



# LIBRARIES

UNIVERSITY OF WISCONSIN-MADISON

## Official mapping guide. no. 2 February 1964

[s.l.]: Southeastern Wisconsin Regional Planning Commission,  
February 1964

<https://digital.library.wisc.edu/1711.dl/FYB3N77JVB2AD8H>

<http://rightsstatements.org/vocab/InC/1.0/>

The libraries provide public access to a wide range of material, including online exhibits, digitized collections, archival finding aids, our catalog, online articles, and a growing range of materials in many media.

When possible, we provide rights information in catalog records, finding aids, and other metadata that accompanies collections or items. However, it is always the user's obligation to evaluate copyright and rights issues in light of their own use.

# W-Regional- Southeast

## PLANNING GUIDE NO. 2

# OFFICIAL MAPPING GUIDE



Graduate Research Center  
Dept. of Urban & Regional Planning  
The University of Wisconsin  
Old Music Hall, 925 Lathrop Dr.  
Madison, Wisconsin 53706

## COMMISSION MEMBERS

### KENOSHA COUNTY

George C. Berteau, Chairman - Kenosha  
Erwin W. Lange - Kenosha  
George L. Schlitz - Burlington

### MILWAUKEE COUNTY

Richard W. Cutler, Secretary - Milwaukee  
John P. Murphy - West Allis  
Prof. Henry J. Schmandt - Milwaukee

### OZAUKEE COUNTY

Ray F. Blank - Grafton  
Nick R. Didier - Port Washington  
James F. Egan - Mequon

### RACINE COUNTY

Lester Hoganson - Burlington  
Milton F. LaPour - Racine  
Wilfred Patrick - Racine

### WALWORTH COUNTY

Charles B. Coe - Whitewater  
Eugene Hollister - Williams Bay  
John D. Voss - Elkhorn

### WASHINGTON COUNTY

Dr. Carlton M. Herman - Allenton  
Joseph Schmitz, Vice-Chairman - Germantown  
Arthur Weiner - West Bend

### WAUKESHA COUNTY

Fortney Larson, Treasurer - Brookfield  
Lyle L. Link - Waukesha  
Maynard W. Meyer - Pewaukee

# OFFICIAL MAPPING GUIDE

Prepared By

SOUTHEASTERN WISCONSIN REGIONAL

PLANNING COMMISSION

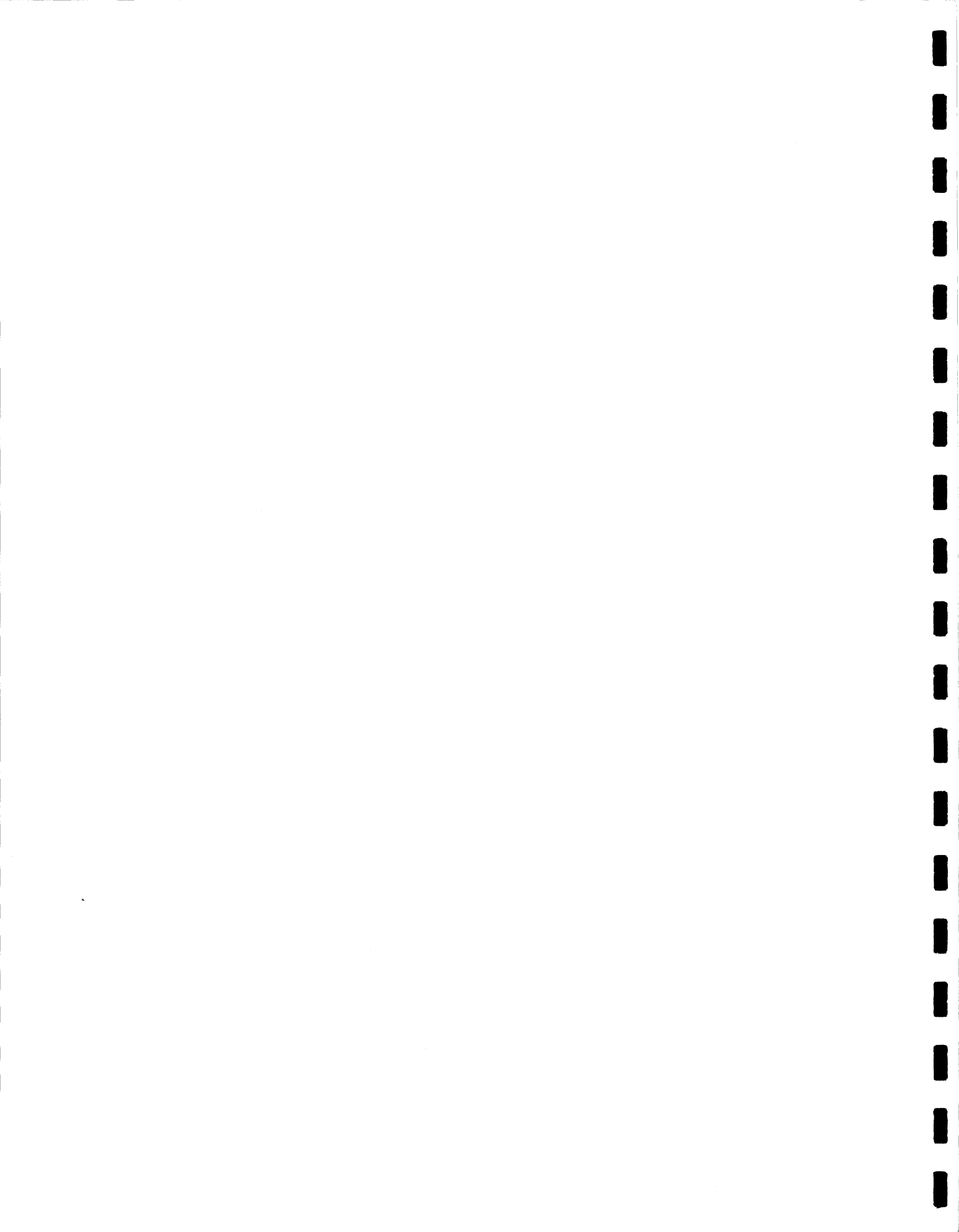
Old Courthouse

Waukesha, Wisconsin

The preparation of this guide was financed in part through an urban planning grant from the Housing and Home Finance Agency, under the provisions of Section 701 of the Housing Act of 1954, as amended.

February, 1964

Price: \$1.50



## **PREFACE**

This publication is the second in a series of planning guides scheduled to be prepared by the Southeastern Wisconsin Regional Planning Commission for distribution to cities, villages, towns and counties within the seven county Region.

The purpose of this guide on official mapping is twofold: first, it is intended to explain clearly the functions and benefits of the Official Map and the engineering considerations involved in the preparation of an Official Map. Second, it is intended to be used as a guide in the preparation of local Official Maps. To this end this guide includes a suggested model Official Map ordinance.

The guide is not intended to be applied indiscriminately without regard for local conditions, nor is it intended to supplant necessary professional planning, engineering and legal advice at the local level. It assumes the existence of duly constituted local planning agencies charged with carrying out the local planning function and is intended to assist these local planning agencies in the performance of their functions and duties.

This guide was prepared by the Community Assistance Division of the Southeastern Wisconsin Regional Planning Commission, and any communication or questions concerning the content and use of this guide should be addressed to that division. It is the hope of the Commission that this publication may be a helpful and informative aid to those interested in developing more pleasant and prosperous communities within the Region.



## TABLE OF CONTENTS

	page
Chapter I	INTRODUCTION . . . . . 1
Chapter II	HISTORICAL BACKGROUND . . . . . 3
Chapter III	DEFINITIONS, FUNCTION AND BENEFITS . . . . . 5
Chapter IV	LEGAL AND ADMINISTRATIVE CONSIDERATIONS . . . . . 13
Chapter V	INTERGOVERNMENTAL COOPERATION . . . . . 21
Chapter VI	ENGINEERING CONSIDERATIONS . . . . . 23

## APPENDICES

Appendix A	MODEL OFFICIAL MAP ORDINANCE . . . . . 43
Appendix B	LOCAL OFFICIAL MAP ENABLING ACT . . . . . 47
Appendix C	COUNTY MAP ENABLING ACT . . . . . 51

## LIST OF FIGURES

Figure 1	Relationship of Official Map to Master Plan . . . . . 9
Figure 2	Typical Base Map Adequate for Preparation of Official Map by Simple Compilation . . . . . 26
Figure 3	Typical Official Map Sheet Prepared by Simple Compilation . . . . . 27
Figure 4	Typical Survey Monument . . . . . 34
Figure 5	Typical Control Survey Station Dossier Sheet . . . . . 35
Figure 6	Typical Control Survey Summary Diagram . . . . . 36
Figure 7	Typical Topographic Map Sheet . . . . . 37
Figure 8	Typical Property Boundary Line Map Sheet . . . . . 39
Figure 9	Typical Official Map Sheet . . . . . 40





# Chapter I

## INTRODUCTION

The population of southeastern Wisconsin, in common with that of the state and nation, is undergoing an unprecedented growth and urbanization. The widely dispersed characteristics of this urbanization, with its accompanying dependence on motor vehicle transportation, has created severe pressures to extend urban street systems and to widen, realign, and reconstruct existing traffic ways. This growing demand for land for streets to furnish access and circulation to newly developing areas is accompanied by a demand for land for utility and drainage rights-of-way and for school, fire station, library and other community facility sites. The sprawling characteristic of the current urbanization has also created severe pressures on park and open space facilities and intensified the need to reserve land for park and open space to meet the recreational needs of a growing population and to shape urban development.

Adequate solutions to these growing land reservation problems will not only depend upon sound long-range plan formulation at all levels of government, but also on practical plan implementation. An interval must necessarily exist between the time a given project is incorporated into a long-range plan and the time of actual project construction. This time lag is inherent in the planning process, and it is during this time lag that means must be found to effectively reserve land for the project as well as to insure the integrity of the plan.

The Official Map<sup>1</sup> is one of the oldest plan implementation devices at the disposal of the local planner. It is also one of the most effective and efficient devices which can be brought to bear on the problem of reserving land for future public use. Yet, it is probably the least understood and the least used of all local plan implementation devices. Zoning ordinances, subdivision regulations, and building and housing codes are all better understood and more effectively applied by communities. In the Region, as of March 1962, the number of municipalities having official maps versus the number of municipalities having zoning and subdivision control ordinances is shown on the following page.

The reluctance of communities to use the official map probably stems from one principal difficulty; namely, the assumed expense of locating and mapping each existing and proposed street and public open area within the geographic limits of the local planning jurisdiction with the necessary accuracy and precision. While this is an engineering problem of considerable magnitude, particularly in larger cities, it is by no means insurmountable. This manual sets forth a practical

---

1. For full definition see Chapter III.

technique for the preparation of official maps along with a model ordinance for their enactment and suggestions for their administration.

<u>Municipalities by Type</u>	<u>Total Within Region</u>	<u>With Official Map</u>		<u>With Zoning Ordinance</u>		<u>With Subdivision Ordinance</u>	
		<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
1st Class (Milwaukee)	1	0	0	1	100	1	100
2nd Class (39,000 - 149,999)	3	1	33	3	100	3	100
3rd Class (10,000 - 38,999)	7	3	43	7	100	6	86
4th Class (under 10,000)	16	8	50	13	81	11	69
Villages	<u>53</u>	<u>15</u>	<u>28</u>	<u>27</u>	<u>51</u>	<u>18</u>	<u>34</u>
Total	80	27	34	51	64	39	49
Counties	7	2	29	6	86	1	14

## Chapter II

### HISTORICAL BACKGROUND

The concept and actual use of the Official Map in the United States dates back to colonial times when the proprietary founders of well-planned colonial cities, such as Philadelphia, Annapolis and Williamsburg, caused plans for these cities to be prepared and the necessary streets and public commons preserved for public use by prohibition of the construction of buildings, fences and other structures in the dedicated areas. Later, as land ownership became more widespread, legislation enacted by the colonies and states permitted commissioners to plat townsites and their streets and to take back deeds of trust from private owners who by this method consented to the street dedications. Washington, D. C. , among other cities, was planned and mapped in this manner.

These methods proved too cumbersome with advancing urbanization and were supplanted by early nineteenth century state legislation under which municipalities were authorized to reserve rights-of-way for streets in advance of construction and to prohibit any building in the beds of these future streets. No escape from these regulations was provided in the early legislation, and no compensation was payable for the removal of a structure built in the bed of a street in violation of the law. The first use of the Official Map under such legislation and in conjunction with planning for the orderly expansion of an existing urban area was made in New York City about 1806, with other cities soon following this lead. Baltimore completed an official map in 1817, Brooklyn in 1818, and additional cities in Pennsylvania, including Pittsburgh, soon thereafter. The legality of these early official maps was tested and, in spite of the severity of their application as compared to modern practice, upheld in the New York and Pennsylvania courts.

