative" in effect, rather than "quantitative", since they pertain to the design of the accepted subdivision itself. While this former effect is of course important and should not be minimized, it is secondary to the main theme of premature control, which so obviously requires an approach through a restriction upon quantity.

Unfortunately, to date almost all attempts to control quantity have been indirectly exerted through the 'quality' type of control, the most typical regulation of which requires the developer to provide certain minimum physical improvements prior to his final approval for development. Because the improvement requires the developer to expend substantial amounts before he has made sale of his properties, this "improvement" control has a deterring effect that tends to restrain unwarranted land speculation.

That these controls are relatively widespread may be seen from the following table,<sup>(1)</sup> indicating the percentage of national communities (based upon 215 replies) which require certain improvements:

---

TABLE III - IMPROVEMENTS REQUIRED PRIOR TO PLAT APPROVAL  
(in percentage of total cases)

Monuments	87%	Storm Sewers & Drainage	35%
Street Grading	57	Gutters	6
Roadway Surfacing	20	Culverts and Bridges	15
Roadway Paving	4	Sanitary Sewers	24
Curbs	9	Water supply	22
Sidewalks	19	Street signs	3
Street Trees	16		

---

But the very fact that a subdivider must meet certain standards, such as the provision of a certain road type in a proposed subdivision, while it may insure a prospective home owner a minimum degree of useability, does not prevent the creation of a subdivision for which no market exists. The completion of

---

(1) H.W.Lautner, Subdivision Regulations, p.246

this subdivision in physical equipment, from the provision of road pavements to fire hydrants, does not in itself constitute a community asset. On the contrary, the existence of such a subdivision, unpopulated, is a distinct liability; in few cases does this example occur as described. More likely the existence of such a development will be found with but two or three properties improved. These developments which are only partially populated constitute an even greater liability to the public welfare (as in the case of the Wisconsin backwoods farmer) than the entirely undeveloped community, since in the latter example the cost of providing the various community services is extremely disproportionate to the cost of equivalent services to citizens of the same community who happen to live in greater concentration.

In order that the subdivider may have assurance of the approval of his final plat prior to his completion of the necessary improvements, many communities have provided for the posting of a bond which signifies the intention of the developer to comply with these requirements. In 1943, the Chicago Plan Commission proposed that no subdivision plat should be approved unless either the plat were accompanied by evidence showing completion of the required improvements or the following:

"A certified check, bond, or escrow agreement, in good order, available to the City of Chicago; and written evidence from the appropriate authorities showing that the amounts are adequate for the completion of these improvements and facilities."(1)

(1) Chicago Plan Commission, Building New Neighborhoods, p.43

In 1947 the ASPO released a model subdivision control law<sup>(1)</sup> which in referring to this situation, used the specific term "performance bond" and suggested the even more stringent, but entirely logical, provisions that follow:

"If the municipal corporation or county shall decide at any time during the term of the performance bond that the extent of the building development that has taken place in the subdivision is not sufficient to warrant all the improvements covered by such performance bond, that required improvements have been installed as provided in this section in sufficient amount to warrant reduction in the face amount of said bond, or that the character and extent of such development require additional improvements, the municipal corporation or county may modify its requirements for any or all such improvements, and the face value of such performance bond shall thereupon be reduced or increased by an appropriate amount so that the new face amount will cover the cost in full of the amended list of improvements."

These so-called "improvement" types of control then, are and have been the broadest and most typical sort of indirect restriction which has been exerted both in the Chicago area and nationwide since the land booms of the twenties. While the power to so restrict the developer stems of course from the exercise of the police power mentioned earlier, it is felt that a far greater potential of this power exists than has yet been enjoyed. For example, it is felt that premature subdivision has yet to be widely recognized as the abuse of the public welfare which recent tax delinquent studies have emphasized.<sup>(2)</sup>

---

(1) American Society of Planning Officials, Model Sub-division Law, p.30

(2) Housing Authority of Cook County, op. cit. p.41

## Abuse of the "General Prosperity"

The courts, in speaking of the 'general prosperity' and the 'economic welfare' resulting from an exercise of the police power, seem to invite the investigation and proposal of safeguards which could eliminate premature subdivisions from the planning scene. While the permitted tax delinquencies of unimproved lots appear to be the greatest abuse of the public welfare relating to land, there are undoubtedly many other abuses which could be demonstrated, such as the misuse of agricultural lands. Through figures available for the Chicago area, it is possible to trace the actual decline of agricultural land use.

There is an increasing interest in the proper use of agricultural lands. This subject and the maladjustments to which these lands have been subjected was accented by the studies of the Land Planning Committee of the National Resources Board in 1935.<sup>(1)</sup> More recently the correlation between the problems of population increase and the dissipation of land resource has been highlighted by the soil conservation interests of this country. Perhaps the most controversial recent and pertinent source of discussion has been William Vogt's publication "Road to Survival".<sup>(2)</sup>

While it is not yet possible to evaluate the importance of this subject to that of land subdivision, it is, however, obvious that the misuse of thousands of acres of platted but

---

(1) National Resources Board, Maladjustments in Land Use

(2) Vogt, William. Road to Survival



unutilized subdivision land, once originally farm land and assumedly still potentially productive land, is contrary to the national welfare. This misuse is highlighted by soil experts who contend that land capacity will not continue to provide for the ever increasing national and world population.

For example, in a recent meeting of the Soil Conservation Society of America in Portland, Oregon, it was stated that in 1900 the Pacific Northwest region had a population of but one million and that the anticipated population of 1960 is six million. It was emphasized that the region's resources that come from the land cannot be increased in this scale.<sup>(1)</sup>

Although truck gardens occupy only one-eighth of the total farm acreage in Cook County, they do, however, occupy the most valuable areas from the standpoint of subdivision activity. By its very nature the successful truck garden must be as close to the urban center both for seasonal markets and for canning facilities as land values will permit. In the Chicago area, it may be assumed that all peripheral lands are suitable for agricultural purposes. It is obvious then, that the premature platting of land and its relative paper value continually forces truck gardeners further into the hinterland. As one example of the value differential may be cited the case of a paper subdivision attached on one side only to a neighboring community. The front

---

(1) Remarks R.F.Bessey, 1949 meeting Soil Cons. Soc. of America, Portland, Oregon

foot value of the platted area averages \$15.00.<sup>(1)</sup> The acreage value of the contiguous truck farms averages \$800.00 per acre. Since each block contains approximately five acres, the platted area is rated almost five times the farm land and this factor obviously deters cultivation.

The latest figures place vacant subdivided land within Chicago at a figure almost equal to the truck farming area (31,000 acres) in Cook County. Since it may be estimated that vacant land in the county (with more than twice the area of the city) would approximate that within the city, it may be concluded that twice the area needed for truck gardening alone stands idle. In this locality this means that upwards of 60,000 acres are being unutilized at a world period of intense need. The most direct way to prevent this waste seems to be through regulation of subdivision activity rather than coercion by agricultural interests.

As stated earlier, this example is intended to be illustrative of the varying types of abuses to which the public might be exposed through the influence of premature subdivision and because of which, more specific controls might be enacted through an extension of the police power to this particular field.

Supplemental information to this situation is the fact that the number of farms in Cook County, and the total number of acres in farms, has shown a decline in the past eight years as indicated by the following table.

---

(1) G.C.Olcott, Land Values Blue Book of Chicago, p.26A

TABLE IV. DECLINE IN FARM ACREAGE (Cook County)<sup>(1)</sup>

	<u>Number of Farms</u>	<u>Total Acres in Farms</u>
1939	4537	253,861
1940	4530	256,483
1941	4331	250,530
1942	4216	251,871
1943	4084	250,912
1944	3559	246,351
1945	3801	241,212
1946	3773	241,512

The total number of farms has shown a decline of 16.8%, from 4,537 in 1939 to 3,773 in 1946; interestingly, the total acreage in farms declined only 4.8%, from 253,861 to 241,512. Yet this decline in farm acreage of about 12,400 acres is 40% of the truck farming regional area. Presumably this loss was absorbed by an increase in the ever widening circle of contributory farm regions to the city, which in ever decreasing ripples would tend to further weaken the national capacity before mentioned.

It may be interesting to note in Table V the actual distribution of farm acreage in types of crop. This is given below:

TABLE V. DISTRIBUTION OF FARM ACREAGE BY CROPS<sup>(2)</sup>

	<u>1939</u>	<u>1946</u>
Total Farm acreage	253,861	241,212
Oats and feed corn	92,608	105,525
Pasture and idle plowland	72,597	52,368
Truck gardening	33,868	33,855
Hay	29,742	32,263
Soybeans	16,460	13,573
Rye and Barley	4,303	696
Winter & Spring Wheat	3,624	2,465
Non-agricultural land	60,148	68,386

(1) Source: Illinois Cooperative Crop Reporting Service

(2) Ibid

Soil conservationists seem still too few to cause more than passive interest in their subject, and it is not felt that the foregoing remarks are any more than indicative of a general trend of thought. They are included in this study to emphasize the widely differing effects which premature subdivision may have upon the "general prosperity".

Cost Measurements

The terms 'economic welfare' and 'general prosperity' have been used to justify the application of the police power in situations where the average taxpayer suffers a hardship because a minority group contributes to disproportionate community costs. The most telling argument for a major extension of the police power to delay the premature subdivider would be the citation of the actual cost figures, not initial, but the continuing maintenance charges on subdivision utilities and services, which influence the parent community. These figures are not yet readily available through research sources. There are, however, certain indications which may be noted and are useful to accent the importance of this phase. For example, in the following table for certain Wisconsin counties,<sup>(1)</sup> the annual highway snow removal cost may be seen to be over 22% of the cost of all highway maintenance.

TABLE VI. MOTOR VEHICLE REVENUE RETURNED TO WISCONSIN COUNTIES FOR HIGHWAY SERVICES

	<u>Maintenance</u>	<u>Snow Removal</u>
Group 1 Counties	1,992,617	584,644
Group 2 "	1,351,875	275,939
Group 3 "	1,985,565	350,411
State Total	5,330,057	1,210,994

(1) Wisconsin State Planning Board, op. cit. p.78

Again, there are available brief and informal reports on the cost of certain services<sup>(1)</sup> in St. Paul, Minnesota and Evansville, Indiana<sup>(2)</sup> which are given in the following tables.

TABLE VII. COST OF SERVICES, ST. PAUL, MINNESOTA

All services:	City limited to \$30 per capita.	
Sewer connections:	Per annum, \$6, but actual cost is \$12.	
School costs:	Kindergarten - grade schools	\$89.51
	Junior High Schools	126.58
	Senior High Schools	143.35

TABLE VIII. AVERAGE ANNUAL NET COST OF CIVIL GOV'T. (a)  
1934-1938 EVANSVILLE, INDIANA

	<u>Av. Annual</u> <u>Net Cost</u>	<u>Net Cost</u> <u>per Capita</u>	<u>Net Cost</u> <u>per Units</u>
		(b)	(c)
Administration	\$32,331	\$.33	\$0.000285 per dollar of assessed valuation
Debt Retirement	135,049	1.37	\$0.00119 per dollar of assessed valuation
Fire Protection	346,151 <sup>(d)</sup>	3.51	\$0.00305 per dollar of assessed valuation
Garbage Collection	29,114	.29	
Health Board	45,280	.46	
Park Board	40,795	.92	
Police Protection	306,177 <sup>(d)</sup>	3.10	\$49.60 per acre
Sewers	21,529	.22	\$105.33 per mile of streets
Street cleaning	29,706	.30	\$202.77 per paved mile
Construction and Maintenance	23,098	.23	\$113.00 per mile
Lighting	74,003	.75	\$29.84 per light
Total	1,133,233	11.48	

(a) Data taken from Annual Reports 1934 to 1938, inclusive.

(1) G.H. Herrold, Costs of Suburban Services, Journal AIP, Summer 1946. p.29

(2) L.T. Keefe, Annexation Studies, Evansville, Indiana. p. 115

(b) Based on 5 year estimated average population of 98,667.

(c) Unit costs based upon:

2480 street lights  
146.5 miles of paved streets  
204.4 miles of streets  
6178 acres - total area of city  
\$114,476,666 average total assessed valuation  
from 1934 to 1938.

(d) Includes pensions.

(e) New cost of the following offices and departments:

Mayor, Judge, Treasurer, Auditor, Clerk, Finance, Law,  
Public Works and Safety, Engineer, Buildings and Grounds,  
Inspection, City Plan Commission, and City Council.

---

Finally, there are the following figures<sup>(1)</sup> compiled in connection with the Wisconsin cut-over region mentioned earlier. These are on a family basis of cost and unfortunately do lend themselves to easy comparison for this reason.

---

TABLE IX. PER FAMILY COSTS OF COUNTY AND LOCAL GOVERNMENT AND SERVICES IN WISCONSIN, 1936

	<u>Florence Cty.</u> ( $\frac{1}{4}$ density of Pierce)	<u>Pierce Cty.</u>	<u>Milwau- kee Cty.</u>	<u>State of Wisconsin</u>
All purposes	313	186	259	220
General Gov't.	41	18	81	47
Highways	81	63	22	45
Education*	104	50	66	63
Relief	74	46	50	43
Other	13	9	39	22

\* On basis of minimum cost school with 5 pupils, annual cost each would be \$180.00; if there were 25 pupils, cost would be \$36.00.

---

(1) Wisconsin State Planning Board, op. cit. p.97

From the foregoing figures it will be seen that the most significant are those dealing with Evansville, Indiana, with particular reference to the per mile costs of street maintenance. These, when compared to the improved but uninhabited premature subdivision, immediately and dramatically illustrate the ineffectiveness of qualitative measures as constituting the end point of subdivision control.

