SIDWELL STUDIO, INC.

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Sustaining Member: American Congress of Surveying Mapping
Member of: American Society of Photogrammetry
American Right-of-Way Association
Illinois Registered Land Surveyors Association (Associate)
International Association of Assessing Officers (Subscribing)

It is not all neatly charted

Not very many people are familiar with the work of modern day mapmakers . . . nor with tax mapping, legal descriptive mapping, the many uses for aerial photography and topographic mapping . . . The impression exists that every last acre in the United States, or at least in the more populous areas, is neatly charted and plotted on maps . . . Such is not the case . . . Millions of tax dollars aren't collected year after year simply because an amazingly large number of real estate parcels aren't recorded . . . Too few people, who should be, are aware that government, industry and business can make wide and profitable use of aerial photography, tax maps and topographical maps.

The purpose of this brochure is to acquaint people, who should know about them, with all the map making and allied services that Sidwell Studio, Inc. offers . . . In the pages that follow, we are going to explain what these services are and how they can be used . . . and give an insight into the production of maps, atlases, aerial mosaics, etc., and the people and equipment necessary to produce them.

R. Louis Rex / president

Over the years . . . constant expansion

The main office and mapmaking facilities of Sidwell Studio, Inc., are located 28 miles west of Chicago on Route 64 (North Avenue). Constructed in 1960, the Sidwell building is located in a 15-acre parkland setting, which is fully landscaped and has two artificial lakes that provide recreational facilities for employees. The original building contained 6,000 square feet of floor space. Recently, a wing was added and the building expanded to 11,000 square feet.

Expansion is an old story at Sidwell. Since the company was founded in 1927 it has had to move into larger quarters on several occasions to accommodate a constantly growing volume of business.

Laboratories, drafting rooms, a film library, stereo compilation and administrative offices, and various reproduction facilities — for microfilming, photography and mosaic compilation — are housed in our main building. The company also leases a second building in West Chicago which is mainly used for storage.

Sidwell offers its clients four basic services

TAX MAPPING for COUNTY and LOCAL GOVERNMENT (for Assessors, Auditors, Collectors, Boards of Equalization)

Invariably, thousands of dollars in additional tax revenue are gained for taxing bodies through the discovery of omitted improvements when Sidwell maps an area for regional, county or local governments.

Our comprehensive tax mapping service includes research, planning and design of a permanent parcel numbering system; an aerial survey of an area that is mapped; tax maps showing all legal descriptive information and all parcel boundries and dimensions, with permanent parcel number identification. (The lengthy legal descriptive information is reduced to code for Data Processing, providing rapid identification and location of any tax parcel.) Original masters on polyester film, with matching aerial photographic enlargements, Populous maps and Township Index maps are delivered along with Black Line bound prints of the above maps.

Also included in the tax mapping service: Record Cards with permanent parcel number assignment, written reports of Erroneous Legal Descriptions, Incorrect Acreage Listings and other discrepancies. Technical assistance in putting tax maps and parcel numbering systems into operation, and instruction on the installation of a Data Processing system also are provided.

Many immediate and future benefits are derived from Sidwell's professional tax mapping service: • New maps give accurate, concise and visual records, uncluttered with excessive information • Aerial photo portion of tax map documents real property records • Tax maps inventory every square inch of land in an area • Copies of tax maps are easily reproduced • New aerial photos can be acquired periodically and matched to maps for appraisal and re-assessment • Electronic Data Processing is readily adaptable to assessing, billing, collection through the permanent parcel numbering system.