With the birth of the modern city planning movement, modern Official Map enabling legislation has been adopted by over one-half of the States. The prototype of all modern official map acts was adopted by the State of New York in 1926; subsequently, Maryland, Michigan, Minnesota, New Hampshire, Utah, and Wisconsin, among others, have enacted enabling legislation based to a considerable extent on the New York act.

The basic enabling legislation under which local units of government may carry out official mapping in Wisconsin was enacted in 1941 and is set forth in Section 62.23 (6) of the Wisconsin Statutes, appended hereto for ready reference. Other provisions of the Statutes enable villages, towns, counties and the state itself to carry out official mapping, although the county and state authority is in modified form.



## Chapter III

### DEFINITIONS, FUNCTIONS AND BENEFITS

#### DEFINITION

Section 62.23 (6) of the Wisconsin Statutes provides that the common council of any city may establish an Official Map for the precise designation of right-of-way lines and site boundaries of streets, highways, parkways, parks and playgrounds. Such a map has all the force of law and is deemed to be final and conclusive with respect to the location and width of both existing and proposed streets, highways, and parkways, and the location and extent of existing and proposed parks and playgrounds. The Statutes further provide that the Official Map may be extended to include areas beyond the corporate limits lines but within the extraterritorial plat approval jurisdiction of the municipality. It is important to note that in Wisconsin the Official Map Act is a subsection of the basic local planning enabling act, Section 62.23 entitled "City planning," and as such is made applicable to villages and towns as well as to cities.

#### CONFUSION OF TERMS

The term "Official Map" is often misapplied or misused. This common confusion stems in part from the fact that local governments may have several maps used for different purposes which are designated as official documents and, therefore, loosely referred to as "Official Maps." Such maps may include a property boundary line (cadastral) map of the community showing platted subdivisions and other existing real property boundary lines, a sanitary sewer system map, a storm water sewer system map, or water supply system map. Some of this confusion is also due to the extensive use of maps in comprehensive community plans. Maps are often used in such comprehensive plans to present long-range highway and land use plans and when so used are often inappropriately called "Official Maps." Finally, the term "Official Map" is sometimes incorrectly applied to the map delineating zoning districts which accompanies a zoning ordinance and is used to administer such an ordinance.

It should be clearly understood that the term "Official Map" as used in this manual applies only to that map properly adopted pursuant to Section 62.23(6)(b) of the Wisconsin Statutes. Such a map is intended to be used as a precise planning tool to implement the community's master plan of streets, highways, parkways, parks, and playgrounds. Its basic purpose is to prohibit the construction of buildings or structures and their associated improvements on land that has been designated for current or future public use. The Official Map must be adopted by the governing body of the local unit of government concerned pursuant to Section 62.23(6)(b) of the Wisconsin Statutes, and only after such adoption does it assume its legal force. Good practice would dictate that a certified copy of the resolution adopting the map appear on the face of the map. If this

practice is followed, this certificate would perhaps be the most unique identifying feature of an Official Map.

#### FUNCTIONS

The primary function of the Official Map is to implement the community's plan of streets and highways in a manner similar to that in which the zoning ordinance and map should implement the community's land use plan. The Official Map permits the community to protect the beds of future streets as well as the beds of partially or wholly developed streets which are to be widened by essentially prohibiting construction of new buildings in such beds. The possible monetary saving which can accrue to the community from such protection of street rights-of-way are large, but the fact that an Official Map assures the integrity of the community's long-range plan of streets and highways is even more important.

Another function of the Official Map is to implement the community's master plan of parks, parkways and open spaces. Because parks and parkways frequently include unusual natural features, such as scenic and historic places, water courses and drainageways, flood plains and marshes, these features can be protected through an Official Map. Inclusion of such features as proposed park land on the Official Map gives strong legal status to the planned projects and protects the land within the indicated taking lines for public use. Again, the possible monetary savings which can accrue from such reservation for future use are high; and the protection offered the public health, safety and welfare in connection with flood plains and marshes is very important.

An incidental but very important benefit accruing to the community through properly executing official mapping is that such mapping adequately locates and records all existing street lines that constitute the boundaries of the public's property and thereby tends to stabilize the location of real property boundary lines, both private and public. Since planning often involves the legal establishment of lines bounding districts reserved for specific purposes, the formulation and implementation of physical plans requires detailed knowledge of the location of existing street lines and of the boundaries of real property. The Official Map can provide this information most effectively and efficiently. Therefore, the Official Map also functions as an accurate base map depicting existing conditions and as such can greatly expedite all municipal planning and engineering work.

#### RELATIONSHIP TO THE MASTER PLAN

The term "master plan" or "comprehensive plan" may be defined as an extensively developed plan for the physical development of a community including proposals for future land use, transportation, urban redevelopment and such public facilities as schools, parks, utilities and drainage facilities. The master plan is carried out by a series of plan implementation devices including among others the Official Map.

The Official Map allows the municipality to express its intent to reserve land for public purposes without commitment to actual acquisition. Thus, the Official Map functions as a refinement of the community's master plan, reflecting certain aspects in a precise, accurate and legally binding manner. (See Figure 1.)

Upon completion of the precise base mapping, specific projects, such as new major streets and highways; proposed street widenings, relocations and vacations; proposed parks, parkways, including major drainageways, may be taken from the master plan, detailed as to specific location, and placed on the Official Map. Under the Wisconsin Statutes the preparation of an Official Map involves: the preparation by the city, village or town engineer of a precise base map showing all existing streets, highways, parkways, parks and playgrounds; the adoption of this base map by the governing body as the Official Map pursuant to Section 62.23(6); and finally the amendment of the base map, after public hearing and referral to the plan commission for report and recommendation by the governing body to include proposed future streets, highways, parkways, parks and playgrounds.

Thus, by exercise of the police power, specific proposals contained in the master plan may be implemented. Street and park reservations can be based, not on immediate needs alone, as must be the case when such areas are acquired by the exercise of the power of eminent domain, but on future needs as well.

In addition to assuring that land needed for future streets and parks will be available at the price of unimproved land, the adoption of an Official Map under the Wisconsin Statutes has certain other consequences which tend to give direction and pattern to future community development and which can be used to carry out the master plan.

Section 62.23(6)(g) provides that where an Official Map has been established no public sewer or other municipal street utility or improvement may be constructed in any street, highway or parkway until such street, highway or parkway is duly placed on the Official Map. Similarly, no permit for the erection of any building may be issued under this subsection unless a street, highway or parkway giving access to such proposed building has been placed on the Official Map. Both of these provisions are particularly valuable in controlling development in the outlying rural-urban fringe areas, assuring that such development occurs in conformance with an integrated long-range development plan.

Although the Official Map is usually applied only to proposed major streets, parks and parkways, a strong case can be made for its application in undeveloped or in partially developed areas to proposed minor streets as well. If the local community has carefully prepared detailed neighborhood unit development plans - intelligent plat review by planning bodies is all but impossible without



such plans - the minor streets, neighborhood park and parkway sites shown on such plans can be delineated and placed on the Official Map. Such mapping will overcome special problems of disjointed land ownership patterns and assure the development of integrated neighborhood units in a manner not possible through subdivision control alone.

#### EFFECTIVENESS

The Official Map is particularly effective as a street and highway plan implementation device. Although other plan implementation devices such as building setback requirements in zoning ordinances, special building setback line ordinances per se along major streets, building setback lines on recorded subdivision plats and private deed restrictions can all be used to reserve land for future widening of existing streets, none of these devices can be readily applied to proposed future streets and highways. Subdivision control ordinances can be used to protect future streets and highways but can do so only indirectly and cannot be used to prevent the erection of buildings in the beds of future streets when the erection of such buildings takes place without platted land division. The Official Map is the only arterial street and highway system plan implementation device that operates on an areawide basis in advance of land development and can thereby effectively assure the integrated development of the street and highway system.

The high order of effectiveness of the Official Map as a street and highway plan implementation device is attributable to the following characteristics of the Official Map:

1. Unlike subdivision control which operates on a plat by plat basis, the Official Map can operate over a wide planning area well in advance of requests for development.
2. The proper application of the Official Map necessitates the preparation of precise or definitive plans beyond the master plan stage and thereby assures that the broad objectives expressed in the master plan are reduced to specific and attainable ones.
3. The Official Map is a useful device to achieve public acceptance in that it serves legal notice of the government's intentions to all parties concerned well in advance of any actual improvements. It thereby avoids the altogether too common situation of development being undertaken without knowledge or regard for the long-range plan and thereby does much to avoid local resistance when plan implementation becomes imminent.

The effectiveness of the Official Map as a plan implementation device applies equally well to any application wherein it is essential to preserve an integrated network of relatively narrow rights-of-way. Inclusion of major storm water drainage channels and sanitary trunk sewer lines in parkways permits the application of the Official Map to the implementation of sewerage, drainage and

# RELATIONSHIP OF OFFICIAL MAP TO THE MASTER PLAN

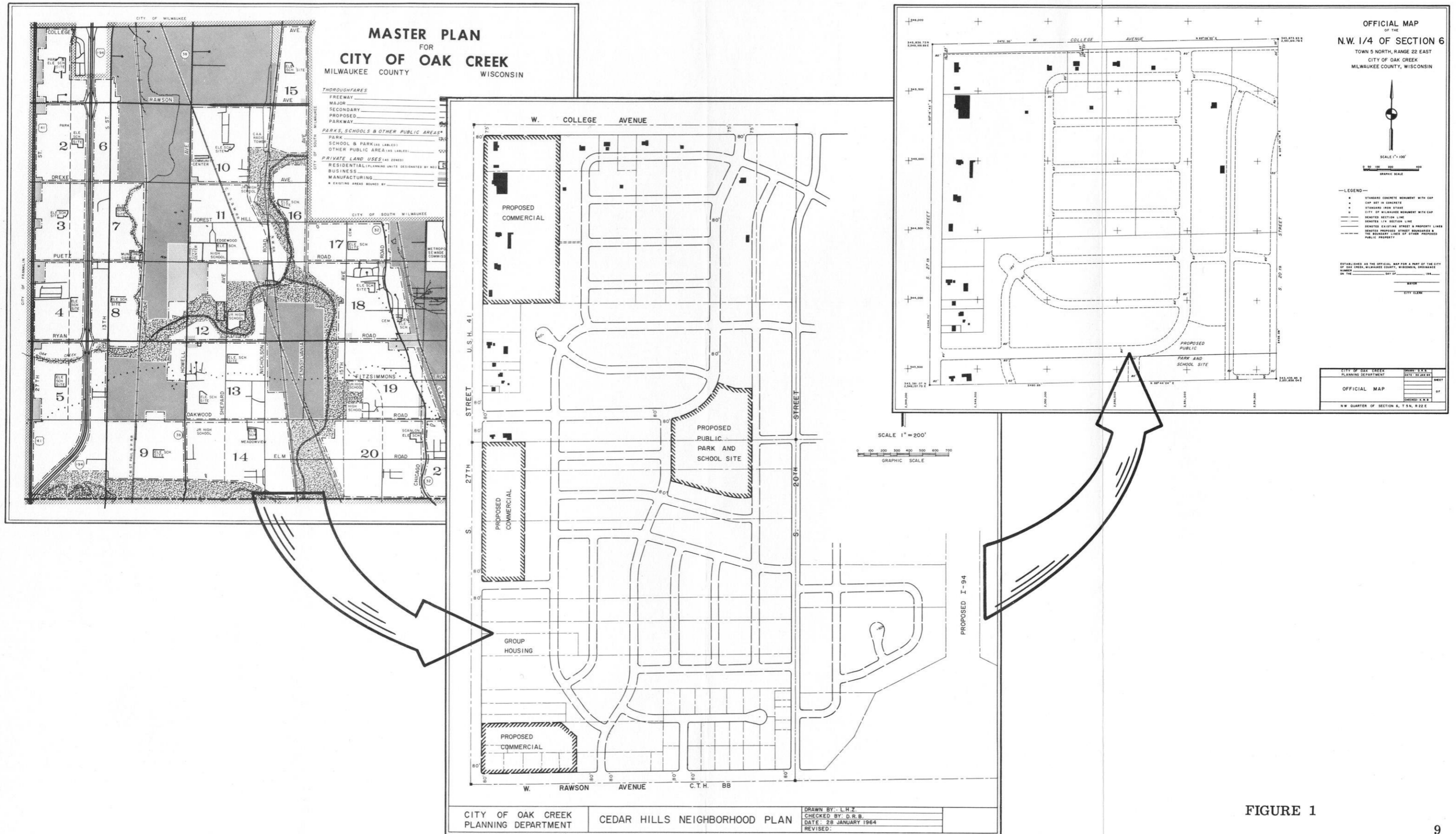


FIGURE 1



flood control plans. Because of the legal problems involved, the Official Map is somewhat less effective as a reservation device for park and open space requirements when such park and open spaces cover large blocks of land rather than relatively narrow rights-of-way.<sup>2</sup>

#### FLEXIBILITY

A certain practical and desirable degree of flexibility is given to the Official Map by Section 62.23(6)(c) of the Wisconsin Statutes which provides that changes or additions to the Official Map made by duly processed and approved subdivision plats shall not require the public hearings or common council action normally required for such changes or additions provided, however, that the changes or additions do not affect any land outside the platted area in which the changes are being proposed.