### SECTION III. ARGUMENT FOR THE QUANTITATIVE APPROACH

#### Considerations of Demand

From the point of view of the land planner, it is apparent that the most fundamental cause for the failure of a subdivision (which would then become known as a premature subdivision) would have been the lack of a demand for the subdivision; in other words, the cause would have been due to the lack of correlation between the study of population needs and the act of platting the development itself.

The consulting planner must conscientiously attempt to analyze this relationship, and the plan commission, confronted with the approval of a development must certainly consider this factor. In fact, to be worthy of its title, the commission should be the embodiment of the purpose for all land planning of which the above consideration is but one of a series of well integrated steps in the planner's technique. The planning purpose under concern, as defined by the American Institute of Planners, is "that of the unified development of urban communities and their environs...as expressed through determination of the comprehensive arrangement of land uses and occupancy and the regulation thereof". Obviously where a planning commission is doing a responsible job the situation described is not as likely to occur.

A conspicuous example of scrutiny by an official body occurs in Puerto Rico where, under terms of the Insular Planning Act of 1942, the Urban Development Division of the Puerto Rico Planning Board has the authority to "disapprove any



application for....lack of demand for new lots".<sup>(1)</sup> An inquiry to the Board in this connection resulted in a letter reply,<sup>(2)</sup> portions of which are excerpted below:

"In reply to your question I am very pleased to inform that so far the Puerto Rico Planning Board has not disapproved any application for subdivision based on lack of demand for new lots.

"Though there is a provision to this respect in our land subdivision regulation, studies made by the Planning Board have demonstrated that there is demand for several types of lots.

"About two years and half ago Mr. William H. Ludlow, Consultant to this Board, conducted a careful study to determine the need for new lots and housing facilities in the San Juan Metropolitan Area. His study for this area showed that there was ample demand in all income groups. The groups considered were:

- "1 - Low Income group - to be taken care of through public housing.
- 2 - Lower-Middle Income group.
- 3 - Higher-Middle Income group.
- 4 - Lower-High Income group.
- 5 - High Income group.

"Recent studies show that in all towns and cities of the Island there is still need for new lots. Such studies were based on the inventory of housing facilities made through land use surveys and population studies. The information is kept up to date for the application of Article 15 of our Regulations when it shows that the time for such action has come.

"At present, in the San Juan Metropolitan area, there is little demand for lots whose price fits the higher-middle and lower-high income groups. Generally we advise new land subdividers in this respect.

"The procedure we have in mind to apply when the time comes for such action is to disapprove the corresponding

---

(1) Telesforo Carrero, Land Subdivision Control in Puerto Rico, Journal AIP. Summer 1947, p.28

(2) Correspondence with T. Carrero, April 1, 1949

project based on our studies and records. In case a subdivider appeals the decision, he should prove the contrary with substantial information or evidence in a public hearing. In other words, at the hearing, he must prove that our studies and conclusions are wrong and that he has demand for his lots."

From the preceding excerpt, with particular reference to the last paragraph, it may be seen that the statutory provisions are extremely liberal. The acceptance by the State of Illinois of such a procedure would, however, be very questionable, particularly when it is realized on the matter of zoning alone that the Supreme Court of Illinois, in twenty out of thirty-one decisions, has ruling the zoning restriction to be arbitrary and unconstitutional.<sup>(1)</sup>

The approach to control as authorized in Puerto Rico which may be identified as the "quantitative" approach (since it involves demand measurement), may at first glance appear as the ideal to the planning technician.

#### Population Measures.

It would appear consistent with modern planning techniques, and certainly with those cited as being in effect in Puerto Rico, to consider the probably population trends that might create the acceptance or failure of the new project. If the trend were unfavorable to the development, even after allowing a reasonable safety factor, it could then be proven that the initiation of the project would be contrary to the economic prosperity (and thus public welfare) of the community.

The difficulties inherent in population forecasting

---

(1) R. F. Babcock, The Planner's Part in Zoning Legislation, Journal of AIP, Spring 1949, p. 22

procedures are admitted by population authorities themselves. One has said, "The forces underlying the growth and distribution of population are to a large extent, immeasurable".<sup>(1)</sup> That this statement has certain truths may be understood from the following illustrations. It is possible to partially isolate figures for the Chicago suburb of Roselle, in which community the author is actively engaged in subdivision design at the present time. Two authorities are available for source figures of the anticipated growth, both of Roselle and its parent county, Du Page; their forecasts are given below:

---

TABLE X. POPULATION FORECAST COMPARISONS

	<u>Anticipated Increase, Du Page County</u>					
	<u>1910</u>	<u>1920</u>	<u>1930</u>	<u>1940</u>	<u>1950</u>	<u>1960</u>
Source <sup>(1)</sup> (1927)	33,432	42,120	58,800	81,700	112,700	-
Source <sup>(2)</sup> (1945)	33,432	42,120	91,998	103,480	-	150,000
	<u>Anticipated Increase, Village of Roselle</u>					
Source <sup>(2)</sup> (1945)	-	-	807	694	-	1,000

---

From the above figures it will first be seen that the only points of similarity in the source authorities are the figures which were already known at the time of the forecast; beyond this point there is great difference of opinion. Secondly, it will be noted that a decline in Roselle took place

---

(1) H.R. Jefer, Trends of Population in Region of Chicago, p.47  
 (2) Chicago Regional Planning Association, Revised Estimates of Population Growth, p.4

between 1930 and 1940. This fact illustrates the statement of Source:<sup>(1)</sup> "The decade 1930-40 amply illustrates the futility of estimating population growth in local communities by a single projection of past growth". The same source also states that "Estimates...must be keyed to the probable growth of surrounding areas and even of the different sections of the nation".<sup>(2)</sup> Regardless of either source, present figures of growth bear little resemblance to those which were anticipated. For instance, the effect of one subdivision recently platted in Roselle can be easily measured. The property comprises 136 lots; if each were improved by a family whose average size was 3.5 persons, a total addition of 476 persons to Roselle's population would result. Assuming that this might come within a two year period, the 1950 population would then exceed the proposed population of 1960 by about 20% and there would still remain approximately 36.1% of the presently incorporated area undeveloped. Furthermore, the developer of this subdivision is presently platting an additional 280 acres into 271 lots not over one-half mile beyond the development mentioned above, and lying within Du Page County. A completely successful development by 1960 of these properties would more than double the tributary population of Roselle anticipated by the considered judgment of experienced forecasters.

---

(1) Chicago Regional Planning Association, Revised Estimates of Population Growth, p.4

(2) Ibid. p.1

It is, of course, also possible that the location of a new manufacturing decentralized activity in or near Roselle might substantially alter the anticipated increase as well as other acts of similar nature <sup>which</sup> might change the course of expected growth. Since the war years, such a trend has been most pronounced in the Chicago area.

#### Relation of Population to Area Requirements

Shortly after the peak in subdividing activity (1926) had been reached in the Chicago area, an interesting effort was made "to translate into quantitative terms the amount of land that will be required to meet the needs of an estimated future urban population". (1)

By analyzing populations of various communities at that time and determining the extent of actual acreage which the population of these communities occupied, and dividing the population by the acreage, a "density factor" of persons per gross acre was derived (for the average suburb, the factor was 12.1 persons per gross acre). This factor was then related to different types and sizes of communities, and certain "group" factors resulted which were useful as checks on future calculations. This system was based on the then current forecasts of 1950, and the extent of subdivided lands necessary for 1950 then became apparent. This was the end result of the study.

In essence the study represented the establishment of a

---

(1) O.S.Fink, Area Requirements of Municipalities in Region of Chicago, p.2

master plan for residential land use for each community under consideration and as such was subject to the same disadvantage with which any master plan is confronted. This is, namely, the unpredictability of the population curve due to the outside influence, such as an unusual growth of industry, or a very active sales promotion campaign of a developer.

A recent study by the author will tend to accent the population-area relationship. A division of 450 acres of slightly rolling farm land in West Lake Forest, Illinois, was contemplated. Against a proposal to plat this area in 20,000 sq. ft. parcels (which size was the minimum provided by the local zoning ordinance), it was argued that to provide less than 2-acre parcels would be a mistake. The argument was based primarily on the fact that complete conformance to the zoning ordinance would result in an increase for the community of approximately 500%, whereas the best informed authorities could see no more than a 23% increase over the next 20 years. The following figures were used:

	<u>1930</u>	<u>1940</u>	<u>1960</u>	<u>% increase 1940 - 1960</u>
Lake Forest	6,554	6,885	9,000	23.5
Libertyville	18,476	28,820	42,000	45.7
Lake County	3,791	3,930	5,700	31.0
Rural area				

Correlated with the above figures was the ultimate population increase for the incorporated, but not subdivided areas of Lake Forest. This calculation indicated an increase of 33,000 persons!

It must be understood that the Lake Forest region can-

not be compared with the normal suburb since its country estate type of home creates a density factor which in 1930 was .8 persons per gross acre. The increase in 1960 on the basis of estimated population to 1.2 persons per acre was startling, but the subdivider's ambition to increase to a density of over 4 persons was entirely unrealistic, and fortunately, was abandoned.

It is interesting to note the application of this relatively simple population-use reasoning to the decision as to whether or not the retention of an existing but unused golf course with<sup>in</sup> the acreage was desirable. Of the five local courses, only one was public, and this was at the time of analysis returning only one-half its maintenance cost. Assuming the eventual complete development of the subject property at an average tract size of about 3 acres, there would result a population of 130 heads of family, with a possible 260 players. Using only the three most convenient courses, there would be facilities for 1500 persons in an eventual population of 9000, or a playing ratio of 1 to 6, which seemed sufficiently high to influence negatively the use of the development's course, and this has since been put into estate use.

#### The Economics of Population

A complete evaluation of the estimate for success of a new subdivision must rightly be based not only upon the growth of population but also upon the economic characteristics of this population, to include, for example, such a

factor as the expected income bracket of the newcomers.

It was recently possible for the writer to apply this line of reasoning in the planning of a tract of 160 acres in Muskegon, Michigan. The primary consideration in the case was the advisability of placing this tract on the market. While the casual person might have sensed that this acreage possessed good developmental possibilities, no steps were taken in this direction until the completion of an analysis which considered first, the national housing needs. The National Housing Agency anticipated that during the coming ten-year period there would be the construction of a total of 12.6 million non-farm dwelling units, the great majority to be entirely new construction. This figure, which was more than 5 times the activity from 1930-1940, was qualified by the results of a recent private housing survey which stated that 2.8 million families were blue-ribbon prospects within the next two to three years, and also by the then current Veteran's Emergency Housing Program which aimed for construction of 2.7 million homes by the end of 1947.

The NHA further estimated that about one-third of the units would be needed at rentals under \$30.00 per month; another one-third to rent from \$30 to \$49, or for sale at prices from \$3000 to \$4999, and the remaining third would be needed to rent for \$50 or more, or for sale at \$5000 or over. About half the need would be new need, originating in the increase in the number of families; the remainder was replacement need. (This fact was not borne out by local figures.)



An important point noted was the surprisingly large number of "rentors" anticipated. These were undoubtedly to be drawn from the second group above, as well as the first, because purchasers were not possible in the \$3000-\$4999 range. This point was also significant because it indicated (a) a potential future for private investors to establish rental projects although this was not attractive to the subject owner, and (b) the relatively minor amount which the private home owner would pay. A local real estate survey amplifies this information by answers as to the size of monthly mortgage payment which prospective home owners said they could afford:

Under \$20 a month	4 %	\$60 - \$79 a month	10%
\$20 - \$39 a month	25%	\$80 a month and over	4%
\$40 - \$59 a month	39%	Don't know	18%

The need for dwelling units in the Muskegon region at that time was 3000 units, and the capacity of contractors to erect these units under normal conditions was 300-500 annually. There were at time of research, 800 dwelling units which lacked the bare necessities of healthy shelter; it was anticipated that of this number some 100 units would be condemned annually by state and city authorities. These sub-standard dwellings were about 60% occupied by colored persons. (As indicative of the local trend, the colored population was reported to have increased 110% between 1940 and 1945). There was therefore need for a total of 3800 new units and since in late 1945 there existed 20,600 dwelling units, this meant a 17.5% increase; of this, however, only 2% could be comfortably met each year. (These figures were verified by reference to

the census for the period 1940-44; during that time a trend of movement increase to the subject area of 47% had occurred.) Unforeseen events not interfering, there would appear to be necessary a building program that would last in the neighborhood of eight years.

The problem now became more specific. With the general area of expenditure known, the need for building units established, and a population trend recognized, the next problem was the quantity of land and the size of the lot to be subdivided. The proposed township zoning ordinance contemplated establishment of minimum residential lot requirements approximately one-fifth of an acre in area. Assuming this to be accepted in both incorporated and unincorporated areas, there was a need for development during the eight "building years" for only 760 acres of land. This was considered a conservative figure for the reason that while lots narrower than 65 feet would be allowed in some incorporated areas, most home owners building on the metropolitan fringe would want a greater area. However, if the average lot on the periphery of Muskegon were increased to one-half to three-quarters of an acre in size, there would be an increased need from 760 acres to 1900 acres for the development at the one-half acre size. Since rough estimates as to the present extent of development reached only the figure of several hundred acres, a positive assurance as to the need for the proposed subdivision was validated.

As a final footnote to this investigation, suggested sales figures were derived as cross-checks for the market

price and for the anticipated lot sizes. The steps in this procedure are briefly itemized below.