LEGAL DESCRIPTIVE ATLASES (for Engineers, Surveyors, Real Estate Brokers, Banks, Savings & Loan Companies, Abstract Companies, Title Companies, Attorneys, Utilities, Federal, State, County, City, Village and Township government agencies)

A Legal Descriptive Atlas gives cohesion to the vast amount of property data that has been collected but often not collated so it is available for easy use. Aer-O-Plats made from aerial photos taken at two different altitudes enable draftsmen to accurately plot property lines, rights-of-way and other topographical landmarks. Base county and city street maps are drawn from aerial maps, and city house numbering systems can be applied to maps, if wanted. Alphabetic indexing of county subdivisions also is made. Maps and other pertinent information are collected in easy-to-use, loose leaf bound atlases. A geographic page numbering system, in which all pages are numbered by legal description, is a feature of a Sidwell atlas. Another is a two-way indexing of the atlas—by subdivision name, and geographically by county and city street maps.

Sidwell offers an annual updating service, at nominal charge, that brings all new subdivision and annexations into the atlas. Because of this continuing service, a Sidwell atlas never becomes outdated, thus protecting the subscriber's original investment.

AERIAL PHOTOGRAPHY (for Engineers, Surveyors, Real Estate Developers, Municipalities, County and Township Governments, Utilities, Industries, School, Sanitary and Park Districts)

For years, business, industry and government have found numerous uses for Sidwell aerial photographs and mosaics. They save valuable time in determining drainage and road patterns. Much valuable land data can be gleaned from them. They are widely used in street and highway planning, house counts, commercial and

factory inventorying, railroad valuations, etc. Aerial photographs and mosaics, exact as to scale, are invaluable in planning shopping centers, sales territories, making traffic counts, for safety, insurance and fire control studies. Civil Defense authorities have used them extensively in planning evacuation routes.

TOPOGRAPHIC MAPPING (for Engineers (consulting), Surveyors, Land Developers, Utilities, Highway Engineers, Government Agencies, Business and Industry)

Third dimension analysis is made possible through the use of topographic maps, which can be drawn to scale ground elevations at contour intervals of one-foot. Usually, these maps are drawn in one to ten feet intervals. Topographic maps are indispensable in determining drainage patterns, enabling engineers to intelligently locate sewer and drainage systems. They are widely used in determining best locations for streets, highways, transmission lines, pipe lines, rights-of-ways, etc. Companies that stockpile materials such as coal, ore, stone, etc., have made increasing use of topographic maps for inventory taking. There are numerous other ways in which the maps can be put to use: in solving zoning problems, re-locating bridges, deciding on green-belt and recreation area locations, control of lake, river and stream pollution, etc.

The four basic services that Sidwell performs are briefly described here. A more complete explanation of the service in which you are most vitally interested is contained in the supplementary booklet or pages enclosed with this brochure.

The drafting board was a dining room table

The Sidwell story is a typical American success story. Back in 1927 Sidwell Studio, Inc., was founded on the strength of a free lance assignment . . . and it became established on a dining room table. From these humble beginnings it has emerged as one of the country's leading legal descriptive and topographic mapmaking companies.

The late Joe H. Sidwell, who founded the company, started in the mapmaking business in 1924 as an employee of the W. W. Hixson Company, Rockford, Ill. Two years later he was made a partner in the firm. A man with an artistic flair, Mr. Sidwell introduced art in real estate maps that generated much enthusiastic comment among realtors. The Rand McNally Co., impressed by his novel approach to map making, gave him a free lance assignment to work on historical and scenic maps of Chicagoland. This assignment led to his establishing his own company.

While Sidwell Studio, Inc., was being established, Mr. Sidwell worked with the Hixson firm in pioneering real estate atlases. Legal descriptive information, which had been widely scattered until this time, was gathered into atlas form and made readily available to everyone in the real estate industry.