Finally, it should be noted that ideally the Official Map is a means of implementing or carrying out a community's master plan. As such, the Official Map should be prepared only within the context of such a plan. Practically, however, plan implementation devices such as zoning, subdivision control, and Official Map ordinances are often called upon to substitute for the necessary long-range plans and in such situations must bear the full weight of guiding and shaping the physical development of the community. This is particularly true in many smaller communities within the Region; and in such a situation, the Official Map may quite properly combine the expression of the community's long-range street and highway objectives with the implementation device necessary to help achieve these objectives; that is, the Official Map may serve as both the long-range street and highway plan and as the primary implementation device for that plan.

---

2. Joseph C. Kucirek and J.H. Buescher, "Wisconsin's Official Map Law," Wisconsin Law Review, 1957, Vol. 1957, p. 185.



## Chapter IV

# LEGAL AND ADMINISTRATIVE CONSIDERATIONS

### INTRODUCTION

The Wisconsin Official Map enabling act for cities is extensive and includes all of the basic elements of modern Official Map enabling legislation. Villages and towns are by reference given the same planning powers as cities and, therefore, may prepare, adopt, and administer Official Maps under the basic enabling act. Other state legislation grants modified official map powers to other units of government, including counties and the State Highway Commission.

The applicable state statutes enabling official mapping or containing ingredients of the official map concept are as follows:

<u>Unit of Government</u>	<u>Applicable Official Map Enabling Statute (1961)</u>
Cities	62.23 (6)
Villages	61.35
Towns	60.18 (12)
Counties	80.64
State Highway Commission	84.295 <sup>3</sup>

### CITIES

Section 62.23(6) of the Wisconsin Statutes authorizes the common council of any city to establish an Official Map of the streets, highways, parkways, parks and playgrounds, both present and future. The enabling legislation envisions the adoption of an Official Map in two stages. In the initial stage, the governing body is permitted to adopt a map showing the existing streets and parks within the municipality; and this initial adoption is permitted without public hearing. The importance of the effect of an Official Map on the general development of the community and on individual property rights is, however, too great to make initial adoption without public hearing, even though permitted by state law, good planning practice. Wisconsin Statutes provide that any changes or additions to the Official Map as initially adopted must be referred to the local planning commission and a public hearing held by the governing body or committee thereof, with at least 20 days' notice before the required hearing. In the second stage, then, the governing body may add to the initially adopted Official Map proposed streets, highways, parkways, playgrounds and park lands both inside the municipality and within its extraterritorial plat approval jurisdiction after referral to the local plan commission and duly held public hearings.

---

3. Chapter 588, Laws of 1961 should be referred to as portions of the law as passed were inadvertently omitted from the published Wisconsin Statutes 1961.

The Statutes also provide that no building permit shall be issued for any building on present or future streets, highways, and parkways shown on the Official Map unless it can be shown that the property is not yielding a fair return and the applicant will be substantially damaged by placing his building outside the mapped area.<sup>4</sup> In such instances the property owner may appeal to the local Board of Zoning Appeals which then holds a public hearing and decides the matter upon the merits of the case. As previously noted, the law also provides that no public sewer or other municipal street utility or improvement shall be constructed in any street, highway or parkway until it is duly placed on the Official Map and that no building shall be erected unless it has access to a street, highway or parkway recorded on the Official Map.

#### VILLAGES AND TOWNS

Section 61.35 of the Wisconsin Statutes confers and imposes all planning powers and duties set forth in Section 62.23 of the Wisconsin Statutes upon villages, including official mapping powers.

In a similar manner, town boards are authorized to exercise all powers relating to villages and conferred on village boards except those laws that would conflict with statutes referring to towns and town boards. This provision is set forth in Section 60.18(12) of the Wisconsin Statutes, and the assumption of village powers must be authorized at a town meeting. Thus, the Official Map act as set forth in 62.23(6) of the Wisconsin Statutes applies in its entirety to villages and towns as well as to cities.

#### COUNTIES

Section 80.64 of the Wisconsin Statutes confers modified official map powers on counties. County "official" maps may be used to show the proposed widening of existing streets and highways and to show the location and width of proposed future streets and highways; and these maps, except in counties of 500,000 or more population, must show the location of property boundary lines and the recorded owners of land affected. County maps must have the approval of the governing body of the municipality wherein the mapped streets and highways lie. The map must be filed with the county register of deeds, and notice of such filing must be published and posted. The map may be amended or changed from time to time upon like approval, publication and posting. The excess width for existing streets and the rights-of-way for planned streets may be acquired at any time by the state, county or municipality. The county map powers lack two important elements of a true Official Map Act: (1) no provision is made requiring the property owner to apply for a building permit if he chooses to construct a building in a mapped area; and (2) the public is not protected from

---

4. It is interesting to note that it is in this respect that modern official map acts differ from the early official map acts which provided no relief from the regulations imposed by the map.

having to pay undue damages to a property owner who builds in a mapped area. Neither does the scope of county map powers extend beyond streets and highways.

It is interesting to note that, in counties of 500,000 or more population, Section 80.64 provides that a duly adopted county map as it applies to towns is binding upon subsequently incorporated or annexed areas. Moreover, the city or village shall not permit or sanction any construction or development which will interfere with, prevent or jeopardize the acquisition of the mapped right-of-way.

#### STATE HIGHWAY COMMISSION

In its 1961 session, the Wisconsin Legislature amended the basic statute under which the State Highway Commission functions by creating Section 84.295 entitled "Freeways and expressways." This newly created section of the Statutes among other things grants modified official map powers directly to the State Highway Commission with the specific legislative intent to protect, from imminent and future costly economic development, corridors of land to be available when needed for future highway construction.

The act provides that the State Highway Commission may after public hearing establish corridors for freeways and expressways by surveying and mapping such corridors and showing the location and approximate widths of rights-of-way required, including that for interchanges, grade separations, frontage roads and any required alterations or relocation of existing streets and highways. The map must also show the location of existing highways, property boundary lines and record owners of land required. The completed map must be placed on file with the county register of deeds. This action is advertised, and the property owners of record on the filing date are notified of this action by registered mail. The map may be changed from time to time by the same procedure.

The act in essence prohibits the construction of any new structures or the alteration of any existing structures within the officially mapped right-of-way or "in such proximity thereto as to result in consequential damages when the right-of-way is acquired, "without first giving 60 days' notice to the State Highway Commission by registered mail. The State Highway Commission may then encourage alterations in such construction proposals to clear the needed right-of-way or may purchase the required right-of-way to prevent erection of any improvements thereon. No damages are allowed for any construction, alterations or additions made in violation of the act.

Although considerably weaker than the local Official Map powers, this limited mapping power can nevertheless result in substantial benefits to the public. Moreover, the proper exercise of such mapping powers will permit sound decisions to be made on land use and development alternatives by private investors. The lack of any sound basis for such decisions in the past has been a con-



stant source of friction between the state highway agency, local governments and private developers.

#### LEGALITY OF WISCONSIN OFFICIAL MAP STATUTE

The constitutionality of the Official Map in Wisconsin has been challenged and established in the case of Miller v. Manders, decided by the Wisconsin Supreme Court in 1957.<sup>5</sup> In its ruling the Supreme Court of Wisconsin declared that the issue in the case was whether Wisconsin's Official Map Law (Section 62.23(6) of the Wisconsin Statutes) and the Official Map Ordinance of the City of Green Bay were unconstitutional as a taking of Miller's property for public use by the city without just compensation. The court stated the question to be considered was whether the state law, as set forth in Section 62.23(6), was a valid exercise of the police power on the ground that it tends to promote the general welfare. The court upheld the Official Map Act saying:

"There would seem to be little doubt that an objective which seeks to achieve better city planning is embraced within the concept of promoting the general welfare...the constitution will accommodate a wide range of community planning devices to meet the pressing problems of community growth, deterioration and change."

The court went on to say that the protection of a municipality against added costs which might have to be incurred in case of future condemnation or purchase of property needed for a public improvement was a valid exercise of the police power.

The court, however, also found narrow limits in the right to exercise the police power to protect the city against increased costs. The saving clause which made the law constitutional was that which requires that the Board of Zoning Appeals shall refuse a building permit where the applicant will not be substantially damaged by placing his building outside the mapped street, highway or parkway. The court also ruled that, if the applicant would be substantially damaged should the permit be denied, it was the duty of the Board of Zoning Appeals to grant the permit. It was also pointed out that if a building permit is denied the applicant still has the right and the protection of court review by certiorari. The decision thus found the Official Map Act a valid exercise of the police power and, therefore, constitutional.

It should, however, be emphasized that the courts have consistently reserved the right to determine the constitutionality of any particular official map as it might apply to a particular property in order to safeguard the rights of the property owner. Cases in which a particular map has been held invalid as applied to a specific parcel of land have generally included situations where a particular property owner, under the Map's application, would have lost all right to a single lot or parcel which was located entirely within an officially mapped street right-of-way.

---

5. Miller v. Manders, 2 Wis. 2d 365, 86 N.W. 2d 469 (1957).

## ADMINISTRATION

The administration of any plan implementation device is a very important factor in the effectiveness of that device. The finest master plan and supporting planning tools are worthless unless they are properly used and applied from day to day by the administrative officials responsible for their application. The building permit is the administrative device that is used to enforce and put into effect the aims of the Official Map; namely, the restriction of construction in mapped areas reserved for public use. The denial of a building permit is the application of the police power authority to an individual case and directly affects the use of an individual's property. For this reason great care must be taken in the administration of the Official Map.

There are three references to the use of building permits in the state enabling act. Section 62.23(6)(d) of the Statutes deals with the issuance of building permits within the corporate limits of a community having an Official Map and provides "For the purpose of preserving the integrity of such official map, no permit shall hereafter be issued for any building in the bed of any street, highway or parkway shown or laid out on such map except as provided in this section." Section 62.23(6)(d) also deals with the issuance of building permits in the extra-territorial plat approval jurisdiction of cities and villages having an Official Map and provides "Any person desiring to construct a building in the bed of a street, highway or parkway so shown as extended may apply to the authorized official of the city or village for a building permit." These two provisions of the state law relate to the issuance of building permits for buildings proposed to be constructed within the beds of existing or proposed streets, highways, and parkways shown on an Official Map.

Section 62.23(6)(g) also provides "No permit for the erection of any building shall be issued unless a street, highway or parkway giving access to such proposed structure has been duly placed on the official map." This latter provision materially strengthens the powers of an urbanizing area to guide its fringe growth and to assure compliance with a comprehensive development plan. It should be noted that the state enabling legislation relating to issuance of building permits lists only "any street, highway, or parkway" but makes no mention of parks and playgrounds, although they may also be placed on the Official Map.

Smaller cities which have no building code may face serious administrative problems in enforcing the Official Map Ordinance. Since they are not accustomed to obtaining building permits, the residents of such a community may not check with local officials about the location of mapped streets, highways and parkways before starting a new building. Once such a building is completed, it may be extremely difficult for the local officials to enforce the provisions of the Official Map Act.

## APPEALS

The state enabling act establishes only one condition under which an appeal may be made to the Board of Zoning Appeals of the local community to permit the placing of a building in a mapped street. It is: "If the land within such mapped street, highway or parkway is not yielding a fair return..."

Three conditions are required for an applicant to appeal the decision of an administrative officer to deny a building permit which does not have access to a street, highway or parkway shown on the Official Map. They are:

1. Practical difficulty
2. Unnecessary hardship, and
3. Circumstances do not require the structure to be related to an existing or to the proposed street, highway or parkway.