---

TABLE XI. METHOD OF PRICING PROPOSED SUBDIVISION

1. National average value of unimproved land, in per cent of total expenditure . . . . .	7%
2. National average value of improvements. . . . .	5½%
3. Average annual income based on weekly Muskegon earning of February, 1946 . . . . .	\$2802.00
4. Average FHA practice assumes family can afford house and land costing twice its annual income	\$5604.00
5. Basic lot price to meet market (12½% of 4). . . . .	\$700.50
6. Anticipated local price per acre. . . . .	\$400.00
7. Therefore, final lot size accepted as one-half acre.	

---

Effect of Outside Influences on Population Curves

An exhaustive study of this subject<sup>(1)</sup> was made for the Chicago region just prior to World War II and the material contained in this section is based wholly on this study except where noted. As a point of beginning, the relationship of recorded lots to population growth from 1870-1930 was noted. For the region, these two curves were approximately parallel, with a slightly more rapid rate of increase for population than for lots. The two major sub-division booms showed clearly (1891 and 1926); the first accompanied a definite increase in growth of population while the second took place during only a normal increase. (See Figure A)

---

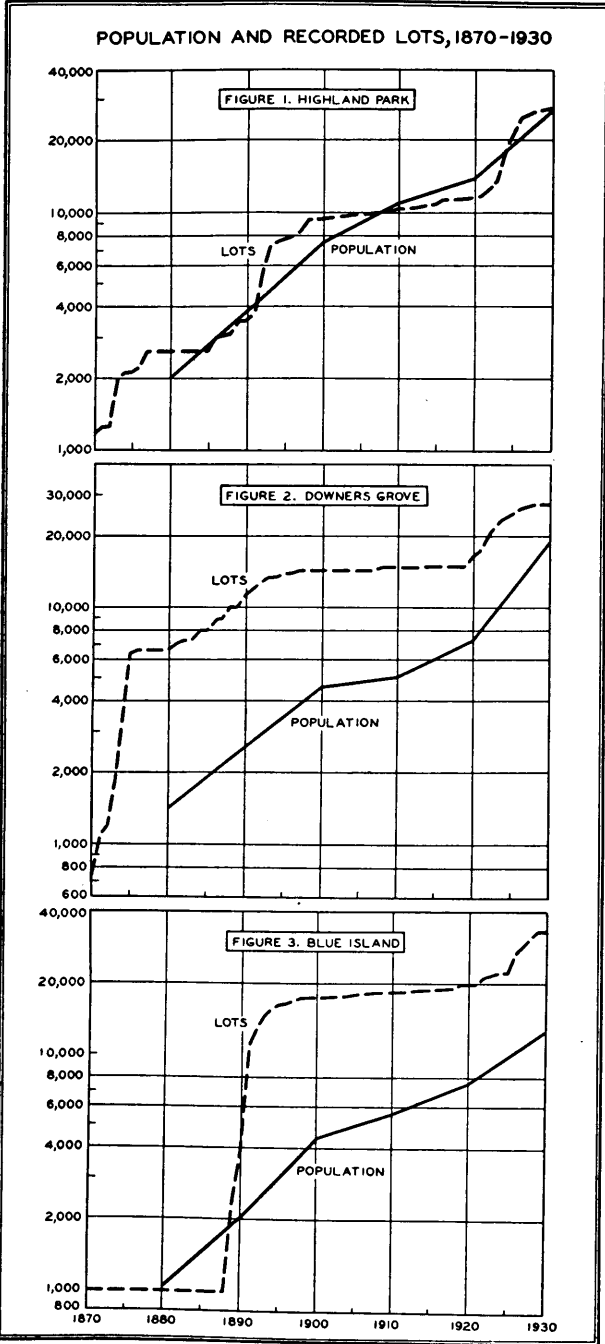
(1) H.C.Monchow, op. cit.

Further analysis of individual communities showed unfortunately, that the region curve reflected too much the nature of all averages in concealing the extremes of expansion and contraction. Included, for example, were both industrial and suburban communities where both extremes mentioned had occurred. The usual cause for rapid expansion was a favorable addition in transportation facilities, or the development of a new manufacturing enterprise.

Upon isolation from the regional totals and separation into two categories, independent and suburban cities, the separate units showed interesting facts on the first independent city group. The City of Chicago, for instance, showed that only 28% of all subdividing had taken place since 1891, and further, that the boom period in 1926 was barely discernible in the Chicago curve which remained considerably below the population curve. Other industrial cities generally follow the Chicago pattern. There are the important exceptions of Gary, Hammond, Harvey, Michigan City, Chicago Heights and Waukegan, the last of which had a percentage increase in lots over population of three times in 1891, just following completion of the Elgin, Joliet & Eastern Belt Railroad, and the establishment of several large manufacturing plants. The results for these cities show positive correlation existing between increase in population lots, but there is no substantial causal relationship.

Study of the suburban city group show on the average a very active lot line curve, where an excess of lots over

FIGURE A-2

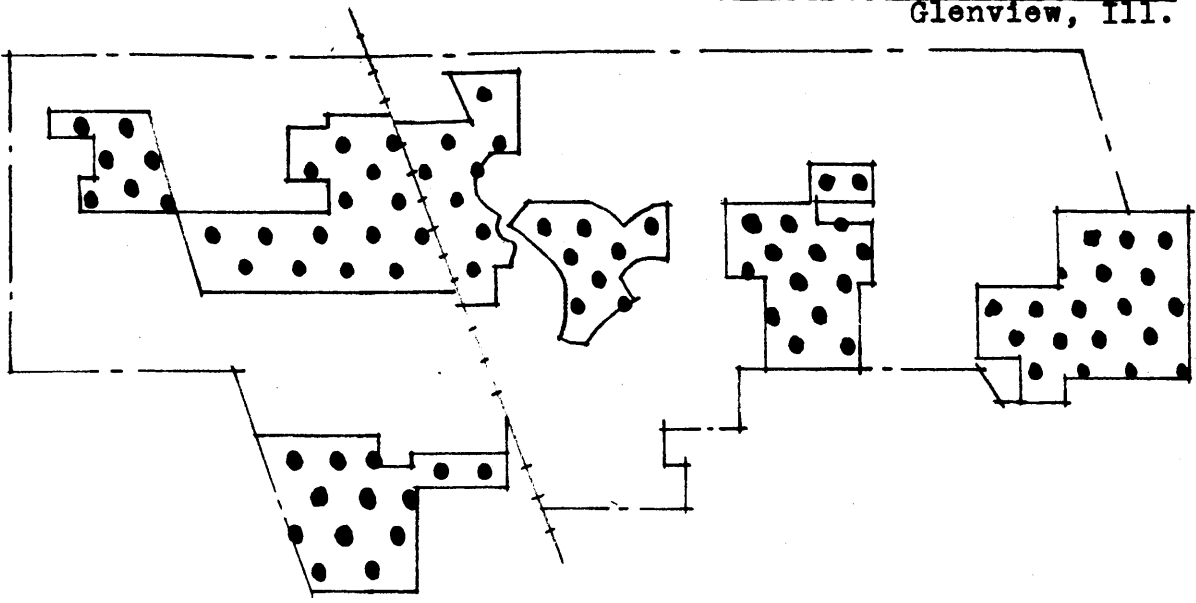


population is the rule and not the exception as in the average independent city. This group shows also the extreme increase in 1926 which is not as noticeable in the first group. Figure A2 shows the experience for three separate areas, all of which indicate the great oversupply of lots in this group. The first area, Highland Park, is least surprising in its illustration, which may be expected because movement to the north of Chicago was least spectacular than in other directions, such as to the west, which is well illustrated by the Downers Grove figure. This latter may be accepted as the general characteristic for the suburban group. The illustration of Blue Island is typical of the residential area in the important southwest manufacturing district.

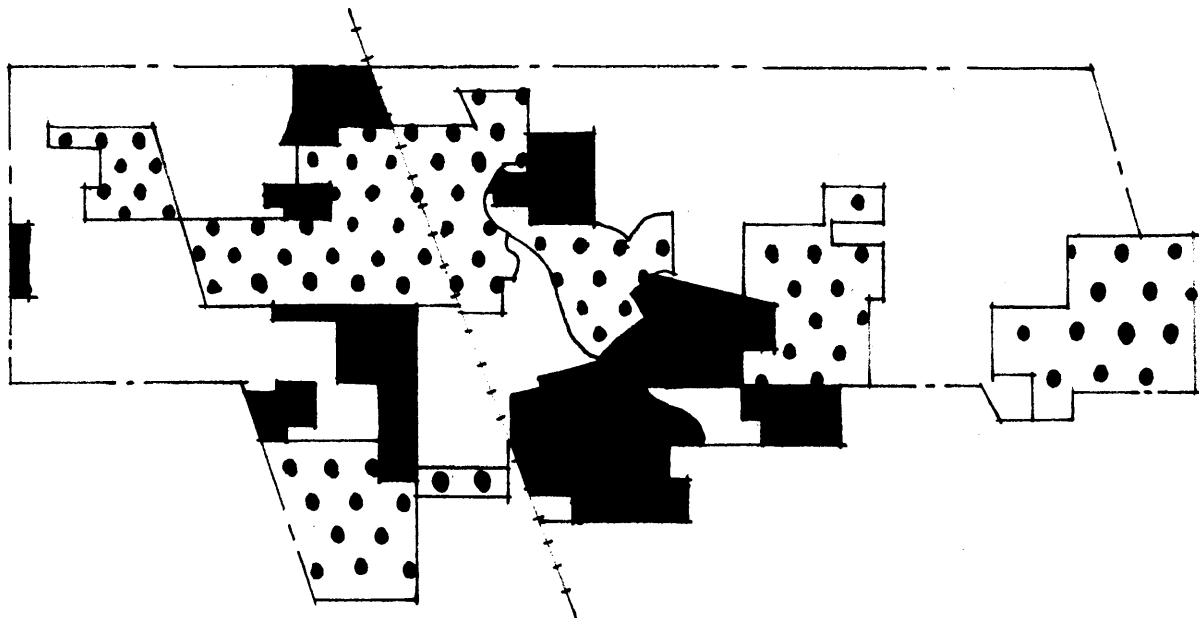
In an effort to study the current trend in this group, the writer has analyzed the activity in the Village of Glenview. This community, which lies in the high income and northwest sector, has shown considerable development in the ten year period from 1937 to 1947 (see Figure B). While information is not available as to the number of lots involved, nor are Federal census figures for the particular years available, it is possible, nevertheless, by using building permit figures, to make a fair comparison from the following figures. In 1937, of the total area of the Village, 29.2% was subdivided. By 1947 this figure had reached 45.5% of the total. In other words there had been a ten year increase of 55.6% in the subdivided areas. However, on the basis of the number of

FIGURE B

COMPARATIVE GROWTH AREAS  
Glenview, Ill.



SUBDIVIDED AREAS 1937  
(29.2% of total)



SUBDIVIDED AREAS 1947  
(45.5% of total)

GROSS 10 YR. INCREASE IN SUBDIVIDED AREAS, 16.3%

NET 10 YR. INCREASE IN SUBDIVIDED AREAS, 55.6%

lots, there were available in 1937 a total of 2607 when the estimated population was but 2136 persons. By 1947 the number of lots had increased only 32% to a total of 3442, while the population had skyrocketed to 4817 persons, a gain of 121%.

It may be seen that in this example there was, in 1937, a surplus of lots of about 234%; by 1947 this surplus had increased to almost 400% in spite of the tremendous increase in population. This illustration will only serve to accent the findings of the suburban group above.

A summary of these trends obviously reveals no correlation between growth of subdivided areas and population. Rather do they indicate that factors other than population have a strong effect on these areas. A previous section has illustrated a specific instance of a subdivider's disregard of the best informed authorities on the growth prospects of the Roselle area. Since it would necessarily be a subdividers estimate of the successful promotion of a particular area that would influence his decision to initiate development, in the absence of population pressure, it may be useful to examine some of the characteristics of the responsible developer. As a group, subdividers represent all standards of performance with one end in common, namely, the sale of raw land for a profit. Their concern is basically what the market will absorb and their regard for population growth only casual. For example, the fashionability of a particular area might give rise to the promotion of property



contiguous to this area with no obvious relation to the actual need for such development. It is apparent then, that the developer is concerned with 'people' purely and simply, who might be induced to purchase his properties.

In the case of the Roselle developer, it may be interesting to note briefly both the characteristics of the developer and the neighborhood. As a business man, this person expresses caution and considerable enlightenment in his undertaking. He has studied the available technical information in this field; his interest is second-generation and his name enjoys an enviable reputation of stability of many years standing. As to the Roselle area, it is generally rural in character and under present conditions somewhat remote and isolated. While railroad commutation is available, it would require considerable improvement to be an attractive feature. Highway facilities are only slightly better and community facilities are almost entirely lacking. This developer's properties are receiving the usual improvements, including roadway surfacing and drainage provisions, and sewage disposal and water supply facilities. It may be seen that no degree of irresponsibility is present, and it must therefore be concluded that in the absence of positive technical assurance of this area, the subdivider operates purely from the impetus of a calculated investment risk. In other words, he hopes to demonstrate that his product is superior to another's and thereby to make a successful sale regardless of the influence of a positive or a negative population curve.