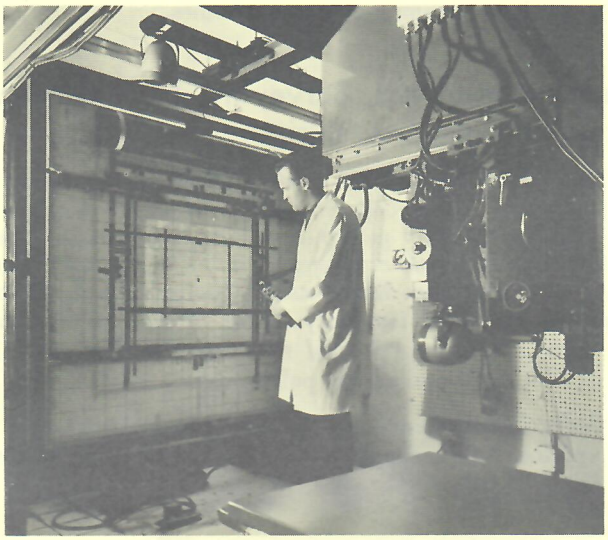
In 1932, working at home with his wife and using the dining room table as a drawing board, Mr. Sidwell developed a new type of pen and ink map. It was technically known as a legal descriptive map, but was commonly called a "Sidwell" by people in the real estate business. Three years later Sidwell Studio started buying aerial photos to expand the scope of its map making.

From 1935 until 1957, Sidwell Studio grew steadily, becoming solidly established as one of the top legal descriptive map making companies in the United States.

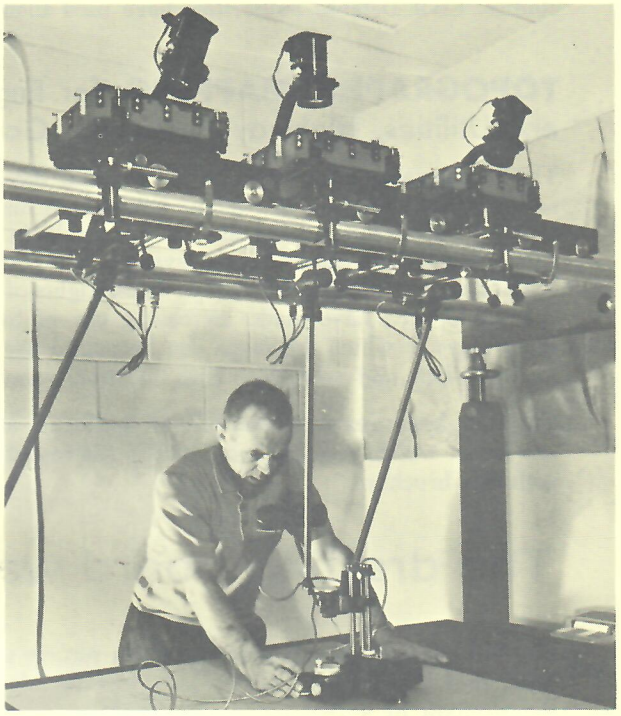
In 1957, Sidwell was selected to undertake the huge task of revising the complex Cook County, Illinois, property tax system. Aerial surveys were made to prepare thousands of sectional maps, a permanent index numbering system covering 1,250,000 parcels of real estate was installed, and the entire County tax operation was converted to data processing. This three-year project was handled so expertly that the Cook County tax processing system has become recognized as a model, applicable to 5,000 or 10,000 parcel systems as well as those involving more than a million parcels.

In 1960, Sidwell Studio moved into its present building and bought its first planes so that it was no longer dependent on outside companies for aerial photographs. The same year R. Louis Rex was named president of the company, succeeding the late Joe H. Sidwell. The staff by this time had been increased to nearly 50 persons, most of whom are highly trained technicians, masters of the tools and techniques that have been improved so dramatically in the last decade to make mapmaking and aerial photography the highly developed sciences they are.