There are two appeal procedures specified in the Official Map Act. The first (s. 66.23(6)(d)) relates to unfair returns and provides "If the land within such mapped street, highway or parkway is not yielding a fair return, the board of appeals in any municipality which has established such a board having power to make variances or exceptions in zoning regulations, shall have power in a specific case, by the vote of a majority of its members, to grant a permit for a building in such street, highway or parkway, which will as little as practicable increase the cost of opening such street, highway or parkway, or tend to cause a change of such official map; and such board may impose reasonable requirements as a condition of granting such permit, which requirements shall be designated to promote the health, convenience, safety or general welfare of the community."

The second appeal procedure (s. 66.23(6)(g)) states "Where the enforcement of the provisions of this section would entail practical difficulty or unnecessary hardship, and where the circumstances of the case do not require the structure to be related to existing or proposed streets, highways or parkways, the applicant for such a permit may appeal from the decision of the administrative officer having charge of the issue of permits to the board of appeals in any city which has established a board having power to make variances or exceptions in zoning regulations, and the same provisions are applied to such appeals and to such boards as are provided in cases of appeals on zoning regulations."

The principal differences in the two appeal procedures are that under the unfair return method a public hearing must be advertised at least 15 days in advance of the hearing; and the decision is determined by a majority vote of the members of the Board of Zoning Appeals, while the second method provides that the regular procedures of the Board of Zoning Appeals for variances or exceptions in cases of appeals on zoning regulations shall apply. In the latter case, then, the Board of Zoning Appeals may fix a reasonable time for the hearing of the appeal and give public notice thereof as well as notice to the parties in interest. Moreover, in the second case the appeal is decided by the concurring vote of four

members of the Board. It is important that the Board of Zoning Appeals in any case give proper notice of a public hearing, keep minutes of its proceedings and of the absence, vote or abstention of its members.

#### EXTRATERRITORIAL POWERS

The state law provides that the Official Map may be shown as extending beyond the boundaries of a city or village, a distance equal to that within which the approval of land subdivision plats by the city council or village board is required as provided by Section 236.10(1)(b)2 of the Wisconsin Statutes. The distance each class of city may exercise such controls in unincorporated areas outside the municipal limits is:

<u>Class of City</u>	<u>Population Size</u>	<u>Distance from Corporate Limits</u>
First	Milwaukee	3 miles
Second	39,000 - 149,999	3 miles
Third	10,000 - 38,999	3 miles
Fourth	Under 10,000	1-1/2 miles
Village		1-1/2 miles

It should be noted that, where cities and villages are in close proximity to one another, the matter of determining the extraterritorial mapping authority in accordance with the Wisconsin Statutes may become a relatively complex problem in surveying and mapping.



## Chapter V

# INTERGOVERNMENTAL COOPERATION

### INTRODUCTION

It is apparent that official mapping can be applied to plan implementation in two ways:

1. Directly to local needs through exercise at the local level of the official map powers delegated to cities, villages and towns by the state enabling act. These local Official Map powers are more effective than the limited powers delegated to the state and county governments.
2. Indirectly to state and regional needs through cooperative state, county, and local application of both local, county and state official map powers.

### CITY, VILLAGE, TOWN COOPERATION

Even the direct application of Official Map powers at the local level will in most instances require close cooperation of town and city or village officials. The fact that Wisconsin legislation permits cities and villages to prepare Official Maps in their extraterritorial plat approval jurisdiction places a burden on both the rural and urban governments concerned to cooperatively adopt and administer any Official Map which extends into an extraterritorial area. The fact that an Official Map adopted by a city or village may affect property rights in an adjacent town requires, in the interest of justice, that the town be consulted during the formulation and adoption of the city or village Official Map. Conversely, the cooperation of the town officials is essential to the proper administration of the Official Map in such extraterritorial areas. If both the town and an adjacent city or village propose to adopt an Official Map (or zoning or any other land use controls), close cooperation is essential if conflicting policies are to be avoided.

### STATE, COUNTY, LOCAL COOPERATION

As noted, the Official Map can also be applied indirectly to state and regional planning needs through cooperative state, regional and local mapping programs. Such cooperative programs must be founded on practical and workable long-range arterial street, highway and park system plans, plans that meet state and regional as well as local transportation and recreation needs and that can, therefore, be cooperatively prepared and adopted and jointly implemented by the various levels and agencies of government concerned.

In Wisconsin local Official Map powers can have a widespread applicability to state and county highway facilities. Joint state-local application of the Official Map power has actually been carried out in Wisconsin by cooperation between the State Highway Commission and the Cities of Oshkosh, Neenah, and Green Bay. The monetary benefits that can accrue to both the state and local governments through such joint exercise of planning implementation powers are considerable. But the pattern and direction that such plan implementation can give

to private investment by properly relating it to proposed facilities are of even greater importance. A potential also exists for joint county-local application of the Official Map power, particularly with respect to highway facilities.

Similarly, the exercise of modified official map powers by the State Highway Commission of Wisconsin should be based upon close working agreements with the local units of government. With respect to highway facilities, the proper application of the Official Map requires preparation of precise long-range plans for proposed transportation facilities. While a general plan setting forth the general location and characteristics of proposed major transportation facilities and traffic corridors is necessary as a statement of agreed upon long-range objectives, it is, however, quite ineffective as a sound basis for plan implementation through land reservation or for the extension of technical planning assistance and advice to local government. Advance reservation of right-of-way and the proper extension of local assistance, as well as the staged construction of facilities, all require the preparation of precise and definitive plans setting forth the ultimate development of each of the major traffic corridors specified on the general plan.

In the case of highway facilities, such plans should set forth precise proposals as to centerline location, ultimate right-of-way width required, type of access control to be exercised, and type and location of interchange and grade separations. Such precise plan preparation requires adequate topographic and cadastral maps along the major traffic corridors, the very type of maps which can be best provided by the official mapping program outlined in Chapter VI. Such plan preparation is essential to the effective application of such plan implementation devices as zoning, subdivision control, precise neighborhood unit plans, as well as official mapping itself.

## Chapter VI

# ENGINEERING CONSIDERATIONS

### INTRODUCTION

As has been noted, the comprehensive community plan is a general plan, certain parts of which are often presented by nonprecise maps, whereas the Official Map is intended to reflect and refine certain aspects of the master plan and, therefore, must be capable of precise and accurate interpretation. This requirement for precision and accuracy seems to provide the principle difficulty in the proper application of this plan implementation device. Many planners, although aware of this problem, have been puzzled by its true nature and have not, therefore, been able to propose adequate solutions to it.

### BASIC CONCEPTS

In order to place the problem in its proper perspective, it is necessary to understand certain basic surveying and mapping concepts. First, it must be understood that both accuracy and precision are required in an Official Map and that these two terms are not synonymous.

Precision is defined as refinement in the performance of an operation or in the statement of a result, and it connotes apparent nearness to truth. If it is desired, for example, that all scaled distances on an official map should have a precision of plus or minus five feet and if it is expected that the map draftsman is to work to a tolerance of one-fortieth of an inch, then the required scale of the map must, to attain the desired degree of precision, be one inch equals 200 feet. Moreover, by simply showing supplementary dimension figures on the face of the map, any desired degree of precision can be obtained right down to the nearest one-hundredth of a foot.

Accuracy, however, is defined as the degree of conformance with a standard; and it connotes absolute nearness to truth. In a map this means true scale representation of conditions as they actually exist on the ground. A common method of specifying the accuracy of engineering maps is to require that 90 percent of all well-defined features shall be plotted to within one-fortieth of an inch of their true coordinate positions and that no point shall be more than one-twentieth of an inch from its true position. It should be noted that, whereas precision is related to scale or to the number of places behind the decimal point of expressed dimensions on the face of the map, accuracy is independent of scale and dependent solely on the methods used to compile the map. Thus, a map may be accurate without being precise or precise without being accurate.

The degree of precision to be selected for a given Official Map should be related to the characteristics of the community being mapped. For example, for a new



and rapidly developing, exclusively residential, country estate village, with large minimum lot areas and large open yard requirements, a scaled precision of  $\pm$  10 feet might be reasonably adequate, requiring an Official Map at a scale of 1 inch equals 400 feet. A relatively older, more densely developed, industrial community might, on the other hand, require a scaled precision of  $\pm$  2 feet, requiring a map scale of 1 inch equals 80 feet. In each case the degree of accuracy built into the maps must be consistent with the desired degree of precision, and mapping procedures must be modified accordingly.

#### NEED FOR BASE MAPPING

Section 62.23(6)(a) of the Wisconsin Statutes specifies that the governing body of any municipality may by ordinance or resolution establish an Official Map of the community "showing the streets, highways, parkways, parks and playgrounds theretofore laid out, adopted and established by law...." (emphasis supplied). Section 62.23(6)(b) then goes on to specify that the governing body of any municipality may, as it deems necessary, add to the official map so as to establish the exterior lines of planned new streets, highways, parkways, parks or playgrounds or to widen, narrow, extend, or close existing streets, highways, parkways, parks or playgrounds. These requirements of the state enabling legislation clearly imply that a properly prepared Official Map must be based upon good "existing conditions" base maps; and such maps are, therefore, essential to good official mapping.

From a broader viewpoint, good base maps are a means of collecting, coordinating, and presenting, in a permanently useful form, much valuable information essential to sound municipal planning and engineering and as such represent one of the soundest long-term capital investments a community can make. The proper application and effectiveness of certain plan implementation devices, including the Official Map, subdivision control ordinances, and precise neighborhood development plans, all depend, to a considerable extent, upon the quality of the available community base maps. Improperly constructed base maps can represent a real loss of money to a community, not only in funds expended for the maps themselves, but also in the direct and indirect costs attendant with their future use.

The proper planning and engineering of municipal public works projects require constant attention to two factors: the land itself with its topography and physical characteristics and the boundaries of real property ownership. Full information concerning these two factors is essential if municipal public works projects are to be soundly conceived and effectively planned and executed. Consideration of these factors requires that the community have two types of base maps:

1. Accurate large scale topographic maps which show the exact configuration and elevation of the ground, stream and watercourse lines, and other major natural and man-made features of the landscape. For municipal planning and engineering purposes, it is desirable that topographic

maps have a scale of 1 inch equals 100 feet and a vertical contour interval of two feet. Absolute minimum scales for such maps should be no smaller than 1 inch equals 200 feet with a vertical contour interval of 5 feet. From such maps drainage areas can be defined and measured, distances accurately scaled, profiles drawn, grade lines established and computed, and alternative route locations for various types of facilities selected and evaluated. Historically, topographic maps were prepared by field surveying methods. Today, such maps are most often prepared by photogrammetric methods based upon aerial photography.

2. Accurate property boundary (cadastral) maps which show the location, arrangement, and dimensions of all real property boundary lines, all existing streets and alleys, together with their platted widths, and all existing land subdivisions. The scale of cadastral maps will vary with the type of community and may range from 1 inch equals 50 feet to 1 inch equals 200 feet, depending upon the characteristics of the community and the density of development. It is important that the scale selected for necessary cadastral maps be the same as that of the topographic maps so that the data presented by the two types of maps can be readily correlated by simple overlay processes.

If adequate base maps of sufficient precision exist, and if these maps are based upon permanently monumented field surveys so that their accuracy can be ascertained, then an Official Map can be readily created by simple compilation techniques. (See Figures 2 and 3.) If, however, as is more often the case, adequate base maps are lacking, then an official mapping project first requires the construction of base maps of sufficient precision and accuracy.

Unfortunately, base maps of required accuracy and precision providing the necessary inventory of the physical facts related to the land and its ownership are lacking for many of the communities within the Region. Many existing city, village and town "maps" hardly deserve to be dignified by this term, being no more than sketch compilations of paper records. Often, available maps of expanding urban areas are so poor as to make definitive planning very difficult and costly and plan implementation through such devices as the official map virtually impossible.

It has been common practice for engineers and surveyors to disregard the curvature of the earth's surface in carrying out local surveying and mapping operations. In such plane surveying operations, a level surface is considered to be a plane; and plumb lines are considered mathematically parallel. These assumptions, although not in accord with reality, permit survey points to be conveniently located by relatively simple surveying procedures and permit these survey points to be plotted on local "maps" without reference to a map projection. The scales of such local maps are usually referred to local ground level, and written dimension figures are commonly used on the face of the maps to

# N. E. ¼ SEC. 29, T. 7 N., R. 22 E.

361  
392  
387



FIGURE 2

Base map adequate for preparation of Official Map by simple compilation techniques. Note that the map is based upon monumented field surveys and that survey monuments and both measured and platted distances are shown.