FIGURE C

MAP OF CHICAGO  
SUBDIVISION PURCHASERS ORIGIN MAP

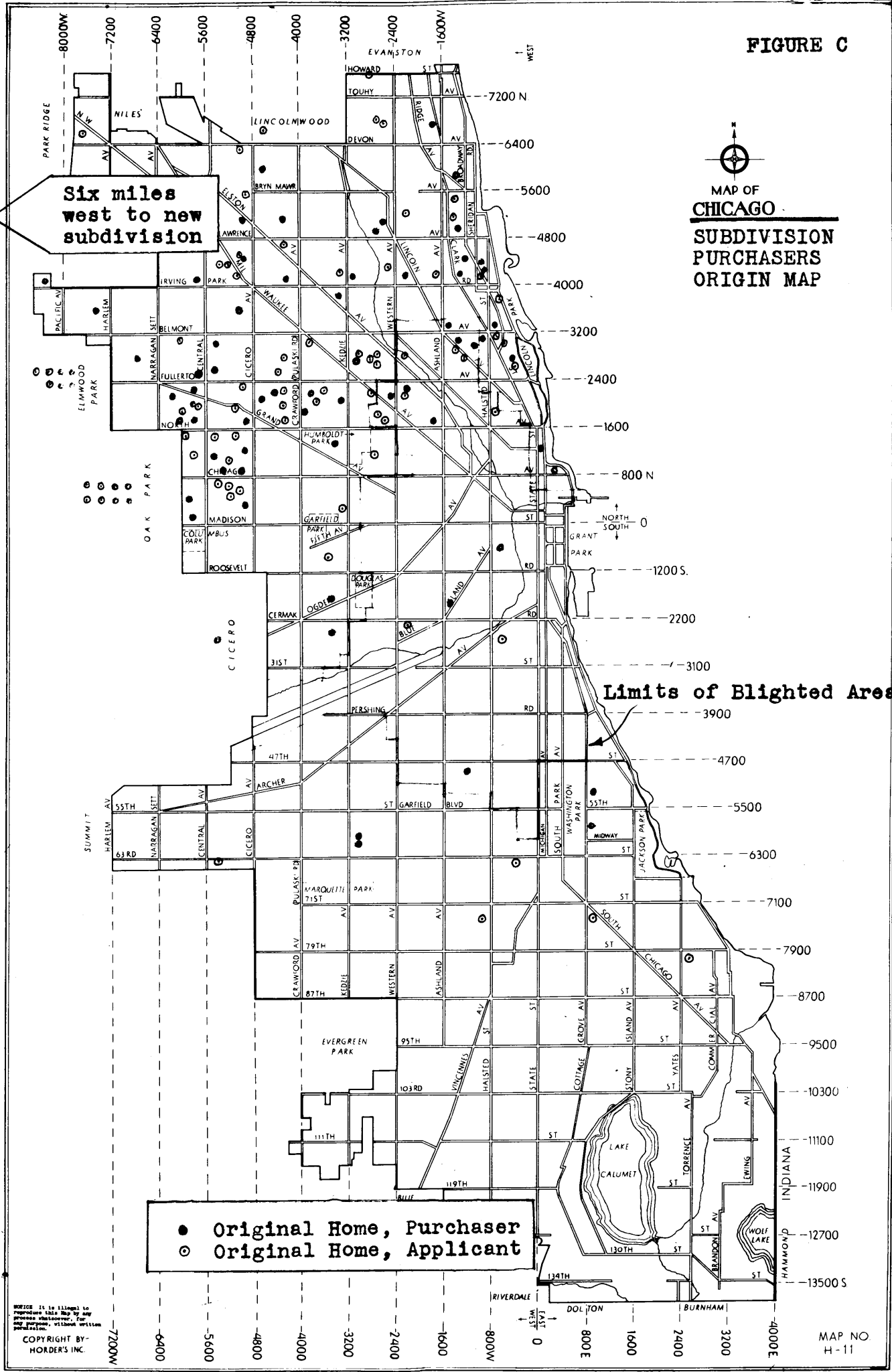


Six miles west to new subdivision

Limits of Blighted Area

● Original Home, Purchaser  
⊙ Original Home, Applicant

NOTICE: It is illegal to reproduce this map by any means whatsoever, for any purpose, without written permission.  
COPYRIGHT BY -  
HORDER'S INC.



In considering the strength of advertising promotion, it was interesting to learn that this type of promotion generally may not be relied upon, however, to draw 'people' necessarily from a city-wide area. A study made for this report of the points of origin for those purchasers in a new subdivision show that the failure of a developer adequately to consider the source of market in the design of his development can be a contributing factor to the unsuccessful community. To determine the general habits of population movement in a particularly successful development, the records of a subdivider<sup>(1)</sup> were examined to learn (a) where actual purchasers of property had lived when payments had been initiated and (b) where persons who merely made inquiries for suburban property lived. In each case 100 names were chosen either in order of purchase or by alphabetical sequence. The results, which are listed in the following summary, are surprising:

TABLE XI. ORIGIN AREA OF PURCHASERS IN A NORTHWEST SUBDIVISION

	<u>Total Breakdown</u>			<u>Urban Breakdown</u>		
	<u>Suburban</u>	<u>Urban</u>	<u>Total</u>	<u>Blighted</u>	<u>South</u>	<u>Northwest</u>
Purchasers	31	69	100	9	4	56
Inquirers	18	82	100	9	7	66

From the above, which results are platted by map (Figure C) showing not only political sub-areas but the blighted areas as well, the following conclusions are reached:

(1) Interview, Chicago, 15 January 1949

1. There is very little movement directly from blighted areas to a new peripheral development, but rather the interest derives from persons now living in the high-rent area of the city.

2. There is a surprising response from those families who already live outside the city limits in other suburbs.

3. There is almost no inter-sector movement, for example, from south to northwest.

The third conclusion is further borne out by a study of the new Park Forest development on the far southern periphery of Chicago.<sup>(1)</sup> From the first fifty tenants chosen at random, 58% came from the south side and only 12% from the north and west sides. The suburban proportion was low, 6%, while the remainder, 24%, were complete newcomers to the Chicago area.

---

(1) Interview, Chicago, 25 April 1949

#### SECTION IV. IMPORTANCE OF QUALITATIVE FACTOR

##### Qualitative Restrictions as Secondary Controls

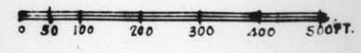
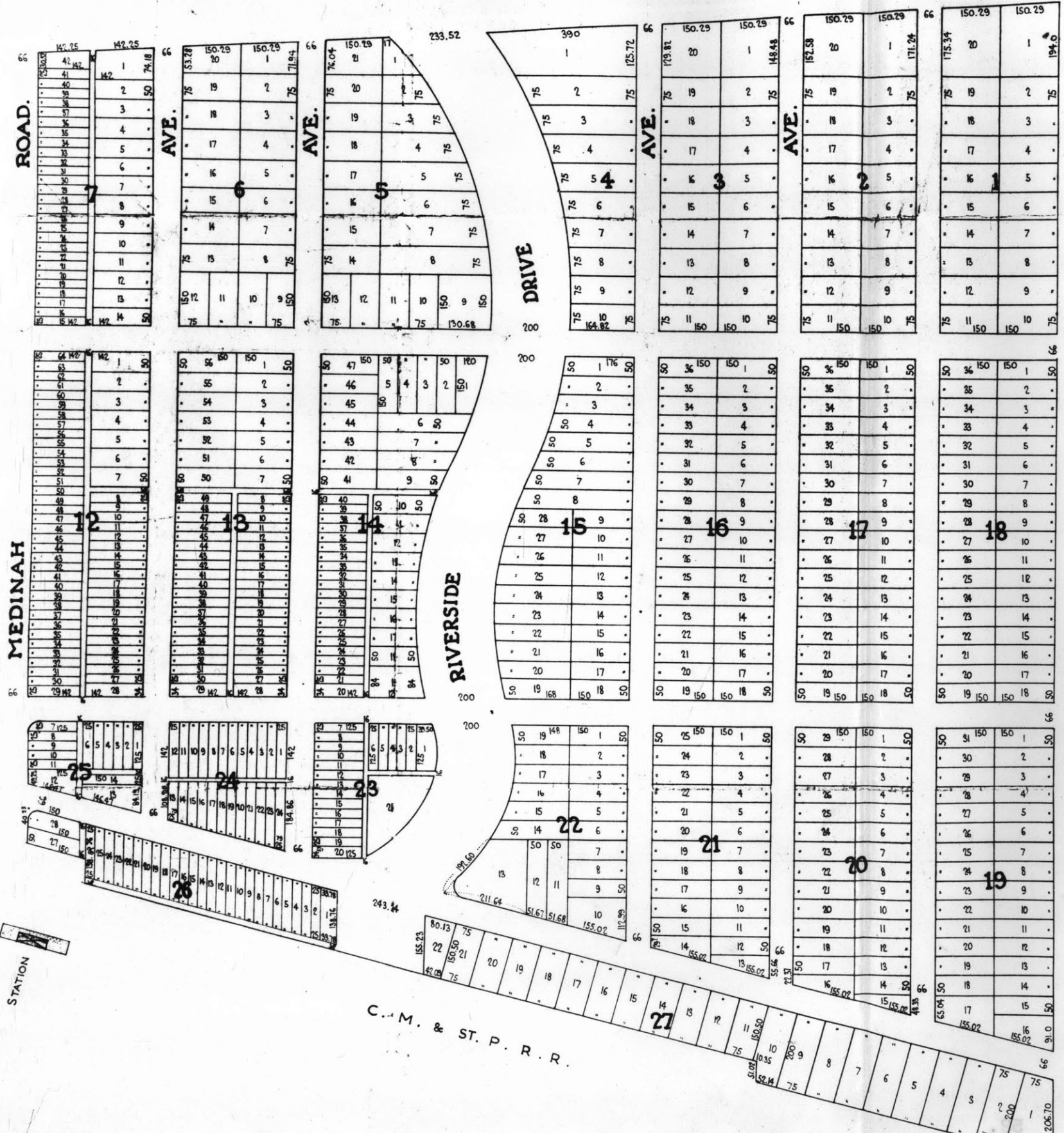
It has been the primary purpose of this paper to show that control exerted over the quantitative aspects of subdivision development would be far more direct than the secondary aspect of qualitative requirements. Yet it is not the intent to belittle in any way these secondary restrictions. As a matter of fact it is now the intent to show in some detail just how important only one phase of these restrictions are in terms of demonstrated savings to both developer and community. To the present time, qualitative statutes have generally been described in engineering terms of block lengths, minimum lot dimensions and corner radii. Although the Federal Housing Authority places suitability of site first (primarily from a developmental cost perspective)<sup>(1)</sup> it is obviously not generally possible to describe in statutory terms how a designer must follow natural topography to produce an effective and economic site plan. Yet the writer has proven that this is the case when the subdivision pattern accepts the natural ground condition as its base.

##### Influence of Topographic Features

The leveling of hills and the filling of valleys is generally neither beautiful nor economic. In the midwestern subject area it is only the occasional site which possesses more than the natural flat prairie topography. As a governing factor, however, topography is never wholly absent--for

(1) Federal Housing Authority, Planning Neighborhoods for Small Houses, p.3

# MEDINAH TERRACE



example, the most level plat must have adequate drainage; in these cases, namely where terrain is relatively flat, a second factor attracts attention. This is the economic urge to produce the most for the least. Unfortunately, tradition has suggested that rectangular street patterns are the cheapest to build. That this is not so is daily becoming more evident in subdivision design. It has been possible to measure rather accurately the fallacy of this belief in the past few months. The results of three projects have been analyzed in this respect and are presented herewith.

In the case of each example, the original development plans had been prepared in the rectangular style, although each project possessed topographic features which suggested a deviation from this style. Research for redesign was therefore initiated by a study of topographic maps and each solution was based upon the natural contours of the site. It was felt that this approach could only result in economic savings so far as utilities were concerned. This attitude has long been a general maxim for site planners, but the actual measurement in costs were not known. The results of this research evidences conclusively the benefits resulting from this type of intelligent approach. Each project is described below in detail.