Mapmaking and aerial photography call for the use of advanced precision equipment

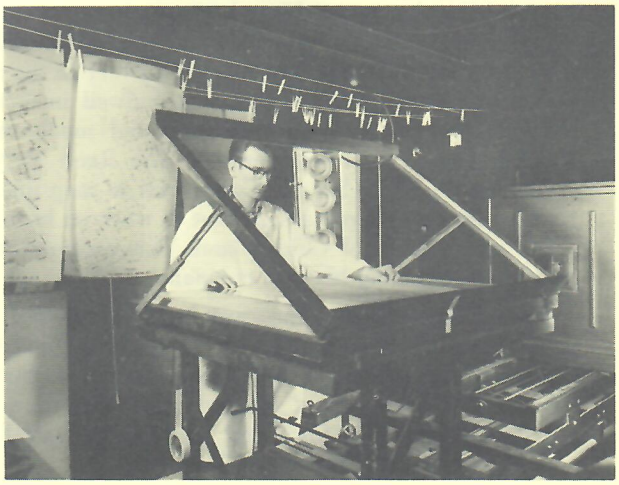


Precision projector rectifier, custom built for Sidwell, can enlarge 9 x 9-inch negative 12 times, giving clarity to a rooftop photographed at 6,000 feet.



Stereo plotter is used for topographic and planimetric mapmaking and volumetric computation. Topo maps can be scaled at 1 - to 20- foot contour intervals.

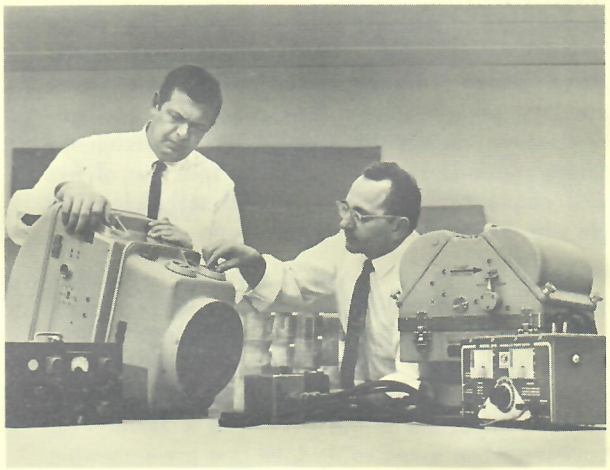
Microfilm camera is used to reduce real estate and government records, tax maps and many other documents for security as well as safe and easy storage.



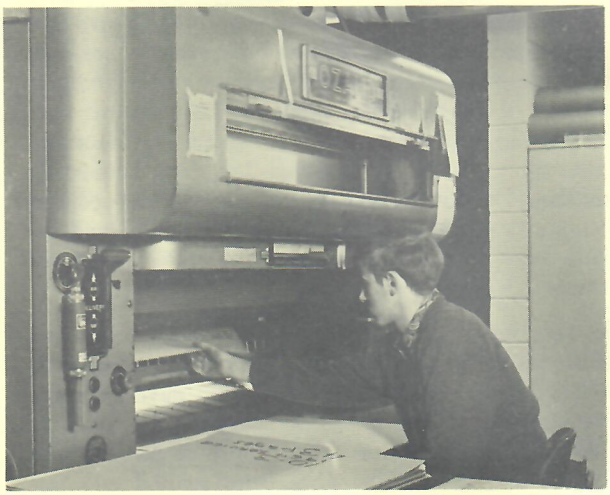
A 31-inch Robertson copy camera is used to enlarge or reduce to exact scale line copy, halftones, aerial mosaics, topo maps and planimetric maps.

Sidwell plane prepares to take off on aerial survey flight. The plane, a specially modified Cessna 310, is manned by a highly trained crew. Most of our aerial photography is done in the spring and fall.

Technician compiles a semi-controlled aerial mosaic. Large county can be covered in a single mosaic.