# OFFICIAL MAP



COMPILED & DRAWN BY  
BUREAU OF ENGINEERS  
CITY OF MILWAUKEE,  
WISCONSIN



### LEGEND

- SECTION LINE ————
- 1/4 SEC LINE ————
- EXISTING STREET & ALLEY LINES ————
- PROPOSED STREET & ALLEY LINES ————
- RAILROAD RIGHT-OF-WAY LINES ————

DRAWN
5-23-63 EFA
REVISED

## N. E. 1/4 SEC. 29, T.7 N., R.22 E.



FIGURE 3

Official Map sheet prepared by simple compilation techniques from adequate base maps; complements base map sheet shown in Figure 2.

supplement scaled distances. Survey bearings are commonly referred to an assumed reference meridian through some point on the local survey and are, therefore, only relative. Elevations are commonly referred to a local datum plane. The errors inherent in such procedures do not become particularly troublesome until the area of survey operations approaches the order of 100 square miles. Therefore, so long as the areas to be mapped remain small, being confined to a single compact isolated urban area, no really serious problems result from the application of these traditional survey practices.

Continued application of traditional plane surveying techniques in an urbanizing region, or even in a county or single large city wherein it may be necessary to extend survey operations over many hundreds of square miles of area, can only result in chaotic mapping conditions. Under such conditions, distances, directions, and areas can no longer be accurately scaled from maps which utilize no projection in their construction. More importantly, individual surveys and maps can no longer be correlated; and accurate composite maps of an entire planning area can no longer be compiled. Relative bearings based upon an assumed meridian cannot be correlated, and even bearings based upon a true meridian passed through an initial survey point become unworkable as surveys proceed further and further east or west of the initial points and the difference in the directions of the original reference meridian and the true meridian increases.<sup>6</sup>

Existing topographic maps based on local vertical datum planes are extremely difficult to correlate with each other or with cadastral maps and records, and in some cases such correlation may be impossible. Such areawide maps as do exist cannot be maintained current because new facility construction and new land use development cannot be accurately related to either the areawide maps or to each other. Water related facilities such as sewers, drains, and water control structures, the elevations of which are related to local vertical datum planes, cannot be readily related to areawide topographic maps or to each other, making systems analyses and design extremely difficult.

The fact that topographic maps of urban areas and their environs are currently being compiled at an unprecedented rate of photogrammetric methods makes it imperative that municipal engineers, city planners, and land surveyors within the Region be concerned with the needs and concepts involved. Relatively simple changes in the specifications governing photogrammetric mapping operations can make these maps the truly effective planning and engineering tools they ought to be and can save much needless duplication of survey efforts at a later date.

Any accurate mapping project requires the establishment of a system of survey control. This survey control consists of a framework of points whose horizon-

---

6. In the latitude of southeastern Wisconsin, the convergence of meridians one mile apart is in the order of one minute of arc, sufficient to produce considerable errors in position when extended over 1/2 mile tangents.

and vertical positions and interrelationships have been accurately established by field surveys. The map details are adjusted to these points and may be checked against them. An effective official mapping project further requires that this control net be permanently monumented on the ground, so that ownership and reservation lines on the map may be accurately reestablished in the field when private land development or a public project approaches the construction stage. That is, the official map must not only accurately reflect field conditions, but must be accurately reproducible on the ground as well.

In this connection it should be noted that real property boundaries are dependent for their location on monuments erected in the field and that the certainty of their location may be destroyed by the destruction of these monuments. Since the accurate location of boundary lines is essential to sound official mapping, all basic land survey monuments in an urban area should be so related to each other and to the horizontal control net established for the mapping that they can be not only accurately mapped, but accurately reestablished as well.

#### A SUGGESTED SYSTEM OF SURVEY CONTROL

As previously noted, any accurate mapping project requires the establishment of a system of horizontal and vertical survey control. The horizontal survey control, if provided in accordance with the best engineering practice, would be established by first order triangulation or traverse nets tied to the national survey control net. This primary control would in turn be supplemented by second order traverse nets which would tie in all street boundary line points, thereby permanently establishing their coordinates as well as the bearings and distances of all street boundary lines. Although the value of such a broad city survey may be obvious to the engineer, because of the high cost involved it is often difficult, if not impossible, to convince authorities not sufficiently informed of its benefits. Moreover, such a broad city survey may well be out of the financial reach of many smaller municipalities, thus delaying or indefinitely postponing the construction of good base maps and an Official Map for such communities.

At the present time new topographic mapping in urban and urbanizing areas is usually based upon third order control nets, having at best temporarily monumented stations. These control nets are largely unrecoverable and, as a practical matter, unusable by local engineers and surveyors. These control nets are generally tied to the National Geodetic Datum, and the finished topographic maps compiled on a state plane coordinate grid. Property boundary line maps are, on the other hand, most often mere compilations of paper records, no framework of control being utilized in their construction at all. Accurate correlation of such cadastral maps with topographic maps and even with other cadastral maps is, therefore, virtually impossible.

A unique system of horizontal control based upon the U. S. Public Land Survey System, as well as upon the National Geodetic Datum, is suggested as a practical basis for the compilation of adequate base maps. The establishment of

such a control system requires the relocation and monumentation of all section and quarter-section corners within the area to be mapped and the utilization of these corners as stations in a second order<sup>7</sup> traverse net tied to the National Geodetic Datum. It is essential that the horizontal control surveys for urban mapping programs be at least of this order of accuracy, even though this degree of accuracy may not be required for the mapping work itself, in order that the control net have permanent utility in all subsequent local survey and mapping work. The control traverse net thus establishes the exact lengths and bearings of all quarter-section lines as well as the geographic positions of the public land survey corners themselves in the form of state plane coordinates. Such a system of survey control has the following important advantages over the control systems usually utilized today:

1. It provides a consistent and accurate system of control for real property boundary line mapping as well as for topographic mapping. Since the boundaries of the original government land division form the basis for all subsequent property divisions and boundaries, the accurate reestablishment of the quarter-section lines and corner permits, within the required limits of accuracy and precision, the compilation of property boundary line maps as well as the compilation by the usual photogrammetric methods of topographic maps. Property boundary base maps can be compiled by simply reconstructing on the drawing board all old plats and deed descriptions within the limits of each quarter section. Satisfactory cadastral maps of all but the oldest and most intensely developed parts of the larger cities can be compiled in this manner. Moreover, these boundary line maps can be readily and accurately updated and extended into newly developing areas since all new land subdivision plats must, by law, be tied to corners established in the public land survey. The accuracy of these plats can be readily controlled by local subdivision regulations. (See Land Development Guide, Planning Guide No. 1, 1963, prepared by the Southeastern Wisconsin Regional Planning Commission.)
2. It provides a common system of control for both topographic and real property boundary line maps. By relocating the U.S. Public Land Survey corners and accurately placing them on the state plane coordinate system, it becomes at once possible to prevent the future loss of these corners and to accurately correlate property boundary line information with topographic details supplied by aerial mapping. This placing of property boundary and topographic data on a common datum is essential to sound urban mapping, yet such a common control datum is rarely utilized. Much mapping work within the Region is done by aerial survey methods; and usual aerial mapping practices do not provide accurate

---

7. Maximum error of closure before adjustment; horizontal distance or position: 1 part in 10,000; azimuth: 4 seconds of arc per main station.

boundary line information on photogrammetrically compiled topographic maps, thus, seriously impairing their usefulness for municipal planning and engineering work. The establishment of state plane coordinates for the public land survey corners permits the transfer of details supplied by aerial mapping, including contour lines, to property boundary line maps by simple overlay methods. Savings in office research time made possible during the planning and design phases of municipal public works projects by having all available information, topography, property boundary lines and survey control, accurately correlated on one map are great. Moreover, such complete and correlated information and control make possible the consideration and analysis of many alternate routes for such public works facilities as trunk sewers, water transmission lines, major traffic ways, and of many alternative solutions to sewerage, water supply and transportation problems.

3. It provides an extremely practical horizontal control network readily usable by both private and public surveyors and engineers for all subsequent survey work within the mapped area. The control system suggested places a monumented, recoverable control station of known position on both the public land survey and state plane coordinate system and of known elevation at half-mile intervals throughout the mapped area. This monumented control net not only expedites such engineering surveys as are made almost daily, year in and year out, by such agencies as municipal engineering departments, county and state highway departments, and sewerage, expressway, airport, and harbor commissions for planning, design and construction layout purposes, but correlates and coordinates all of the survey work throughout the entire urban area. In this regard, the control system outlined is particularly valuable in providing a common system of control for the precise location and mapping of underground utilities, both public and private.
  4. It makes the state plane coordinate system available for the first time on a practical basis for property boundary survey control, thus preparing the way for the ultimate use of state plane coordinates in boundary descriptions.<sup>8</sup> The fact that the control system outlined requires the permanent monumentation of public land survey corners does much in itself
- 
8. The Wisconsin Legislature recently created Section 236.18 of the Wisconsin Statutes which officially adopts the state plane coordinate system established by the U. S. Coast and Geodetic Survey for the defining and stating of the position or location of points on the surface of the earth within the State of Wisconsin. As established for use in the southeastern Wisconsin region, this coordinate system shall be named and in any land description in which it is used it shall be designated the: "Wisconsin Co-ordinate System, South Zone." This section of the statutes makes it specifically permissible to use the Wisconsin Co-ordinate System for land survey and description purposes as a supplement to the U. S. Public Land Survey system.



to stabilize real property boundaries and makes the control net of great value to private land surveyors.<sup>9</sup> By utilizing this control, local land surveyors can, without changing their methods of operation or incurring any additional expense, automatically tie all of their surveys to the state plane coordinate system and reference all bearings used in land surveys, plats, and legal descriptions to Grid North and, therefore, to true north. If the use of the state plane coordinate system is to be encouraged, it is essential that it be made available in this manner to the local land surveyors.

5. It permits line drawn maps, whether these lines represent the limits of land to be reserved for future public use, the limits of land to be taken for immediate public use, the limits of districts to which public regulations are to be applied or the location and alignment of proposed public works projects, to be accurately and precisely reproduced upon the ground at the time of plan implementation or construction.
  6. It is readily adaptable to the latest survey techniques and of relatively low cost as compared to an urban first order triangulation system and its attendant supplementary control nets. When it is realized that the cost of control surveys executed in the usual manner for aerial mapping projects can account for one-quarter to one-third of the total cost of the finished maps, and when it is further realized that this control is largely unrecoverable and unusable by local engineers and surveyors and, therefore, a complete loss to the community, the real economy of utilizing the outlined control system becomes apparent. By allocating to the control survey work a relatively small additional amount of the total resources that might be available for mapping, far more effective and useful finished maps can be obtained; and a valuable and permanently useful system of survey control can be provided. The only significant increases in
- 
9. In many cases the proposed control net would provide the first meaningful survey control available to the land surveyor. Property corners in much of the Region have long been inadequately monumented and, therefore, readily susceptible to loss. Points of beginning for legal descriptions often depend upon unmonumented corners or on street and road intersections that cannot be precisely relocated. The accurate retracement of property boundaries under such conditions is extremely difficult and expensive, and the accurate mapping of such boundaries by municipal agencies is well-nigh impossible. Moreover, the uncertainties of title and accompanying litigation resulting from such conditions become more and more unsatisfactory as urbanization intensifies and land values increase. By relocating and adequately monumenting the public land survey corners and then accurately and precisely placing these corners on the state plane coordinate system, many of these difficulties can be eliminated.

cost actually assignable to the control system outlined are those incurred for the relocation and monumentation of the land survey corners and the small amount of additional traversing required to coordinate these corners. Experience indicates that this may amount to approximately 20 percent of the total cost of an urban mapping project, a small increase when weighed against the benefits to be derived.

A particularly efficient and economical mapping arrangement is for a municipality to undertake an aerial topographic mapping project as an integral part of its official mapping program. This not only supplies the topographic data necessary to the proper design of projects to be placed on the official map, but it affords a substantial economy in the cost of the control survey work.

The specifications governing such work should require that the monuments placed to mark the relocated public land survey corners consist of precast reinforced concrete monuments having engraved bronze caps embedded in their tops (see Figure 4). The bronze caps are stamped with the corner notation, quarter section, town and range, as well as with the second order benchmark elevation based on local datum. The monuments should be referenced by ties to at least three witness marks, and a dossier should be provided for each station in order to permit its ready recovery and use (see Figure 5). These dossier sheets should be filed with the county surveyor and thereby made available as public documents to all surveyors and engineers practicing in the mapped area.