#### Medinah Terrace Properties

This project of 150 acres of slightly rolling land twenty-six miles northwest of Chicago was originally platted



# GENERAL PLAN MEDINAH TERRACE

MEDINAH, ILLINOIS

## SCHEDULE OF LOTS

BLOCK	LOT	NET AREA AC.	NET AREA SQ. FT.	NET AREA AC.	NET AREA SQ. FT.	NET AREA AC.	NET AREA SQ. FT.	NET AREA AC.	NET AREA SQ. FT.	NET AREA AC.	NET AREA SQ. FT.	NET AREA AC.	NET AREA SQ. FT.	NET AREA AC.	NET AREA SQ. FT.
1	1.54	1.91	1.54	1.70	1.56	1.61	1.81	1.49	1.91	1.62					
2	1.41	2.76	2.57	2.72	2.05	2.61	2.54	2.34	2.70	2.66					
3	1.01	3.92	3.51	3.60	3.80	3.70	3.51	3.10	3.81						
4	1.60	4.69	4.54	4.60	4.84	4.84	4.70	4.30	4.74						
5	1.84	6.66	5.52	5.68	5.55	5.62	5.12	5.94	5.84						
6	4.47	6.58	4.48	6.78	6.57	6.63	6.43	6.97	6.84						
7	1.56	7.14	7.54	7.32	7.14	7.69	7.13	7.74	7.74						
8	1.37	6.13	6.49	6.83	6.10	6.77	6.12	6.84	6.84						
9	5.1	9.58	9.49	9.66	9.10	9.80	9.16	9.84	9.84						
10	6.5	10.51	10.49	10.61	10.77	10.83	10.93	10.93	10.93						
11	9.9	11.51	11.49	11.62	11.74	11.81	11.91	11.91	11.91						
12	1.50	12.54	12.61	12.74	12.59	12.65	12.69	12.69	12.69						
13	6.1	13.52	13.54	13.68	13.74	13.74	13.74	13.74	13.74						
14	7.5	14.56	14.47	14.54	14.54	14.54	14.54	14.54	14.54						
15	4.9	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54						
16	6.0	16.52	16.52	16.52	16.52	16.52	16.52	16.52	16.52						
17	6.0	17.52	17.52	17.52	17.52	17.52	17.52	17.52	17.52						
18	6.0	18.52	18.52	18.52	18.52	18.52	18.52	18.52	18.52						
19	8.4	19.54	19.54	19.54	19.54	19.54	19.54	19.54	19.54						
20	1.7	20.79	20.79	20.79	20.79	20.79	20.79	20.79	20.79						
21	1.7	21.19	21.19	21.19	21.19	21.19	21.19	21.19	21.19						
22	1.4	22.65	22.65	22.65	22.65	22.65	22.65	22.65	22.65						
23	1.7	23.71	23.71	23.71	23.71	23.71	23.71	23.71	23.71						
24	1.7	24.87	24.87	24.87	24.87	24.87	24.87	24.87	24.87						
25	1.7	25.06	25.06	25.06	25.06	25.06	25.06	25.06	25.06						
26	1.7	26.30	26.30	26.30	26.30	26.30	26.30	26.30	26.30						
27	1.7	27.27	27.27	27.27	27.27	27.27	27.27	27.27	27.27						
28	1.7	28.53	28.53	28.53	28.53	28.53	28.53	28.53	28.53						
29	1.7	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51						
30	1.7	30.57	30.57	30.57	30.57	30.57	30.57	30.57	30.57						
31	1.7	31.42	31.42	31.42	31.42	31.42	31.42	31.42	31.42						

## NOTES

- THIS PLAN CONFORMS TO ALL KNOWN REQUIREMENTS CONCERNING SUBDIVISIONS IN DU PAGE COUNTY.
- BASED PRINCIPALLY ON TOPOGRAPHIC SURVEY FURNISHED BY OWNER, WITH REMAINDER INTERPOLATED FROM U.S.G. SURVEY.
- BOUNDARY SURVEY BY E. N. FLETCHER, DATED SEPT. 16, 1941.
- LOT DIMENSIONS ARE SCALED DISTANCES ONLY; EASEMENTS ARE INCLUDED IN NET AREA.

## KEY TO SYMBOLS

SCALE: 1" = 100'

PROPERTY LINE THUS ROAD CENTER LINES THUS

CONTOUR INTERVALS EVERY 1' THUS ROAD SURFACING THUS

## LEGAL DESCRIPTION

THAT PART OF THE S.W. 1/4 OF SECTION 1, AND OF THE N.W. 1/4 OF SECTION 12, IN TOWNSHIP 40 NORTH, RANGE 10, EAST OF 3RD P.M., BOUNDED BY— COMMENCING ON THE SECTION LINE 7.09 CHAINS NORTH OF THE S.W. CORNER OF SAID SECTION 1; THENCE N. ALONG SECTION LINE 33.33 CHAINS TO QUARTER SECTION CORNER; THENCE E. ALONG 1/4 SECTION LINE 40.73 CHAINS TO CENTER OF SAID SECTION 1; THENCE S. ALONG 1/4 SECTION LINE 45.13 CHAINS TO N. LINE OF E.-O.-W. OF CHICAGO AND PACIFIC R.R.; THENCE N. 75 1/2° W. ALONG N. LINE OF E.R. LANDS 42.07 CHAINS TO PLACE OF BEGINNING, CONTAINING 159.78 ACRES; EXCEPTING THEREFROM A STRIP OF LAND 3 RODS WIDE LYING N. OF AND ADJOINING THE ORIGINAL E.-O.-W. OF THE CHICAGO AND PACIFIC R.R. CO. AND EXTENDING FROM THE W. LINE OF SAID SECTION 1 SOUTHEASTERLY 130 RODS ALONG SAID E.R. E.-O.-W.; AND ALSO EXCEPTING THEREFROM ANOTHER STRIP OF LAND LYING N. OF AND ADJOINING SAID 3 ROD STRIP AND EXTENDING FROM SAID W. LINE OF SECTION 1 WITH A UNIFORM WIDTH (MEASURED DUE N. & S.) OF 65 FEET FOR A DISTANCE OF 200 FEET ALONG SAID 3 ROD STRIP.

## OWNER

MEDINAH REALTY TRUST. (TRUSTEE, CHICAGO TITLE & TRUST CO.)

## DEVELOPER

THE DEANIGAE ORGANIZATION

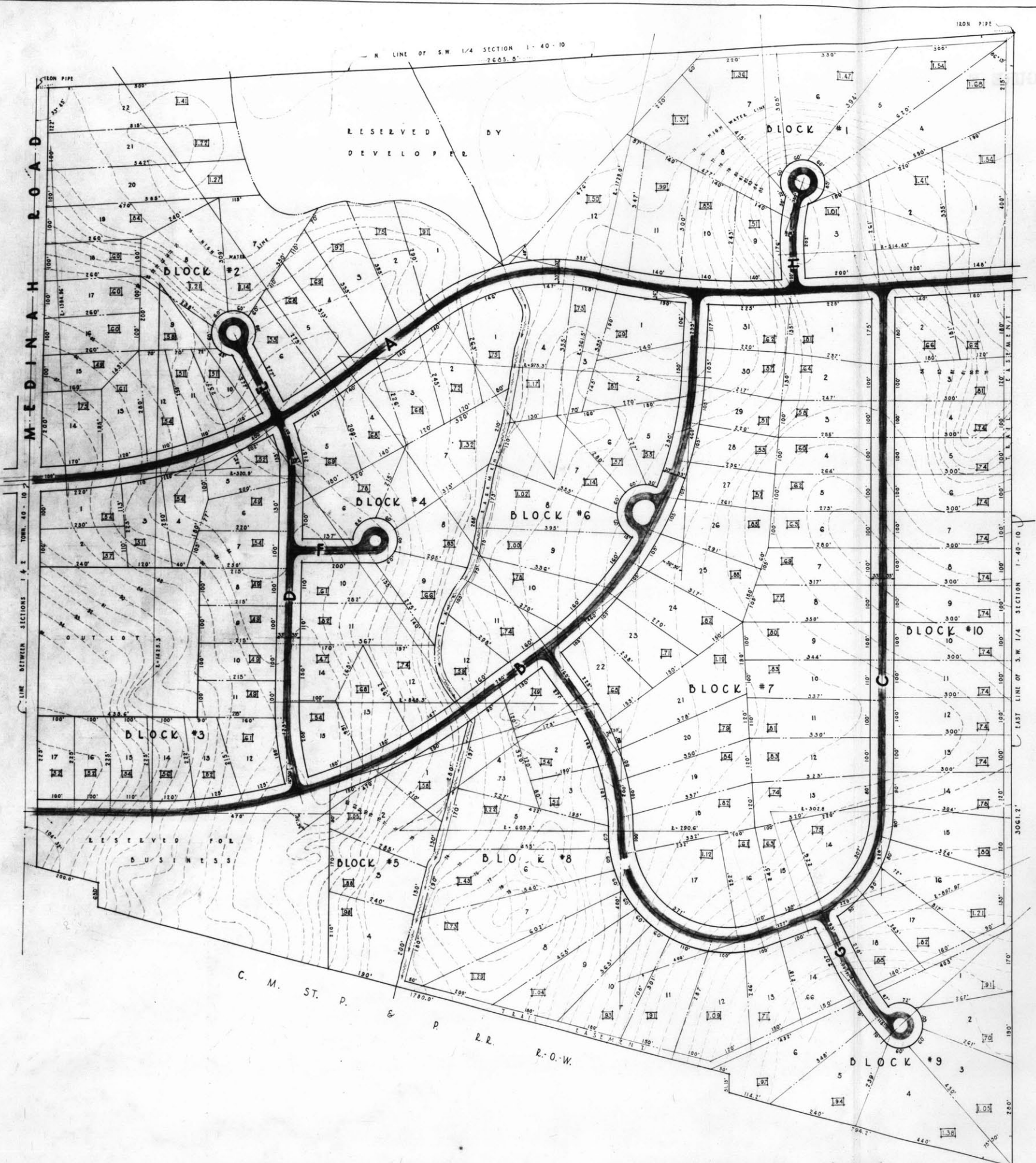
## PLANNING ENGINEER

M. L. ROCKWELL, A. I. P. (ILL. REG. #15352)

## DELINEATOR

T. TOEUNAGA

DATED: MARCH 31, 1947





in 1924, as shown by Figure D. While its lots were sold, or roads built, a number of cottonwoods were planted in conformity with the original street plat. At the time of redesign only two or three substantial tree groups remained; where possible, for sales purposes only, these were incorporated within the new plan (see Figure E), particularly on D and C roads, for example. Interesting features of this particular development include (a) a green-belt trail easement directly accessible to over 50% of the parcels, (b) a park site of 11 acres exclusive of the green belt, and (c) a shopping center and parking area.

Aside from the rectangular street plan, the only other obvious error in layout appears to have been the acceptance of the universal concept of the 1926 era of population overgrowth. Provision in the original plan was for 593 families as against 151 in the revised plan.

Comparative figures on cost of road show 28,400 lineal feet in the original plan, as against 11,200 feet in the revised, or a saving of 39%. Roughly, this would be a current day saving of \$46,600.00 in cost of the road itself. With regard to the saving in acreage which could be marketed through the use of the new plan, there would be a gain of \$14,830.00, or a total gain due to the new plan of \$61,430.00.

If equivalent sales prices were applied to each of these two "competing" designs, and such a conjecture does not appear unreasonable, the developer would achieve a net profit on the revised plan of \$24,600.00, where on the original plan he would actually suffer a loss of \$28,500.00.

FIGURE 7

# BEAR LAKE TRACT

CONTINENTAL MOTORS CORPORATION

ORIGINAL LAYOUT  
PROPOSED FOR  
REVISION

BEAR

LAKE

PROPOSED DIVISIONS

EXISTING  
PUMP HOUSE

EDGE OF  
BLUES

LOT 1

LOT 2

LOT 3

LOT 4

LOT 5

LOT 6

LOT 7

LOT 8

LOT 9

LOT 10

DOLE

DOLE

DOLE

DOLE

DOLE

DOLE

DOLE

DOLE

MOULTON  
AVE.

STEWART  
ST.

SEWER LINE

EXISTING  
SEWER

ADDITIONAL  
SEWER

STANTON AND ROCKWELL  
FORMERLY



ARKON ASSOCIATES

ARCHITECT - ENGINEERS  
AND LAND PLANNERS

222 WEST ADAMS ST. CHICAGO 6

### Bear Lake Tract

This piece of property comprises 13 acres located in Muskegon, Michigan, an industrial city of 63,744 population, 180 miles northeast of Chicago. Some years ago a Muskegon corporation acquired several properties through gift or other unusual circumstances which it recently desired to liquidate to its greatest advantage. This unit above was included in these holdings.

The property is located in the best residential area of the city on the south shore of a lake, with a bluff frontage. The proposal originally made as to the sale of this tract contemplated division of the lake frontage into 7 lots and the sale of 22 lots lying south of the above frontage. The layout of this proposal is included as Figure F.

Following preparation and study of the topographic survey, it was obvious that the sale of at least one lake front lot on the west end of the above plat would be impracticable due to insufficient building area caused by the steep bluff and hillside road. It was also learned that the block of 22 lots has been officially platted and is on record.

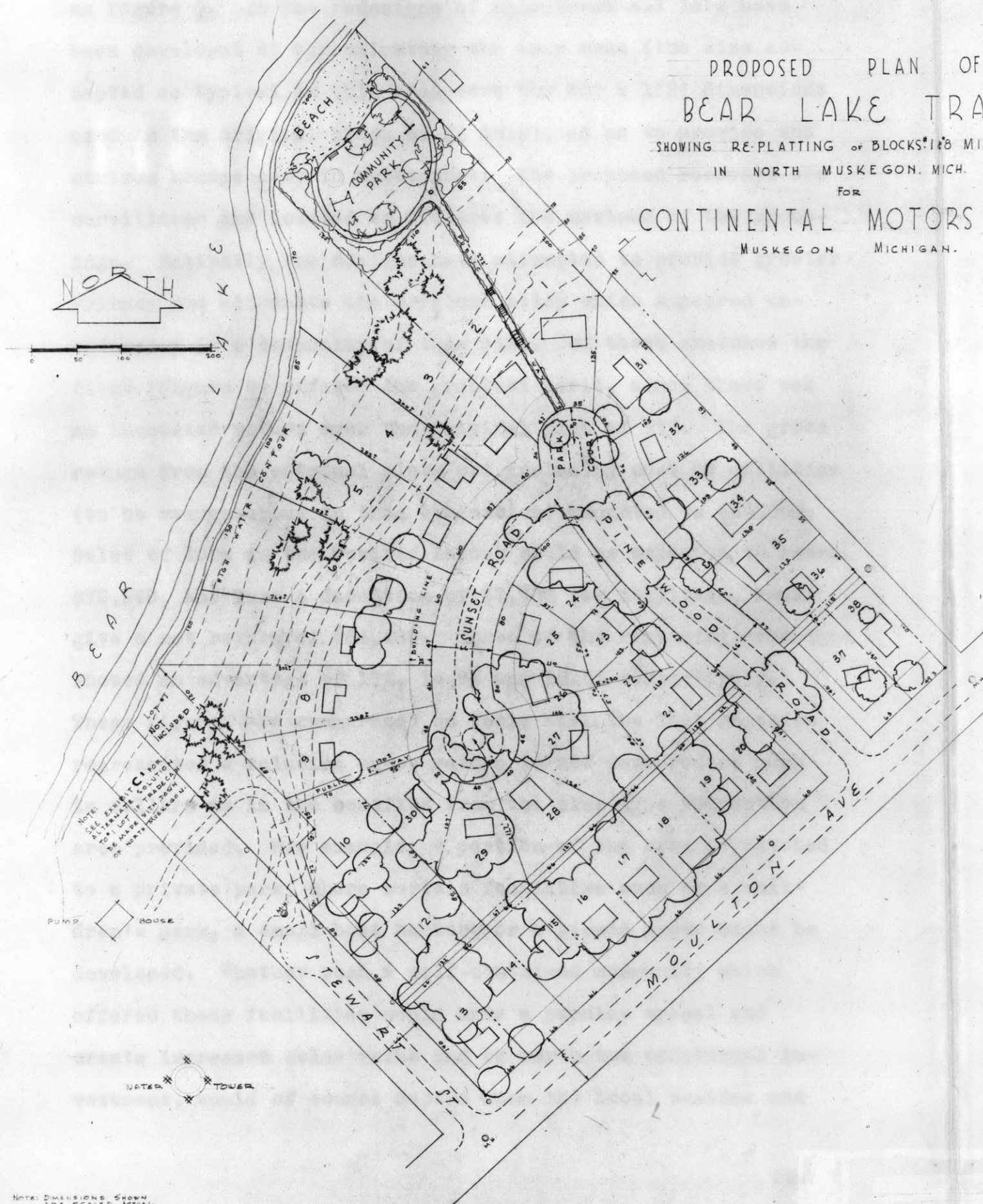
Although the benefit resulting from a complete replatting of this tract was immediately apparent, study was also made of only a partial replatting, so that the 22 lots might be maintained in their present design.