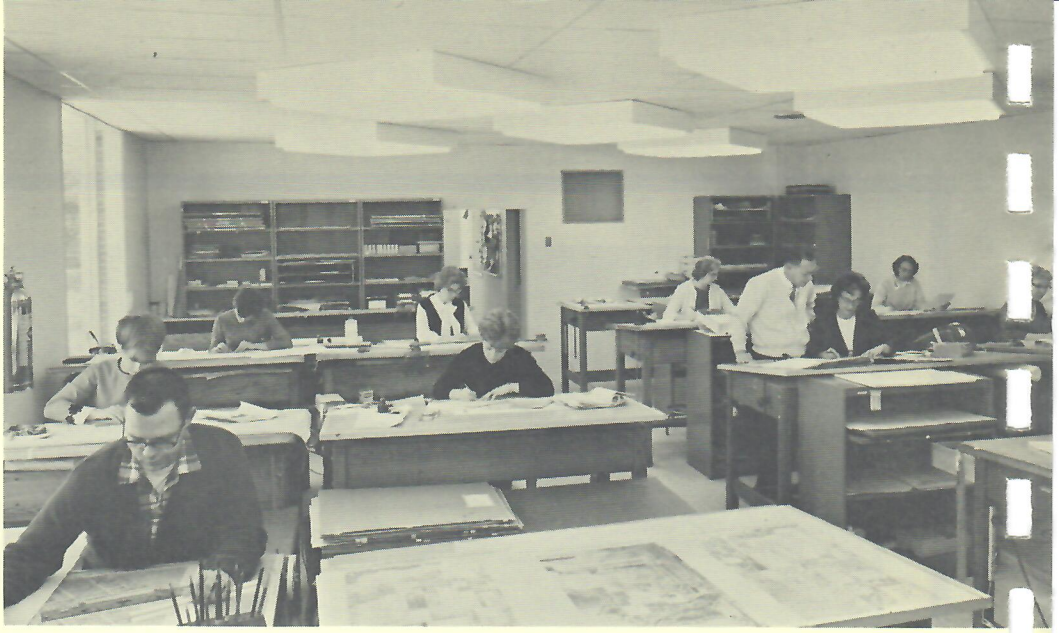


Precision cameras, with focal lengths of 6- and 12-inches, are used for aerial photography and mapping



Over 60,000 prints, from 12 x 18 to 34 x 34 inches, are reproduced yearly on Ozalid Printmaster.

More than 75,000 aerial negatives are stored in our air conditioned, temperature controlled film library.



Employees' versatilily gives us unusual flexibility

It takes a highly trained group of technicians to operate a mapping and aerial survey service. The roster of Sidwell Studio, Inc., employees includes cartographers, stereo compilers, scribers, pilots, photo interpreters, photographers (lab technicians and aerial cameramen) in addition to legal analysts, tabulator operators and editors. Approximately four out of five Sidwell employees are either skilled technicians or people who handle intricate detail work.

We hesitate, however, to call any of our employees specialists. From its beginning in 1927, Sidwell Studio, Inc., has taken great pride in its versatility in the wide and diversified area of map making. It never has hesitated to take on big projects as well as small ones. More important it has developed a facility for improvising when asked to do jobs that are somewhat beyond the scope of the ordinary mapmaking company. This philosophy has spilled over into the training of Sidwell employees. A photo lab technician, for example usually is capable of handling an aerial camera: the cameraman is no stranger to developing and printing film. A scriber many times doubles as a cartographer and vice versa; a photo interpreter may fill in and handle a drafting project.

There is a great advantage in having people who are capable of doing more than one job. Service doesn't have to be delayed or curtailed, for example because our regular aerial photographers are tied up on jobs that may take weeks, even months to complete. A laboratory technician can be taken out of the darkroom and do an expert job of manning an aerial camera. Versatility not only adds to the flexibility of the Sidwell operation, but close familiarity with the various facets of map making gives our employees a better realization of what can be done for the client.

Technicians at Sidwell have an average of eight years experience in tax and aerial mapping. Some of our employees have been with us for as long as 25 years. Many of them are products of our In-Service training program, which has been carried on for many years in cooperation with West Chicago area schools. Young men who show exceptional drafting talent are tested for their reasoning ability in mathematics and logic and brought into the Sidwell training program if they meet our standards. In time they may graduate to cartographers or, if they have an aptitude for photography, may become aerial cameramen, lab technicians or photo interpreters. In several instances the company has helped employees obtain additional education.