Specifications should also require the control survey data to be summarized by means of a control survey summary diagram showing the exact length and grid bearing of the exterior boundaries of each quarter section; all monuments erected; the number of degrees, minutes, and seconds in the interior angles of each quarter section; the state plane coordinates of all quarter-section corners together with their public land survey system identification; the benchmark elevations of all monuments erected; and the basic U. S. Coast and Geodetic Survey control stations utilized to tie the public land survey corners to the geodetic control datum together with the coordinates of these stations. The angle between geodetic and grid bearing, the combination sea level and scale reduction factor, and the equation between local datum and mean sea level should also be given (see Figure 6).

Finished topographic maps, in addition to showing the usual contour information, spot elevations, planimetric and hydrographic detail and state plane coordinate grid ticks, should show in their correct position and orientation all quarter-section lines and corners established in the field surveys (see Figure 7).

Property boundary line maps should show the exact length and grid bearing of all quarter-section lines, the state plane coordinates of all quarter-section corners; the monuments marking these corners; the recorded dimensions of all

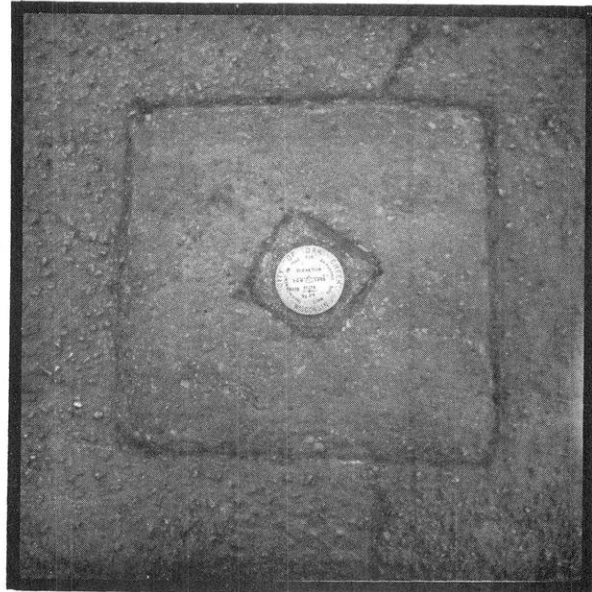


FIGURE 4

Photograph showing reinforced concrete survey monument placed to mark relocated public land survey corner. Bronze cap carries municipal identification, warning against disturbing marker, and numbers identifying corner in public land survey system.

**CITY OF OAK CREEK**  
**RECORD OF CONTROL SURVEY STATION - SECTION OR 1/4 SECTION CORNERS**

SECTION OR 1/4 SECTION CORNER  $\frac{24}{25} | \frac{24}{25}$  , TOWNSHIP 5 N, RANGE 22 E  
OR BENCH MARK NO. \_\_\_\_\_ IN \_\_\_\_\_ 1/4 SEC \_\_\_\_\_, T 5 N, R 22 E  
MILWAUKEE COUNTY, WISCONSIN

SET BY: Alster & Associates, Inc., Washington, D.C.

STATE PLANE COORDINATES: NORTH 325,007.70 EAST 2,577,989.20  
ELEVATION OF STATION: 80.12

HORIZONTAL DATUM: WISCONSIN STATE SYSTEM OF PLANE COORDINATES  
LAMBERT PROJECTION-SOUTH ZONE  
VERTICAL DATUM: CITY OF OAK CREEK  
HORIZONTAL & VERTICAL CONTROL ACCURACY: SECOND ORDER

---

LOCATION SKETCH:

DETAILED DESCRIPTION:

From South Chicago Road and East Ryan Road, drive east 0.7 mile.

SURVEYOR'S AFFIDAVIT:

STATE OF WISCONSIN  
MILWAUKEE COUNTY

I HEREBY CERTIFY THAT I found a 6" square limestone monument, 8" below the  
road surface.

DATE OF SURVEY June 1961 \_\_\_\_\_ S 371  
REGISTERED LAND SURVEYOR

FIGURE 5

Typical dossier sheet prepared for each control survey station sets forth all information necessary to recovery and use of station.

TOWNSHIP 5 NORTH, RANGE 22 EAST  
 CITY OF OAK CREEK  
 COUNTY OF MILWAUKEE

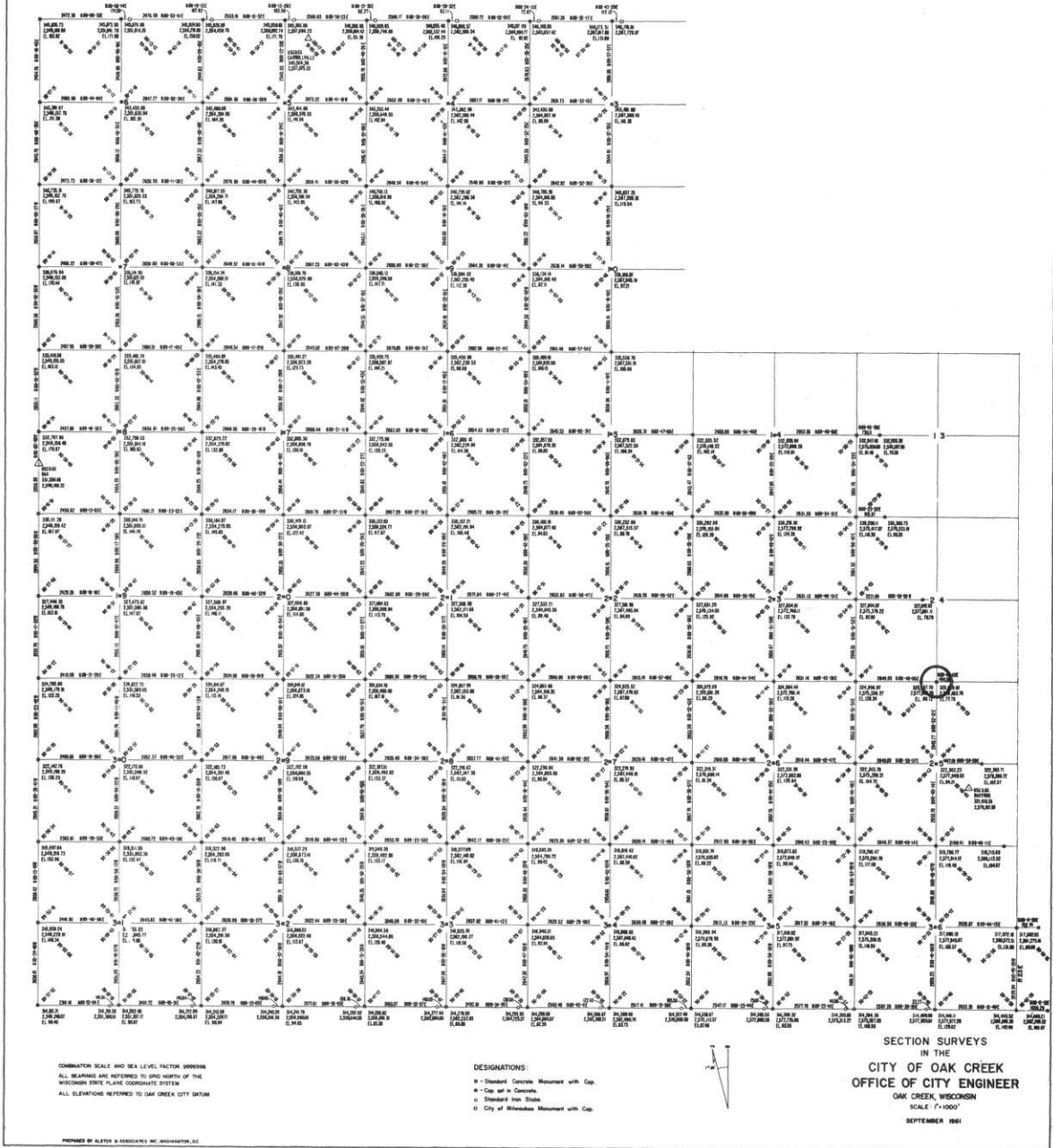


FIGURE 6

Finished control survey summary diagram covers entire urban area and precisely locates public land survey corners on the state plane coordinate system. Diagram gives complete survey control information including coordinates and elevations of all monuments, lengths, and bearings of all quarter section lines and interior angles of all quarter sections. Note the relative density of secondary control stations versus that of U. S. C. & G. S. primary control stations.

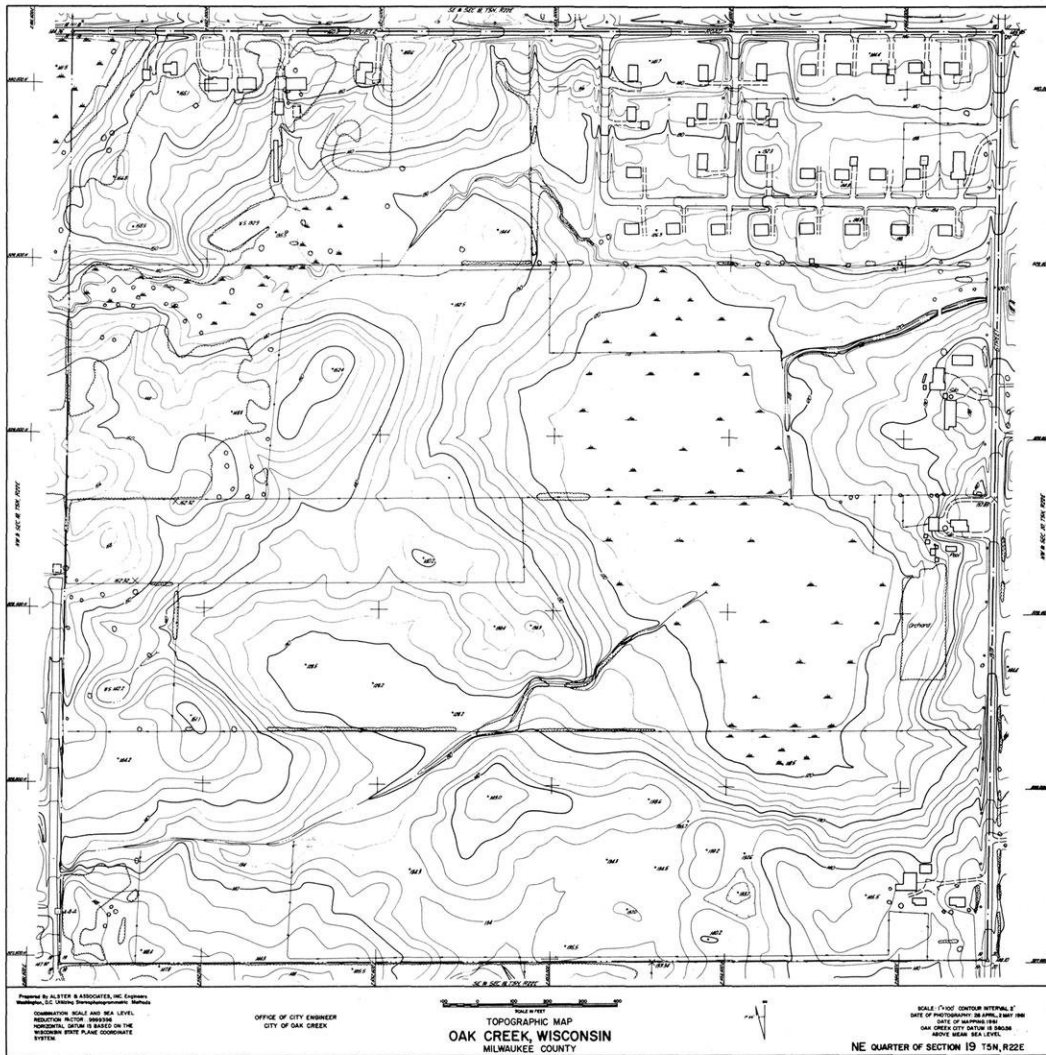
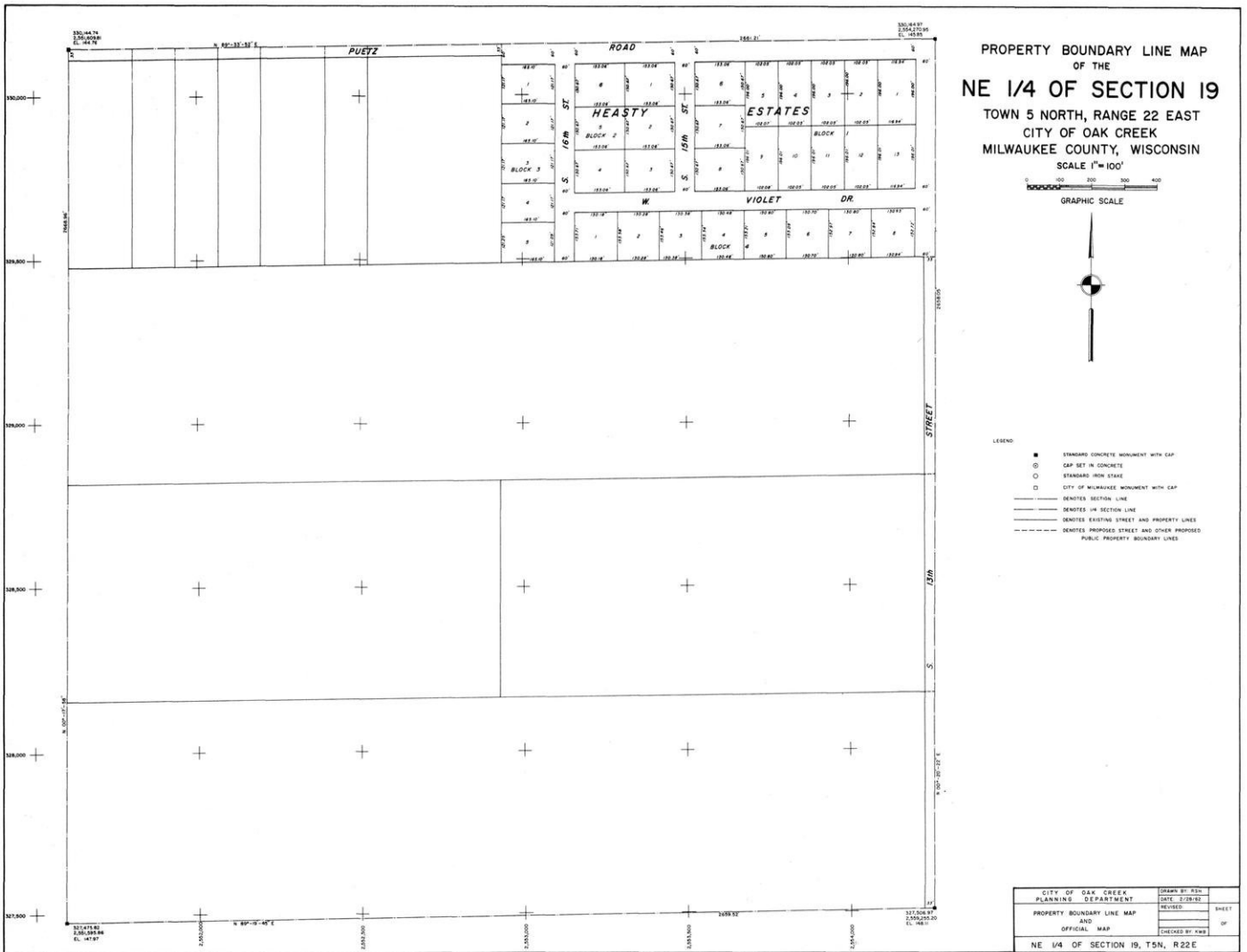