In addition there were prepared 5 wholly new redesigns of this tract. These were presented in order of their economic advantage; the first of these redesigns is included herewith

# PROPOSED PLAN OF BEAR LAKE TRACT

SHOWING RE-PLATTING OF BLOCKS 1 & 8 MILLS 2<sup>ND</sup> ADD'N.  
IN NORTH MUSKEGON, MICH.

FOR  
CONTINENTAL MOTORS CORP'N.  
MUSKEGON MICHIGAN.



NOTE: SEE SHEET 104-101  
FOR ALL TRACTS TO BE MADE WITH EACH  
OR NORTH MUSKEGON.

Lot 41  
NOT  
INCLUDED

NOTE: DIMENSIONS SHOWN  
ARE SCALED ACTUAL  
MEASUREMENTS TO BE DETERMINED  
BY FIELD SURVEY FOR RECORD PLAT.

as Figure G. In the redesigns of this tract all lots have been developed at approximately the same area (the size accepted as typical in this area were the 66' x 132' dimensions used in the original block of 22 lots), so as to provide the maximum homogeneity in appearance. The proposed roadways are curvilinear and located to preserve the maximum of the groupings. Basically the designs have attempted to provide greater privacy and eliminate the original alley which appeared unnecessary in a community of this size. Of these sketches the first (Figure G) offered the greatest merit, since there was an increased return over the original plat of 77%. The gross return from the original plat, not including cost of utilities (to be overgenerous in this evaluation) amounted to \$44,300. Sales of lots in the revised layout could be expected to reach \$72,268, and less a deduction of \$7,788 for utilities, would give a net return of \$64,480. Three of the remaining redesigns showed an advantage of 17%, 16.8% and 12.5% respectively. These figures are summarized on Table XIII. The last redesign represented a solution whose return is not measured so much in dollars as in the benefits from the club type recreation area provided. For example, a portion of the area is devoted to a private park, where certain facilities such as a children's park, a small boat harbor, or a picnic grove might be developed. Whether such a self-contained community which offered these facilities would have a popular appeal and create increased sales value and be worth the additional investment, would of course depend upon the local customs and

NET RETURN ANALYSIS

A.	Original Plat (Figure F)	Partial Revision	Redesign (Figure G) #1	Redesign #2	Redesign #3	Redesign #4	Redesign #5
Cost of Development							
Road Paving	\$2808.	\$8194.	\$3625.	\$8125.	\$7750.	\$9389.	\$5938.
Water Line	1875.	3750.	2250.	4563.	5250.	5250.	3500.
Sewer Line	1875.	1850.	1913.	4375.	4125.	4125.	5875.
Alley	1334. incl.	above	--	--	--	--	--
Sewage Lift	--	1500.	--	1500.	1500.	1500.	1500.
	<u>\$7892.</u>	<u>\$15294.</u>	<u>\$7788.</u>	<u>\$18,563.</u>	<u>\$18625.</u>	<u>\$20264.</u>	<u>\$16833.</u>
B.							
Value of 100% Sale	\$44300.	\$65250.	\$72268.	\$61200.	\$61200.	\$61200.	\$55275.
C.							
Net Return	36,408.	49,956.	64,480.	42,637.	42,575.	40,936.	38,442.
D.							
Advantage over Original Plat	--	13,548.	28,072.	6,229.	6,117.	4,528.	2,034.
E. % Advantage	--	37%	77%	17%	16.8%	12.5%	5.6%

NOTE: Unit charges assumed: Water Line (8") . . . . . \$2.75 lin. ft.  
 Water Line (6") . . . . . 2.50 " "  
 Sewer Line (8") . . . . . 2.50 " "  
 Road surfacing (gravel & oil) 1.25 sq. yd.

NET RETURN ANALYSIS  
 Bear Lake Tract

TABLE XIII

habits of the particular community. Yet with the adoption of this plan and the reservation of as much as 36.7% of the total area for the purposes described above, there would still be a dollar advantage of 5.6% in development costs (not including the club facilities) over the original plat.

Roselle Highlands

This property, consisting of 60 acres and located 26 miles northwest of Chicago, was originally platted in a rectangular layout less than one year ago at the time of writing (see Figure H). It is immediately southeast of a small rural village center with good prospects of growth, and while it has no natural tree growth, it does have an interesting slope, half-saucer fashion, to the north. The greatest difference in elevation is slightly over 20 feet. Adjacent to the north property line is an elementary school site.

These three factors, (a) accessibility to the village station, (b) accessibility to the school grounds, and (c) sloping contours, all of which were oriented to the northwest, suggested that the rectangular pattern was unreasonable under the circumstances. These arguments, when presented to the developer, made possible the opportunity to develop a more rational street layout (see Figure I), which not only would meet the factors described above but would also result in a net saving of 27% in road costs alone, as indicated below:

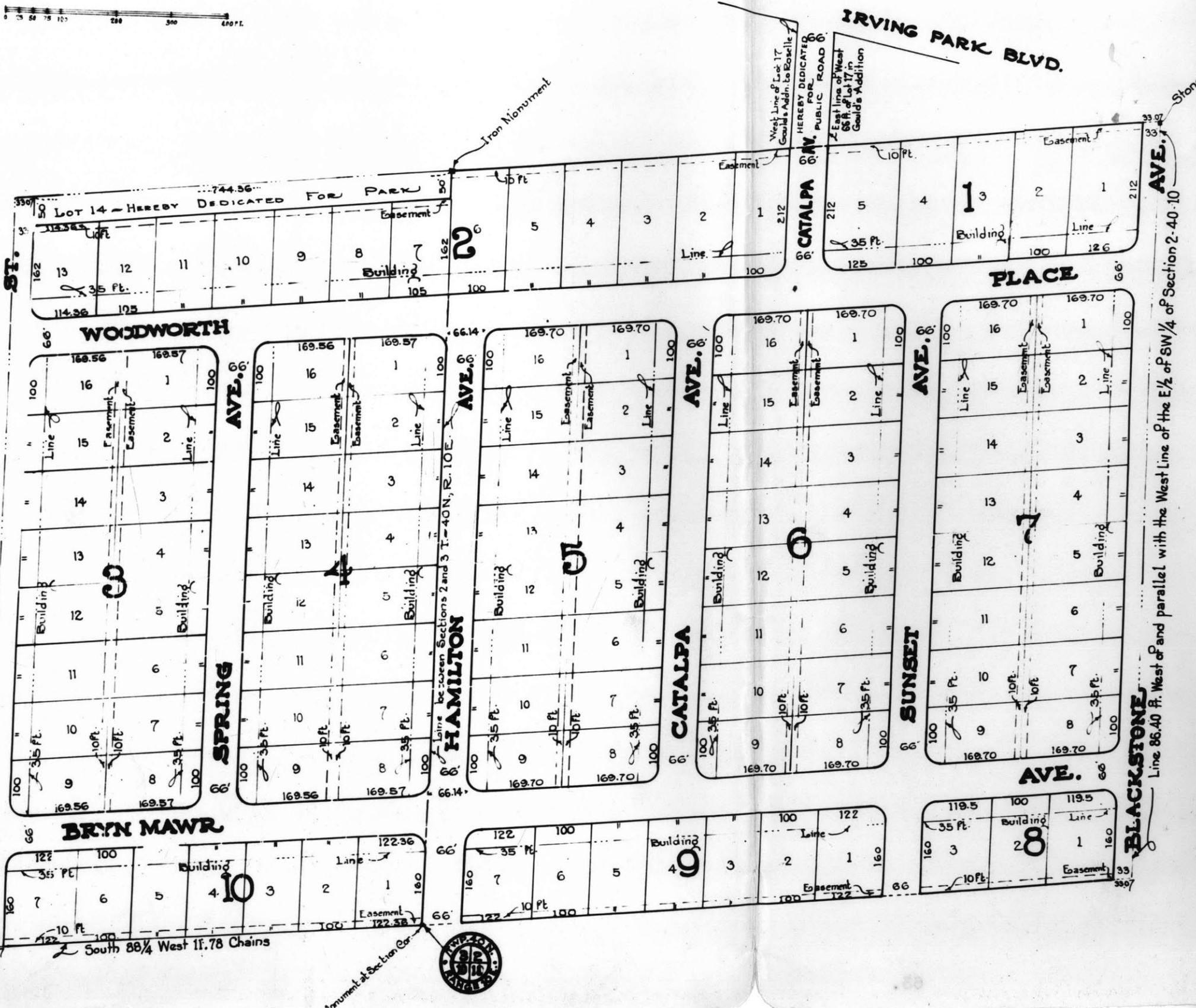
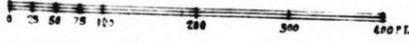
(a)	<u>Road Length</u>	<u>Area</u>	<u>Cost</u>
Original layout	9,150 lin. ft. road	= 183,000 sq. ft. or) 20,333 sq. yds.	\$25,416.25
(b) Revised layout	7,700 lin. ft. road	= 154,000 sq. ft. or) 17,111 sq. yds.	21,588.75
		Difference	<u>\$ 3,827.50</u>

Added to the above figure would be the additional saving in the form of increased sale of approximately 6 more lots at an

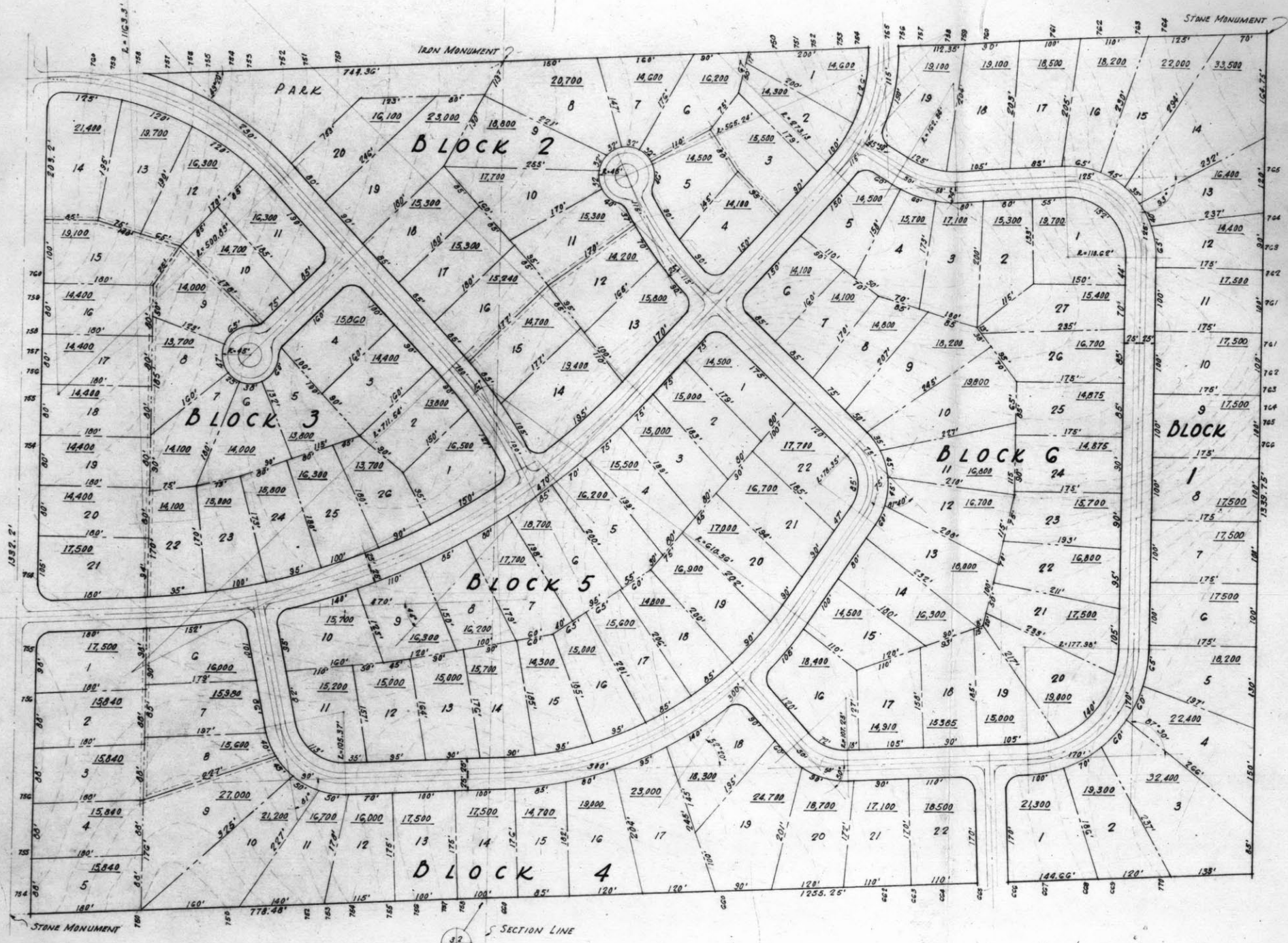


# BRANIGAR'S ROSELLE HIGHLANDS

Being a Subdivision in the South West 1/4 of Section 2  
and the South East 1/4 of Section 3 all in Township 40 North,  
Range 10 East of the 3rd Principal Meridian in DuPage County Illinois.