Sidwell planes are flown by former military pilots who have been given special training in aerial photography. Most of our photo interpreters and mosaic compilers are graduates of service schools. Persons who operate stereo plotters have to have a special knack for three-dimensional analysis. Scribers have to be endowed with ability to sift detail and reproduce it in compact and finely drawn lines such as are seen on topographic maps. Legal analysts and tabulator operators supplement the work of the technical staff by researching property records, condensing them and preparing them to be capsuled for data processing handling. Finally, it remains the task of our editors to carefully check all the work the technicians and detailers have done and make sure that it is as free of error as possible.

We, too, have had our explosion in the tools and techniques of map making and aerial photography in the last decade. Particularly significant have been the improvements made in aerial cameras as well as methods of reproduction. The people at Sidwell like to think that their skills have been refined and improved in direct proportion to the great advances made in their working tools. The fact that the company's greatest growth has occured in the last ten years attests to the fact that the technicians and others at Sidwell have kept pace.

Look at the many things Tax, Topographic and Aerial Maps and Legal Descriptive Atlases can be used for

Acquisitions of Property
Advertising (locating outdoor signs)
Air Pollution Control
Airport Site Location
Airport Traffic Control
Annexations (municipal)
Appraisals
Assessments

Bridge Location
Building Design
Building Site Selection

City Planning
Civic Center Improvements
Civil Defense
Crowd Handling (Athletic Events, Conventions, etc)

Drainage Studies

Educational Institutes (Building, Site selection)
Excavations (Volume determination)

Fire Control (Municipalities, Forests, Industrial Complexes,, Oil Tank Farms, etc.)
Forestry Service

Geological Studies

Harbor Studies

Highway Planning and Re-routing
Historical

Insurance—Underwriting and Claims
Inventory Taking (Stockpiles)
Irrigation

Land Acquisition
Land Development
Land Conservation Planning
Landmark Location & Identification
Legal Evidence
Livestock Inventory

Military Installations
Missile Sites
Murals (mosaics)

Navigation
Noise Abatement Studies
Parking Facilities
Pipeline Locations
Population Density Studies
Power Lines
Public Housing Studies
Progress Reports
Property Claims

Railroad Location Projects (Right-of-Way, Sidings, etc.)

Real Estate Sales & Development
Recreation Planning (parks, pools, golf courses, etc.)
Reservoir Location
Reclamation Studies
River Studies

Sales Territories
Safety Studies (Highways, etc.)
Sanitary Engineering Studies
Shopping Center Planning
Soil Studies
Stadium Site Selection
Street Planning
Strip Mining
Sub-division Planning
Surveying

Tax Mapping
Terrain Studies
Traffic Control
Traffic Counts
Tree Counts

Urban Renewal

Valuations

Water Pollution Studies
Weather Studies
Wildlife Counts

Zoning Studies

May we help you with your tax or topographical mapping and aerial photography needs? . . . Sidewell representatives will be happy to discuss your requirements at any time and give you information as to costs, time schedules, etc. Write or phone collect

SIDWELL STUDIO, INC., 28 W 240 North Avenue
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Area Code: 312 231-0206 231-0207
. . . or visit us in beautiful Sidwell Park

Sidwell Serves • Government • Business • Industry

Here is a partial list of the hundreds of clients who have used Sidwell's Map Making and Aerial Photography services in the many years we have been in business.