FIGURE 7

Typical finished topographic map sheet showing, in addition to usual information, the correct position and orientation of the quarter section lines and corners. Maps are compiled by quarter section.

street lines, alley lines, and boundaries of public property; recorded street widths and platted lot dimensions. In unplatted areas real property boundary lines may be shown by scale alone (see Figure 8). It is this particular base map which is initially adopted by the governing body of the municipality as the Official Map. Specific projects, such as new major streets and highways; proposed street widenings, relocations or vacations; or proposed parks, parkways, and playgrounds, may then be taken from the master plan, detailed as to specific locations and added to the base maps, and the revised base maps adopted as the amended Official Map (see Figure 9).

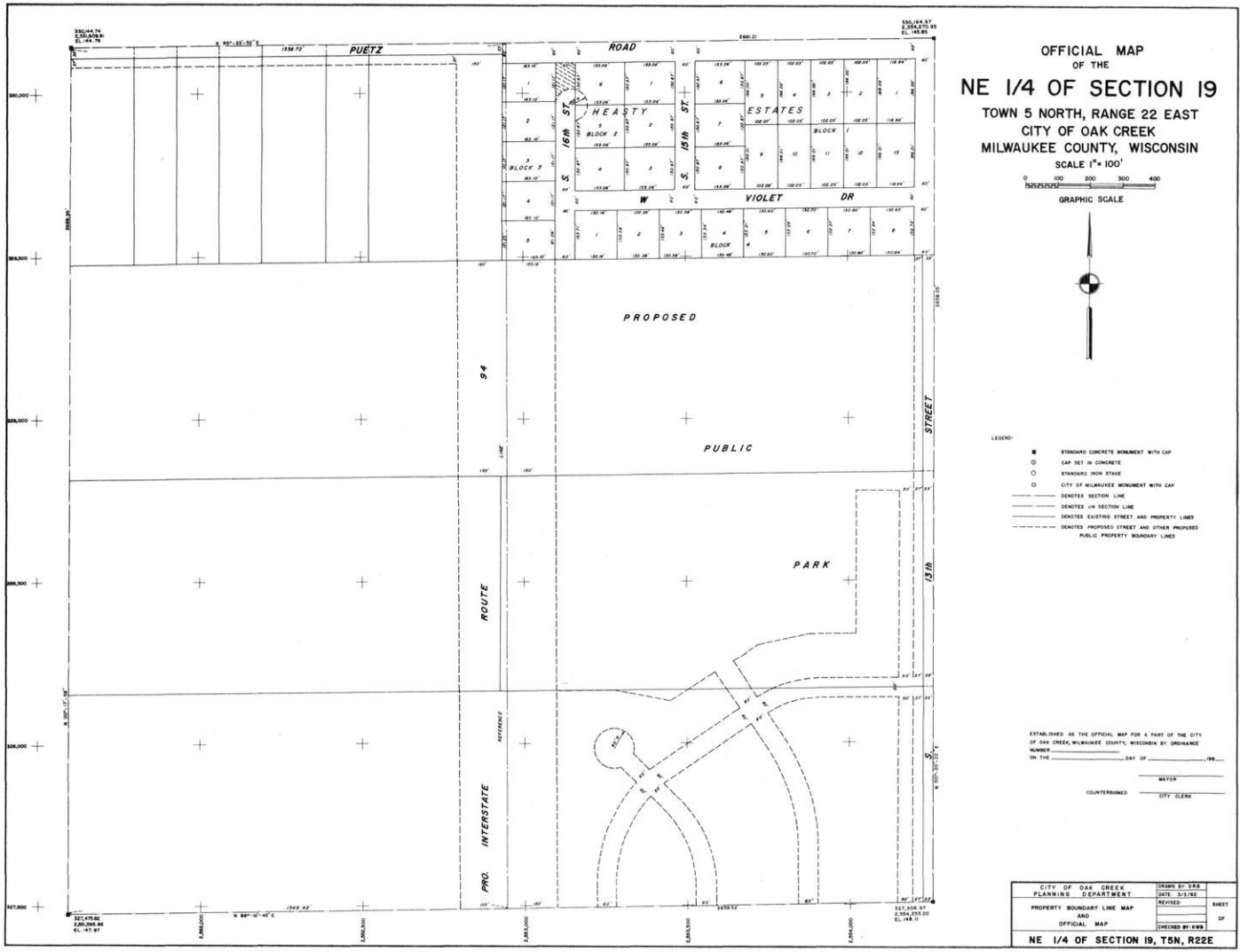
It is suggested that the base maps be compiled by U.S. Public Land Survey quarter section or section. For all but the smallest communities an individual sheet should be used for each quarter section or section mapped. While mapping scales must be adopted for the specific needs of each individual community, a commonly used scale for urban base maps is 1 inch equals 100 feet. Section and quarter-section corners should be plotted by coordinates, and all other property boundary lines should be plotted by scale from title records and adjusted to the quarter-section lines. Compilation of the maps in this manner permits their reduction on a 10 to 1 ratio for the compilation of an accurate wall map showing the entire community at a final scale of 1 inch equals 1,000 feet by mosaic process and at a 2 to 1 ratio for compilation of neighborhood unit maps for planning and utility systems engineering purposes. Contour information is, of course, readily and accurately transferable from topographic maps by a simple overlay process. On completion of the base and wall maps, their adoption by the local governing body as an Official Map can be undertaken and specific projects detailed and placed on the adopted Official Map as plan implementation begins. In this way a scientific basis can be provided for all future surveying and mapping work in the community as well as the preparation of an Official Map achieved in a practical manner.



**FIGURE 8**

Typical finished property boundary line map sheet. Property boundary lines are tied precisely to the state plane coordinate system, making accurate correlation with topographic maps possible. Property boundary line map sheet complements topographic map sheet shown in Figure 6.





**FIGURE 9**

Typical finished Official Map sheet. Map shows precise locations for such proposed public works projects as a major freeway, the widening of two arterial streets, a public park, frontage roads, and residential street patterns. Map sheet shown complements those shown in Figures 6 and 7.

**APPENDICES**



APPENDIX A

MODEL OFFICIAL MAP ORDINANCE

In the following model ordinance where the word *City* appears in italics, the word Village or Town may be substituted; where the word *Mayor* appears, the words Village President or Town Chairman may be substituted; and where the term *Common Council* appears in italics, the term Village Board or Town Board may be substituted. Other words appearing in italics may be changed to best meet the needs and desires of the individual community.

Please note that this model official map ordinance is intended only as a guide to communities in the formulation of local ordinances. Competent legal, planning and engineering assistance should be sought in conjunction with the use of this guide by communities in developing local ordinances.



## MODEL OFFICIAL MAP ORDINANCE

### SECTION 1. Introduction

WHEREAS, the *Common Council* of the *City* of \_\_\_\_\_, after recommendation by the *City Plan Commission* has heretofore adopted on \_\_\_\_\_, 19\_\_\_\_\_, an Arterial Street and Highway Plan as a part of the Master Plan of the *City* and

WHEREAS, the *City Plan Commission* has recommended to the *Common Council* that an Official Map be established for the *City* of \_\_\_\_\_, and

WHEREAS, a public hearing was held before the *Common Council* of the *City* of \_\_\_\_\_, on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_, on the question of the adoption of an Official Map, and

WHEREAS, the *Common Council* of the *City* of \_\_\_\_\_ has determined that it is necessary for the proper physical development of the *City* to establish an Official Map for the *City* of \_\_\_\_\_,

NOW, THEREFORE, the *Common Council* of the *City* of \_\_\_\_\_, \_\_\_\_\_ County, Wisconsin, do ordain as follows:

#### 2. Intent

It is the intent of the *Common Council* to establish an Official Map for the purpose of serving and promoting the public health, safety, convenience, economy, orderliness and general welfare of the community; to further the orderly layout and use of land; to stabilize the location of real property boundary lines; to insure proper legal descriptions and proper monumenting of land; to facilitate adequate provision for transportation, parks, playgrounds, and storm water drainage; and to facilitate the further subdivision of larger tracts into smaller parcels of land.

#### 3. Authority

This Ordinance is enacted under the authority granted by Section (s)62.23(6) of the Wisconsin Statutes.

#### 4. Official Map

The Official Map shall show the location and extent of all platted and existing streets, highways, parkways, parks and playgrounds within the corporate limits of the *City* of \_\_\_\_\_ as heretofore laid out, adopted and established by law. There is hereby established, as the Official Map of the *City* of \_\_\_\_\_, the Map which accompanies and is made a part of this Ordinance bearing the date of \_\_\_\_\_, 19\_\_\_\_\_. This map is hereby designated as the "Official Map of the *City* of \_\_\_\_\_," and all notations, references and other information shown thereon shall be as much a part of this Ordinance as though the matters and information thereon were fully described herein.

#### 5. Changes and Additions

The *Common Council* may change or add to the Official Map so as to establish the exterior lines of; widen; narrow; extend; or close any platted, existing, proposed or planned streets, highways, parkways, parks or playgrounds.

### SECTION 5. (Cont'd)

The *Common Council* shall refer any change or addition to the Official Map to the *City Plan Commission* for review and report thereon prior to adoption. The *City Plan Commission* shall report their recommendation to the *Common Council* within sixty (60) days.