Stone  
Line 86.40 ft. West of and parallel with the West Line of the E 1/2 of SW 1/4 of Section 2-40-10



# GENERAL SITE PLAN

## ROSELLE HIGHLANDS

ROSELLE, ILLINOIS

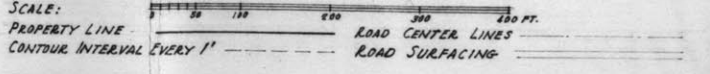
### SCHEDULE OF LOTS

BLOCK 1		BLOCK 2		BLOCK 3		BLOCK 4		BLOCK 5		BLOCK 6	
LOT NO.	AREA	LOT NO.	AREA	LOT NO.	AREA	LOT NO.	AREA	LOT NO.	AREA	LOT NO.	AREA
1	21,300	1	14,600	1	16,500	1	17,500	1	14,500	1	19,700
2	19,300	2	14,300	2	13,800	2	15,840	2	15,000	2	15,300
3	32,400	3	15,500	3	14,400	3	15,840	3	15,000	3	17,100
4	22,400	4	14,100	4	15,800	4	15,840	4	15,500	4	15,700
5	18,200	5	14,500	5	13,800	5	15,840	5	16,200	5	14,500
6	17,500	6	16,200	6	14,000	6	16,000	6	18,700	6	14,100
7	17,500	7	14,600	7	14,100	7	15,980	7	17,700	7	14,100
8	17,500	8	20,700	8	13,700	8	15,600	8	16,200	8	14,800
9	17,500	9	18,800	9	14,000	9	27,000	9	16,300	9	18,200
10	17,500	10	17,700	10	14,700	10	21,200	10	15,700	10	18,800
11	17,500	11	15,300	11	16,300	11	16,700	11	15,200	11	16,800
12	14,400	12	14,200	12	16,300	12	16,000	12	15,000	12	16,700
13	16,400	13	15,800	13	18,700	13	17,500	13	15,000	13	18,000
14	33,500	14	19,400	14	21,400	14	17,500	14	15,700	14	16,300
15	22,000	15	14,700	15	19,100	15	14,700	15	14,300	15	14,500
16	18,200	16	15,240	16	14,400	16	19,000	16	15,000	16	18,400
17	18,500	17	15,300	17	14,400	17	23,000	17	15,600	17	14,910
18	19,100	18	15,300	18	14,400	18	18,300	18	14,800	18	15,385
19	19,100	19	23,000	19	14,400	19	24,700	19	16,900	19	15,000
20		20	16,100	20	14,400	20	18,700	20	17,000	20	19,800
21		21	17,500	21	17,100	21	16,700	21	17,500		
22		22	14,100	22	18,500	22	17,700	22	16,800		
23		23	15,000			23	15,000			23	15,700
24		24	15,800			24	15,800			24	14,875
25		25	16,300			25	16,300			25	14,875
26		26	13,700			26	13,700			26	16,700
27		27	15,400			27	15,400			27	15,400

### NOTES

- THIS PLAT CONFIRMS TO ALL KNOWN REQUIREMENTS CONCERNING SUBDIVISIONS IN DU PAGE COUNTY.
- ONE FOOT CONTOURS INTERPOLATED FROM U. S. GEOLOGIC SURVEY.
- BOUNDARY SURVEY BY EMMET KENNEDY, DATED 31 JANUARY 1948.
- LOT DIMENSIONS ARE SCALED DISTANCES ONLY; NET AREAS OF LOTS ARE GIVEN IN SQUARE FEET AND UNDERLINED.

### KEY TO SYMBOLS



### OWNER

MEDINAH REALTY TRUST

### DEVELOPER

THE BRANIGAR ORGANIZATION, 134 S. LA SALLE ST., CHICAGO, ILLINOIS.

### SITE PLANNER

M. L. ROCKWELL, A.I.P. (AS. MEM.) ILL. ENG. REG. 1335Z.

### DELINEATOR

T. TOKUNAGA

DATED: 8 MAY 1948

GENERAL SITE PLAN		JOB NO.
BRANIGAR'S ROSELLE HIGHLANDS		293
DATE	INITIALS	SHEET
5 0 48	TR	
STANTON AND ROCKWELL		1
ARCHITECT - ENGINEERS		
AND LAND PLANNERS		
222 WEST ADAMS ST. - CHICAGO 6		
CONTRACTOR TO VERIFY ALL DIMENSIONS AT SITE		

average of \$500 per lot, or a total of \$3,000. This would mean a total saving of \$6,827.50.

### Summary

The examples cited in this section have been intended to emphasize an aspect of qualitative control greatly neglected, possibly because it would be extremely difficult to regulate a factor which is creative in essence. Probably no more may be hoped for than that subdivision approval agencies will learn to recognize the value of this factor and urge its use increasingly. Finally, as an influence upon the correction of the subject of premature subdivisions its importance is extremely remote, yet its inclusion here is justified to indicate the nature of one type of the qualitative factors.

## SECTION V. ADAPTABILITY OF FURTHER CONTROLS

### Population Growth Control

It has been argued in the preceding sections that the fundamental cause for the failure of a premature subdivision was due to a lack of correlation between population needs and the platting, or recording, of the development itself. Examples of the suburban group of cities have proven this point dramatically. This lack of enforced correlation has allowed even the most conscientious developers to over-anticipate the market. This has in turn resulted in the recording of lots, with or without improvements as required, which have been premature to the public need. Briefly, it would follow that the most significant control would be that which most effectively restricted the overanticipation of the developer. For identification, this proposal might be termed the "population correlation" method.

An approach to this question would presumably be made by the planning agency concerned. Unfortunately, inquiry by the public body of the public need or anticipation of such a private project as a subdivision is considered an alarming possibility. Only two known examples of the right of such inquiry exists, namely that already referred to in the Puerto Rico Act, and that permitted by the State of Washington since 1937 for its cities, towns and counties:

"to inquire into the public use and public interest to be served by the establishment of...a subdivision... and...consider...all...facts deemed by it relevant and designed to indicate whether or not the public interest will be served...by such...subdivision..."(1)

---

(1) State of Washington, Chapt. 186, Laws of 1937, Sect. 7

There would, of course, be the natural argument by land interests that such control would be undemocratic. The illustration of the Wisconsin timber-lands experience already cited would be useful in this connection and to emphasize that democracy is best served when the promotion of the public welfare is the "legitimate object".(1)

It might be proposed that effective control would be accomplished through the refusal of an approving authority to consider favorably any plat whose expectant population failed to correlate with recognized tables of growth for the subject area. To eliminate undue argument over such tables a reasonable "safety" or "doubt" factor might be applied.

Thus, and very briefly, a project of 500 lots providing for expansion to 2000 persons in an assumed ten-year period, which occupied 2% of the net residential area of uniform density of a County anticipating a growth of only 10,000 population within ten years would be denied. Grounds for denial would be the fact that the project proposed a 20% expansion of population on 2% of the available area. If a doubt factor of 20%, for instance, on the official population estimate were permitted, the proposal would be reduced to a 16-2/3% expansion on 2% of the area and the denial would be upheld. (Obviously many assumptions are made and factors simplified to produce such an illustration). The use of such a system would be dependent upon reliable, and accepted, tables of growth. It appears questionable as to whether our

---

(1) Baker op.cit.

tools of anticipation are sufficiently accurate in this respect, with particular question as to the subject of the inter-area movement of population, as to cause recognition by the courts of such a procedure. This is not to infer that the judicial system would be unfriendly to an extension of the police power to reduce wasted costs and to promote the economic welfare of the community (the rapidity with which the principal of zoning has been accepted is encouraging in this direction). Despite this favorable position, our technical advance is not commensurate with the acceptance of our general principles, particularly insofar as the Illinois Supreme Court is concerned, the case of which has previously been cited.

Thus, while the system herein proposed has much attraction, it seems less effectual at the present time, and perhaps less democratic in principle, than other possible controls. It is recognized that considerations of the type described arise in areas which are rural in character and therefore not likely to be covered by Master Plans of the nearest community. If this is not the case, and a master plan has been derived, the argument proposed does not pertain.

#### Control as a Public Utility

Closely allied to the preceding method, and very possibly a part of it in some applications, would be the recognition of land in the status of a public utility. In conjunction with this step would be the use of a certificate of public convenience and necessity. Such a certificate

would be obtained prior to the approval of a subdivision from an appropriate municipal commission in the same manner that a railroad or street railway would obtain a similar certificate from the appropriate public service commission in order to begin the construction of trackage or the initiation of a new route. This certificate would of course show how such construction would serve the public convenience and necessity. However, before general acceptance of land as a public utility became a fact it would be necessary to demonstrate the public interest. That this is a point almost upon us is borne out by the increasing growth of urban redevelopment statutes permitting the condemnation of private lands under certain conditions for these purposes. The point is daily further accented by the tax delinquent situation already described, and also possibly by the more recent subdivision control regulations requiring dedication of a stated proportion of the plat for park purposes (new proposals by Chicago Plan Commission suggest amount to be as determined by the Commission, not to exceed 10% of total acreage). But even with such an acceptance, this concept is subject to the same disadvantage of the population-correlation method--that of relying upon the somewhat intangible and varying standards by which the public convenience and necessity must be measured. The absolute acceptance of either of these methods appears to rely too heavily upon political concepts some years distant.

## Public Ownership as a Control

It seems appropriate at this stage to mention the possibility of achieving the most effective possible control through Government ownership of land. One advocate of this method, Dr. James Ford, has stated:<sup>(1)</sup>

"Extension of public ownership of land is necessary to avoid recurrence of the evils of exploitation of land against the public interest and to give the government a firm control of the housing situation. Land is a proper field for public ownership. Management of land is chiefly a legal rather than a business problem. It is a type of business that government could handle efficiently. Accounting is simple. Public interest is paramount. Government ownership is better than the single tax as a device to protect the public interest, because it eliminates the pressure of selfish interests and ultimately it does away with the incentive to speculation, jockeying, and corruption, which are against the public interest. But it accomplishes the same purpose of letting socially created increments to land values accrue to the public who create them and not to private speculators."

This attitude as stated would find much opposition in the traditional concept of private property in this country. The fact that public ownership has prevailed for years in many foreign countries, and the fact that there is in Great Britain today a very interesting experiment in this direction, could do little to alter the traditional concept. As summarized,<sup>(2)</sup> the British Town & Country Planning Bill of 1947 provides:

"for the preparation of plans by larger local authorities, that is, the councils of counties and county boroughs, or by several combined in a Joint Planning Board. These planning authorities will keep in close touch with local opinion, and with local planning boards. Every planning authority will be under an obligation to carry out a survey of the area, and to prepare a plan within three years. Planning authorities will also be obliged to review their plans at five-year intervals. Local

---

(1) H.C. Monchow, op. cit. p.168

(2) American Society of Planning Officials condensation



authorities are given wide powers to buy land compulsorily, for their own use, or for leasing to a private developer. One of the most important sections of the bill is that which provides for the acquisition of development rights. In the future, no development may take place without permission. The land owner is free to go on using his land for its existing use, but the question whether it may be developed and put to a different use will be governed by considerations of the communities' interests. When permission to develop is refused, no compensation will be payable except in a limited number of cases. When development is permitted any resulting increase in land values is to be collected in whole or in part by the State in the form of a development charge which must be paid or secured before the development is carried out. The effect is that the value of land in the market will in the future be that value which is attributable to its existing use."

There has, of course, been much recent acquisition lately by the local governments of tax delinquent parcels. Sometimes they have occurred in large enough quantity to provide sites for playgrounds or school sites (or even for sale and reversion to farm property in some instances), but on the whole public enthusiasm and consequent governmental powers for extension and development of this system have been lacking.

#### Taxation Control

Considerable merit lies in the use of property taxation as a source of control over speculative land developments. Although a decline in contribution of property tax as a main source of income to city government has taken place because of influence of gasoline, general sales and other taxes, it is clear that it will remain the most important municipal source of revenue.

Over the years a breakdown in property tax application has been progressing. The initial step was reached when real and personal tangible and intangible property were

classified separately and at different rates. Another movement of reform abolished the State property tax. This was followed first by exemptions in some states of important types of personal property and then the complete elimination of personal property from taxation in at least two states.<sup>(1)</sup> At the present time there are definite indications of the reduction of the general property tax to merely a land tax. This step has been speeded by the more general reliance on the income tax, and to a certain extent in some areas by the high exemptions granted eleemosynary institutions which has, of course, reflected disadvantageously on the neighboring properties.