STATES

Illinois
Indiana
Iowa
Ohio
Michigan

COUNTIES

Allen County, Indiana
Clark County, Ohio
Cook County, Illinois
Champaign County, Illinois
Du Page County, Illinois
Dodge County, Wisconsin
Kane County, Illinois
Kankakee County, Illinois
Kendall County, Illinois
Kent County, Michigan
Lake County, Illinois
La Salle County, Illinois
Lorain County, Ohio
Mc Henry County, Illinois
Mahoning County, Ohio
Oakland County, Michigan
Peoria County, Illinois
Polk County, Iowa
Sangamon County, Illinois
St. Clair County, Illinois
St. Joseph County, Indiana
Stark County, Ohio
Summit County, Ohio
Tazewell County, Illinois
Vermilion County, Illinois
Will County, Illinois

CITIES

Akron, Ohio
Aurora, Illinois
Belleville, Illinois
Canton, Ohio
Champaign, Illinois
Chicago, Illinois
Danville, Illinois
Des Moines, Iowa
East St. Louis, Illinois
Elgin, Illinois
Elyria, Ohio,
Evanston, Illinois
Flint, Michigan
Fort Wayne, Indiana
Grand Rapids, Michigan
Joliet, Illinois
Kankakee, Illinois
Lorain, Ohio
Massilon, Ohio
Pekin, Illinois
Peoria, Illinois
South Bend, Indiana
Springfield, Illinois
Springfield, Ohio
Waukegan, Illinois
Youngstown, Ohio

UTILITIES

Central Illinois Light Co.
Central Illinois Public Service
Commonwealth Edison Co.
Consumers Power Co.
East Ohio Gas Co.
Greater Peoria Sanitary & Sewage Disposal Dist.
Illinois Bell Telephone Co.
Illinois Power Co.
Indiana & Michigan Electric Co.
Indiana Bell Telephone Co.
Iowa Power & Light Co.
Metropolitan Sanitary District Of Chicago
Michigan Bell Telephone Co.
Middle States Telephone Co. Of Illinois
North Shore Gas Co.
Northern Illinois Gas Co.
Northern Indiana Public Service Co.
Northwestern Telephone Co.
Ohio Bell Telephone Co.
Ohio Edison Co.
Ohio Water Service Co.
Peoples Gas Co.
Springfield Water & Light

INDUSTRIES

Celanese Plastic
Centex Construction Co.
Chicago & Illinois Midland Railroad
Chrysler Corp.
Cities Service Oil Co.
Corn Products Co.
Firestone Tire & Rubber Co.
General Mills
B. F. Goodrich
Goodyear Tire & Rubber Co.
Gulf Oil Co.
Jewell Tea Co.
Keystone Steel & Wire Co.
Kroger Company
Material Service Corp.
Mid-States Steel & Wire
Minnesota & Ontario Paper Co.
National Gypsum Co.
New York Central Railroad
Phillips Petroleum Co.
Pure Oil Co.
St. Charles Kitchens
Scholz Homes, Inc.
Science Research Assoc.
Shell Oil Company
Sinclair Oil Co.
Standard Oil Co.
Sunray D-X Oil Co.
Timken Roller Bearing Co.
Universal Atlas Cement
Vulcan Material Co.
Youngstown Sheet & Tube Co.