A Public Hearing of parties in interest and citizens before the *Common Council* shall be required before any changes or additions to the Official Map are effective. At least twenty (20) days' notice of said hearing shall be required by publication.

Changes and Additions made by duly approved subdivision plats shall not require the public hearing if the changes or additions do not affect any land outside the area being platted.

#### 6. Building Permits

For the purpose of preserving the integrity of the Official Map, a building permit shall be required for any structure or part thereof that shall hereafter be located, erected, moved, reconstructed, extended, enlarged, converted or structurally altered. No permit shall hereafter be issued for any building in the bed of any existing or proposed street, highway, or parkway shown on the Official Map. No permit for the erection of any building shall be issued unless a street, highway, or parkway giving access to such proposed structure has been duly placed on this Map.

The Building Inspector may require each applicant for a building permit to submit a plan, prepared and certified by a registered land surveyor, showing accurately the location of any proposed building with reference to any street, highway, or parkway shown on the Official Map.

#### 7. Municipal Improvements

No public sewer or other municipal street utility or improvement shall be constructed in any street, highway or parkway within the corporate limits of the *City* of \_\_\_\_\_ until such street, highway, or parkway is duly placed on the Official Map.

#### 8. Appeals

The Board of Zoning Appeals shall have the power to review any administrative decision of the *City Building Inspector* to deny a permit for the erection of a structure under this Ordinance and to grant relief from the requirements of this Ordinance under the provisions of Sections 62.23(6) (d),(f), and (g) of the Wisconsin Statutes.

#### 9. Certified Copy of Map

There shall be a certified copy of the Official Map described in Section 4. The certified copy shall be kept in the Office of the *City Clerk*, and shall be available for inspection by any interested person during regular office hours. The certified copy shall bear on its face a certification that it is a true copy of the Official Map described in and accompanying this Ordinance and shall show the date of adoption of this Ordinance and shall be signed by the *Mayor* and countersigned by the *City Clerk*. Thereafter no change or addition to such Official Map shall become effective until it shall have been in-

SECTION 9. (Cont'd) dictated by the appropriate convention on the aforesaid certified copy of the Official Map and a certificate placed thereon or attached thereto bearing the number and date of adoption of the amending ordinance. The certificate shall be signed by the Mayor and countersigned by the City Clerk.

10. Map To Be Filed With Register of Deeds

The City Clerk shall be responsible immediately upon adoption of the Official Map or any amendment thereto for recording a true copy of the amended Official Map with the Register of Deeds of the County(ies) of \_\_\_\_\_, Wisconsin.

11. Enforcement

It shall be the duty of the City Building Inspector and the Chief of Police to enforce the provisions of this Ordinance.

12. Penalties

Any person, firm or corporation who fails to comply with the provisions of this Ordinance shall, upon conviction thereof, forfeit not more than Two Hundred Dollars (\$200.00) and not less than Fifty Dollars (\$50.00) and cost of prosecution for each violation, and in default of payment of such

SECTION 12. (Cont'd) forfeiture and costs shall be imprisoned in the county jail until payment thereof but not exceeding thirty (30) days.

No Damages shall be allowed for the taking by any governmental agency, for street, highway and parkway purposes, any building erected in violation of this Ordinance.

13. Severability and Conflict

If any section or part of this Ordinance is adjudged unconstitutional or invalid by any court of competent jurisdiction, the remainder of this Ordinance shall not be affected thereby. All other ordinances or parts of ordinances of the City inconsistent with this Ordinance to the extent of the inconsistency only are hereby repealed.

14. Effective Date

This Ordinance shall be effective after adoption by the *Common Council* and publication or posting as provided by law.

Adopted \_\_\_\_\_

Published \_\_\_\_\_

Effective \_\_\_\_\_

Countersigned: \_\_\_\_\_ Mayor

\_\_\_\_\_ City Clerk

## Appendix B

### LOCAL OFFICIAL MAP ENABLING ACT

#### SECTION 62.23(6) OF THE WISCONSIN STATUTES, 1961

##### "(6) OFFICIAL MAP

"(a) The council of every city may by ordinance or resolution establish an official map of the city showing the streets, highways, parkways, parks and playgrounds theretofore laid out, adopted and established by law, and such map is to be deemed to be final and conclusive with respect to the location and width of streets, highways and parkways, and the location and extent of parks and playgrounds shown thereon. Such official map is declared to be established to conserve and promote the public health, safety, convenience or general welfare. Said ordinance or resolution shall make it the duty of the city clerk at once to file with the register of deeds of the county or counties in which such city is situated a certificate showing that the city has established such official map.

"(b) Such city council is authorized and empowered, whenever and as often as it may deem it for the public interest, to change or add to the official map of the city so as to establish the exterior lines of planned new streets, highways, parkways, parks or playgrounds, or to widen, narrow, extend or close existing streets, highways, parkways, parks or playgrounds. No such change shall become effective until after a public hearing in relation thereto before the city council or a committee appointed by the city council from its members, at which parties in interest and citizens shall have an opportunity to be heard. At least 20 days' notice of such a public hearing shall be published in an official publication of said city or in a newspaper of general circulation therein. Before making such addition or change, the council shall refer the matter to the city plan commission for report thereon, but if the city plan commission shall not make its report within 60 days of such reference, it shall forfeit the right to further suspend action. Such additions and changes when adopted shall become a part of the official map of the municipality, and shall be deemed to be final and conclusive with respect to the location and width of the streets, highways and parkways and the location and extent of parks and playgrounds shown thereon. The placing of any street, highway, parkway, park or playground line or lines upon the official map shall not in and of itself constitute or be deemed to constitute the opening or establishment of any street, parkway, park or playground, or the taking or acceptance of any land for such purposes.

"(c) The locating, widening or closing, or the approval of the locating, widening or closing of streets, highways, parkways, parks or playgrounds by the city under provisions of law other than this section shall be deemed to be a change or addition to the official map, and shall be subject to the provisions of this section, except that changes or additions made by a subdivision plat approved by the city under ch. 236 shall not require the public hearing specified in par. (b) if the changes or additions do not affect any land outside the platted area.



"(d) For the purpose of preserving the integrity of such official map, no permit shall hereafter be issued for any building in the bed of any street, highway or parkway, shown or laid out on such map except as provided in this section. The street, highway or parkway system shown on the official map may be shown on the official map as extending beyond the boundaries of a city or village a distance equal to that within which the approval of land subdivision plats by the city council or village board is required as provided by s. 236.10 (1) (b) 2. Any person desiring to construct a building in the bed of a street, highway or parkway so shown as extended may apply to the authorized official of the city or village for a building permit. Unless such application is made, and the permit granted or not denied within 30 days, such person shall not be entitled to compensation for damage to such building in the course of construction of the street, highway or parkway. If the land within such mapped street, highway or parkway is not yielding a fair return, the board of appeals in any municipality which has established such a board having power to make variances or exceptions in zoning regulations, shall have power in a specific case, by the vote of a majority of its members, to grant a permit for a building in such street, highway or parkway, which will as little as practicable increase the cost of opening such street, highway or parkway, or tend to cause a change of such official map; and such board may impose reasonable requirements as a condition of granting such permit, which requirements shall be designated to promote the health, convenience, safety or general welfare of the community. Such board shall refuse a permit where the applicant will not be substantially damaged by placing his building outside the mapped street, highway or parkway.

"(e) In any city in which there is no such board of appeals, the city council shall have the same powers and shall be subject to the same restrictions. For this purpose such council is authorized to act as a discretionary administrative or quasi judicial body. When so acting it shall not sit as a legislative body but in a separate meeting and with separate minutes kept.

"(f) Before taking any action authorized in this subsection, the board of appeals or city council shall hold a hearing at which parties in interest and others shall have an opportunity to be heard. At least 15 days' notice of the time and place of such hearing shall be published in the official publication of such city or in a newspaper of general circulation therein. Any such decision shall be subject to review by certiorari issued by a court of record in the same manner and pursuant to the same provisions as in appeals from the decisions of a board of appeals upon zoning regulations.

"(g) In any city which has established an official map as herein authorized no public sewer or other municipal street utility or improvement shall be constructed in any street, highway or parkway until such street, highway or parkway is duly placed on the official map. No permit for the erection of any building shall be issued unless a street, highway or parkway giving access to such

proposed structure has been duly placed on the official map. Where the enforcement of the provisions of this section would entail practical difficulty or unnecessary hardship, and where the circumstances of the case do not require the structure to be related to existing or proposed streets, highways or parkways, the applicant for such a permit may appeal from the decision of the administrative officer having charge of the issue of permits to the board of appeals in any city which has established a board having power to make variances or exceptions in zoning regulations, and the same provisions are applied to such appeals and to such boards as are provided in cases of appeals on zoning regulations. The board may in passing on such appeal make any reasonable exception, and issue the permit subject to conditions that will protect any future street, highway or parkway layout. Any such decision shall be subject to review by certiorari issued by a court of record in the same manner and pursuant to the same provisions as in appeals from the decision of such board upon zoning regulations. In any city in which there is no such board of appeals the city council shall have the same powers and be subject to the same restrictions, and the same method of court review shall be available. For such purpose such council is authorized to act as a discretionary administrative or quasi judicial body. When so acting it shall not sit as a legislative body, but in a separate meeting and with separate minutes kept.

"(h) In those counties where the county maintains and operates parks, parkways, playgrounds, bathing beaches and other recreational facilities within the limits of any city, such city shall not include said facilities in the master plan without the approval of the county board of supervisors."



## Appendix C

### COUNTY MAP ENABLING ACT

#### SECTION 80.64 OF THE WISCONSIN STATUTES 1961

"Widening of highways; establishment of excess widths. With the approval of the governing body of the municipality in which a street or highway or part thereof, is located, the county board may, to promote the general welfare, establish street and highway widths in excess of the widths in use; and likewise may adopt plans showing the location and width proposed for any future street or highway, which shall not be subject to section 80.32(2). Such streets or highways or plans therefor shall be shown on a map (showing present and proposed street or highway lines and also property lines and owners except in counties having a population of 500,000 or more) then filed in the office of the register of deeds, and notice of such filing shall be published in a newspaper of general circulation in the territory in which such streets or highways are located once each week for 3 successive weeks, and shall be posted in at least 3 public and conspicuous places along each such street or highway. The notice shall briefly set forth the action of the county board. The county board, upon like approval, publication and notice, may from time to time supplement or change the same, and such supplements or changes shall be similarly filed in the office of the register of deeds. The excess width for streets or highways in use for the right of way required for those planned, may be acquired at any time either in whole or in part by the state or county or municipality in which located; but no part shall be acquired in less than the full extent, in width, of the excess width to be made up of land on the same side of the street or highway, nor for less than the full length of such excess width lying within contiguous land owned by the same owner. Any land so acquired, whether the excess width is acquired for the full length of the street or highway or not, shall at once become available for highway purposes. The power to acquire such right of way or additional width in portions as provided herein may be exercised to acquire the land on advantageous terms. In counties containing a population of 500,000 or more if, subsequent to the establishment of widths on streets or highways by a county board with the approval of the governing body of the municipality in which such streets or highways lie, in conformity with this section or section 59.97, any area embracing a street or highway upon which a width has been so established is annexed to a city or village or becomes a city or village by incorporation, such city or such village shall thereafter adhere to such established width, and shall not, subsequent to any annexation or incorporation, except with the approval of the county board, alter or void such established width, nor shall any construction or development be permitted or sanctioned by such city or such village or any of its officers or representatives which will interfere with, prevent or jeopardize the obtaining of the necessary right of way to such established width."



**STAFF**

SOUTHEASTERN WISCONSIN REGIONAL  
PLANNING COMMISSION

Kurt W. Bauer . . . . . Executive Director

Central Office

David Fonseca, Jr. . . . . Chief Resources Planner

Dallas R. Behnke . . . . . Chief Draftsman

William J. Kockelman . . . . . Chief Community Assistance Planner

Land Use-Transportation Study Office

J. Robert Doughty . . . . . Study Director

Richard B. Sheridan . . . . . Chief Transportation Planner

Harlan E. Clinkenbeard . . . . . Chief Land Use Planner

Kenneth J. Schlager . . . . . Chief Systems Engineer

Sheldon W. Sullivan . . . . . Administrative Officer

Wade G. Fox . . . . . Cartographic and Design Supervisor

SECRET  
NO FOREIGN DISSEM  
NO UNCLASSIFIED DISSEM  
NO UNCLASSIFIED DISSEM