One authority points out that the differing incidence of tax upon land and improvements is very simply based on the fact that the tax upon improvements tends to be shifted to the consumer, while the tax upon land generally falls upon the landowner.<sup>(2)</sup> This same authority favors the tax on land alone and states:

"Building would be doubly encouraged as the tax on land would keep land values down and make land easier to acquire, and the untaxing of improvements would also make building less difficult. Speculation in land values would be discouraged."<sup>(3)</sup>

As a further control, this authority also favors the added feature of an increment tax on land values, although this proposal has not generally met with great acceptance. As a matter of fact, the theory when applied many years ago in

(1) Nat'l. Research Board, Urban Planning & Land Policies, p.285

(2) Ibid p.304

(3) Ibid p.306

England from 1909 to 1920 (and in Germany from 1904 to 1934) was repealed by public opposition and high cost of administration due to World War I. The following description explains its application at that time:

"This tax is payable when land changes hands under certain conditions, that is, it is levied on the following occasions: (1) the sale of any land or interest therein; (2) its lease for a period of more than 14 years; (3) its passing to a new owner by reason of death; (4) in the case of land which is held by any body, corporate or incorporate, and which therefore does not change hands, the tax is levied every 15 years, with the privilege on the part of the owner of paying in 15 yearly installments. On each of these four occasions the site value of the land is determined, and the excess, if any, of the site value thus ascertained (commonly called the occasion site value) over the original site value constitutes the increment value. An increment value of 10 per cent is not taxable; but on the excess of all increments of value over 10 per cent a tax is imposed at the rate of 20 per cent. In other words, the tax amounts to a fifth of any periodical increase in value over 10 per cent."<sup>(1)</sup>

In general, economists feel that the European experience is not conclusive, either for or against the adoption of the increment tax. A main argument, as stated by H. S. Buttenheim<sup>(2)</sup> follows:

"It seems to offer a much more equitable and administratively practical method of taxation than the special assessment. The special assessment is a tax upon property on the basis of an estimated gain before such gain has been realized. Experience has proved that estimates may be far from accurate. By means of the special assessment, the Government can never collect more than the total cost of a particular improvement, even though the actual increase in property values may be many times that amount. In other cases, the property may be assessed far more than the resulting gain accruing to it from the development.

"The increment tax, on the other hand, is based on an actual rather than an estimated increase. The taxpayer is not penalized by having to pay more than the resulting increase

---

(1) Ibid p.491

(2) Ibid p.308

in value, as may happen under the present plan, and the Government is not limited to receiving back only the cost of the improvement, in cases where a very much greater increase of value results. Under this plan, the Government may, moreover, recoup some of the increases in property values resulting from public expenditures other than public improvements."

#### Performance Bond Control

The extent to which control is exerted through the requirement of physical improvements has been noted in Table III. Many of such requirements have been in effect for some years and yet there has been only slight diminution of premature activity. As a matter of fact (see earlier example of Skokie, Illinois), the requirement of improvements is a very dangerous one. As a requirement, it was instituted to deter over-anxious developers from proceeding with sales unless they felt sufficiently sure of the market to be willing to risk their funds; many over-optimistic developers have taken the risk and lost, with the unfortunate result of leaving units of sidewalks, highways and other improvements for maintenance by the nearest community. As already pointed out, the completely developed division without a single piece of improved property is unusual, and the cost of services to this property is always disproportionate to that cost in the more developed areas; this fact has therefore a most unfair effect on the tax rate of the owner in the latter areas.

It has also been previously noted that many communities provide for the posting of an improvement bond in lieu of the actual improvements. A typical form of such a bond is given in Figure K. It is felt that an extension of the use of such

FIGURE K  
TYPICAL FORM OF PERFORMANCE  
BOND

KNOW ALL MEN BY THESE PRESENT: BOND NO. \_\_\_\_\_  
AMOUNT \$ \_\_\_\_\_  
THAT WE, (Owner of Subdivision) \_\_\_\_\_

of \_\_\_\_\_  
hereinafter called the Principal, as Principal, and the  
(Insert Surety Company) \_\_\_\_\_  
a corporation of the State of \_\_\_\_\_, hereinafter  
called the Surety, as Surety, are held and firmly bound un-  
to (Insert here Name of Municipality, or Political Subdivi-  
sion) \_\_\_\_\_  
hereinafter called the Obligee in the full and just sum of  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
to the payment whereof the said Principal and the Said Surety  
bind themselves, their and each of their heirs, executors,  
administrators, successors and assigns, jointly and sever-  
ally, firmly by these presents.

WHEREAS, the said Principal has submitted for approval  
a plat of a certain subdivision to the (Insert here the  
Municipality or other political subdivision) \_\_\_\_\_  
said subdivision being described as  
follows: (here insert legal description of subdivision)  
\_\_\_\_\_

and,  
WHEREAS, the statutes of the State of \_\_\_\_\_  
(here give the statute citation) provides that certain im-  
provements shall be installed before final approval of any  
plat, unless a bond with surety acceptable to the munici-  
pality or county shall be executed by the owner of said sub-  
division with surety to be acceptable to the (Municipality  
or County) guaranteeing that the improvements required by  
said statute shall be installed.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH  
that if the said principal shall comply with the requirements  
of (here describe the statute) \_\_\_\_\_  
regarding the final approval of the plat of the above des-  
cribed subdivision and shall install all improvements as  
required therein to the satisfaction of the (Municipality  
or County) \_\_\_\_\_  
and shall pay such damage and costs as may be caused to any-  
one because of the principal not complying with the terms of  
said statute then this obligation is to be void, otherwise to  
be and remain in full force and effect.

SIGNED AND SEALED this \_\_\_\_\_ day of \_\_\_\_\_ A.D.

a bond might provide, of all methods previously discussed, the most practical means of protecting the tax rate mentioned above and at the same time preserve our traditional concept of land as private property.

Normally the use of the bond is adopted when the developer wishes to obtain final approval of his plat prior to making actual improvements of roads, etc. In lieu of the completely improved development before approval is granted, the community requires that he post bond in the amount of the total cost of improvements. He may then execute the improvements in progressive stages as he makes sale of the lots. Obviously the sale of a lot does not insure construction of a house and the developer may make 100% sale of lots and complete the improvements required without the construction of a single house. In such a case the community may abandon all services to the development, but it still suffers the loss of land which might profitably have been left to agricultural or other use. In the case of partial development, the community must continue the services at unreasonable cost to itself.

At this point the extended use of the performance bond may be considered. Thus its terms may provide for the completion of homes for a substantial percentage of the total lots offered for sale. Enforcement of the completion of these homes might be delayed for an agreed upon period of years; at the end of such a period, two alternate steps would be available. On one hand, if the record of tax payments for lots which would support the required number of homes showed

few delinquencies, then the developer would be released from his bond. On the other hand, if delinquencies were numerous, then under the terms of his bond the developer would be required to exercise the option either of repurchasing the delinquent properties for resale, or of paying a pro rata share together with non-delinquent owners in the subdivision, of the total maintenance charges for the various community services which were available to the development.

The adoption of this system would tend to place responsibility for the maintenance of unimproved properties for a reasonable period of years upon the subdividers themselves. It would, of course, subject prospective purchasers to a close scrutiny to determine whether their intention was to build or merely to invest in land. Even in the case of the latter, after a favorable credit rating had been given these purchasers, there would be no objection to their investment purpose, providing payments on taxes were maintained.

Obviously it is not the intention that the developer be held responsible for the effect of national calamities, yet at such a time the scale of taxes (and services performed) would be adjusted themselves to meet the average range of income of the community. If therefore a reasonable safety factor were provided relating to the proportion of home owners in the development who could be expected (on a national average basis) to remain solvent, then this safety allowance precaution would seem to be adequate protection to the developer.

So far as the constitutionality of such a procedure is concerned, the writer has been advised that the principal limitation on the use of the police power is the Fourteenth Amendment with its restrictive provision that no State shall "deprive any person...property, without due process of law". Therefore in the event of a challenge to the procedure outlined, it is felt that such an extremely cogent case for the use of the police power could be established by costing the services to be furnished to the development and illustrating the proportionate tax rate to the community in sequence for one purchaser, ten purchasers, fifty purchasers or more that the courts would be convinced that the method proposed was in the best interests of the 'general welfare'.

In final perspective it is clear that the most direct subdivision control can be accomplished through the quantitative approach, the population-correlation method, which in some areas could be effectuated through insisted conformance with a regional master plan which was accepted and recognized as such. However, since a complete network of such plans appears many years in the offing, it seems as a last conclusion reasonable, if discouraging, to rely upon a qualitative type control, such as that of the extended performance bond as described above.



## BIBLIOGRAPHY

- American Society of Planning Officials. A Model State Subdivision Control Law. Chicago, American Society of Planning Officials, 1947. 48 p. mimeographed.
- American Society of Planning Officials. British Town & Country Planning Bill, 1947. Chicago, American Society of Planning officials, 1947. 2 p. mimeo.
- Babcock, Richard F. The Illinois Supreme Court and Zoning: A Study in Uncertainty, Vol. 15, No. 1. Chicago, The University of Chicago Law Review, 1947. pp. 87-105
- Baker, N.F. Legal Aspects of Zoning. Chicago, The University of Chicago Press, 1927.
- Blucher, Walter H. Subdivision Development & Control. Chicago, American Society of Planning Officials, 1940. 8 p. mimeo.
- Carrero, Telesforo. Land Subdivision Control in Puerto Rico. Vol. XIII, No. 3. New York, Journal of the American Institute of Planners, 1947. pp. 25-30.
- Chicago Plan Commission. Master Plan of Residential Land Use of Chicago. Chicago, Chicago Plan Commission, 1943. 134 p.
- Chicago Plan Commission. Building New Neighborhoods, Subdivision Design and Standards. Chicago, The Chicago Plan Commission, 1943. 44 p.
- Chicago Regional Planning Association. Revised Estimates of Population Growth for the Region of Chicago. Chicago, Chicago Regional Planning Association, 1945. 7 p. mimeo.
- Cornick, Philip H. Premature Subdivision and Its Consequences. New York, Institute of Public Administration, Columbia University, 1938. 346 p.
- Federal Housing Administration. Planning Neighborhoods for Small Houses. Technical Bulletin No. 5. Washington, Federal Housing Administration, 1939. 33 p.
- Fink, Orman S. Area Requirements of Municipalities in the Region of Chicago. Chicago, Chicago Regional Planning Association, 1928. 66 p. mimeo.
- Herrold, G. H. Costs of Suburban Services. Vol. XII, No. 3. New York, Journal of American Institute of Planners, 1946. pp. 29-30

- Hoadley, W. E. Jr. and C. G. Wright. Employment, Production & Income in the Chicago Industrial Area. Chicago, Federal Reserve Bank of Chicago, 1948. 28 p.
- Housing Authority of Cook County, Illinois. "Dead" Land, A Report to the Illinois State Housing Board. Chicago, Housing Authority of Cook County, 1949. 90 p.
- Hoyt, Homer. One Hundred Years of Land Values in Chicago. Chicago, The University of Chicago Press, 1933. 519 p.
- Keefe, L. T. Annexation Study, City of Evansville, Indiana. 1938, Unpublished, 118 p.
- Jeter, Helen R. Trends of Population in the Region of Chicago. Chicago, The University of Chicago Press, 1927. 64 p.
- Lautner, Harold W. Subdivision Regulations, An Analysis of Land Subdivision Control Practices. Chicago, Public Administration Service, 1941. 346 p.
- Maltbie, W. M. The Legal Background of Zoning. Chicago, American Society of Planning Officials, 1947. 3 p.
- Marinette County, Wisconsin. Zoning Ordinance for Marinette County, Wisconsin. Marinette, County Board of Supervisors, 1934. 1 p.
- Michigan Planning Commission. A Study of Subdivision Development in the Detroit Metropolitan Area. Lansing, Michigan Planning Commission, 1939. 38 p.
- Monchow, Helen Corbin. Seventy Years of Real Estate Subdividing in the Region of Chicago. Evanston, Northwestern University, 1939. 200 p.
- National Resources Board. Maladjustments in Land Use in the United States. Part VI of the Report on Land Planning. Washington, U.S. Printing Office, 1935. 55 p.
- National Resources Board. Agricultural Land Requirements & Resources. Part III of the Report on Land Planning. Washington, U.S. Printing Office, 1935. 64 p.
- National Resources Board. Public Land Acquisition in a National Land-Use Program. Part II: Urban Lands. Washington, U.S. Printing Office, 1941. 38 p.
- National Resources Board. Urban Planning & Land Policies. Part II of the Report on Urban Planning. Washington, U.S. Printing Office, 1935.

- Olcott, G.C. Land Values Blue Book of Chicago & Suburbs.  
Chicago, George C. Olcott & Co., 1948. 224 p.
- State of Wisconsin. Wisconsin Platting & Sanitation Code.  
Madison, The State of Wisconsin, 1947. 53 p.
- Urban Land Institute. The Community Builders Handbook.  
Washington, Urban Land Institute, 1947. 205 p.
- Vogt, William. The Road to Survival. New York, William  
Sloane Associates, 1948.
- Washington Title Insurance Company. Copy of Law Relating  
to Plats of Land. Seattle, Washington Title Insurance Co.  
1937. 1 p.
- Wisconsin State Planning Board. The Cutover Region of Wis-  
consin, Report of Conditions and Recommendations for  
Rehabilitation. Madison, Wisconsin State Planning Board,  
1939. 147 p. mimeo..

(Does not include newspaper clippings, interviews, statutes,  
etc. which are fully described in footnotes.)