COMMERCIAL

Akron Dime Bank
Akron Real Estate Board
American Aerial Surveys
Anderson Engineering
Associated Engineers Company
Austin Engineering Company
Baird & Warner, Inc.
Bankers Life Company
Bell Savings & Loan Assoc.
Bleck Engineering
Burton Abstract & Title Co.
Candeub & Fleissig
Chicago American
Chicago Title & Trust Company
Chicago Tribune
City Planning Assoc.
Commercial National Bank of Peoria
Consoer Townsend & Assoc.
Continental Illinois National Bank & Trust Co. of Chicago
Des Moines Register & Tribune
Dovenmuehle, Inc.
Engineering Planning Service, Inc.
Equitable Life Ins.
Evans Savings & Loan
Evanston-North Shore Board of Realtors
The Firestone Bank
First National Bank of Chicago
Foster & Kleiser
Fuller Appraisals
Carl L. Gardner & Assoc.
Goodell Engineering Assoc.
Great Lakes Title Company
Guaranty Title & Mortgage Co.
Holiday Inn
Iowa Appraisal & Research
Iowa State Bank
Iowa Title Company
The Kissell Co.
Lawyers Title Insurance Corp.
Lincoln National Life Ins. Co.
Michigan National Bank
Michigan Title Co.
Naperville Country Club
National Survey Company
Northern Illinois Home Builders Assoc.
Northern Trust Company
Old Kent Bank & Trust Co.
Perkins & Will
Pioneer National Title & Trust Co.
Prudential Insurance Co. of America
Quinlan & Tyson, Inc.
Rand Mc Nally
Real Estate Appraisal Corp.
R. W. Robinson
Salk, Ward & Salk
Sanborn Map Company
Sears, Roebuck & Company
South Bend Savings & Loan
Swords Engineering
Tec-Search
Title Insurance Co. of Minnesota
United Parcel Service
Wallace Engineering Company
Wight Consulting Engineers
Williams & Works Engineers
Clyde E. Williams & Assoc.
Winston, Strawn, Smith & Patterson
Woodstock Country Club

MISCELLANEOUS

Argonne National Laboratory
Bradley University
Chicago Transit Authority
Drake University
Federal Housing Administration
Federal Savings & Loan Insurance Corp.
Internal Revenue Service
Northwestern University
University of Chicago
University of Illinois
U.S. Army Corps of Engineers
U.S. Post Office

Legal Descriptive Atlases

Client at right is briefed on proper use of Legal Descriptive Atlas in Sidwell sales room. Mail and phone orders for aerial photographs, subdivision maps, etc., account for a large volume of our sales.

CASE HISTORY . . .

HOW SIDWELL UPDATED KANE COUNTY'S REAL ESTATE RECORD SYSTEM, MADE PROPERTY RESEARCHING EASIER

Not more than 40 years ago the researching of real property records took much more than a fair share of legwork. The records, in the custody of county governments, more often than not were scattered all over the courthouse. People doing property research work for realtors, banks, savings and loan companies, attorneys, appraisers, title companies, etc., lost much valuable time in rounding up the information they needed. It wasn't uncommon for property deeds to be stored in a vault on the third floor of the courthouse . . . whatever dog-eared maps there were often were kept in the basement . . . and the index of property owners was likely to be found in the courthouse annex, a block away. The mere physical act of rounding up all the scattered property information was quite a trying one.

Fortunately, this haphazard method of storing records was changed between 1928 and 1931 when Joe H. Sidwell, founder of Sidwell Studio, Inc., collaborated with the W. W. Hixson Company of Rockford, Ill., in developing the Legal Descriptive Atlas. Essentially, what Mr. Sidwell and his colleagues did was round up all the far flung property record information and bring it together in bound atlas form. Complete legal descriptive information, formerly available only in the county courthouse, now became readily available to anyone who invested in an atlas. The convenience of owning one was worth far more than the cost.

The present day version of the Legal Descriptive Atlas is considerably refined over what it was back in the days when Joe H. Sidwell and his associates published those early editions. Mr. Sidwell, who founded his business as a tax mapping and Atlas service, constantly improved his brainchild over the many years he directed Sidwell Studio, Inc. And, his successors are following in the tradition of never standing pat on the product. Even today they are not satisfied that they have produced the ultimate Atlas. The present day Atlas is better than the one produced five years ago; the Sidwell Atlas of the '70s will be an improved version of the one that is being published today.

This is the reason why Sidwell Studio has never surrendered its position as the country's leading compiler of Legal Descriptive Atlases. Considered a model of completeness and conciseness by real estate men, a Sidwell Atlas condenses the involved, legalistic language of the property deed to a visual detailed drawing that saves anyone who has anything to do with property record research, innumerable hours of wading through fine print to find needed information. County outline maps that show the most remote details of highways, roads, and land sections, along with supplementary aerial maps, make the pinpointing of any location merely a matter of "checking the Atlas." Urban, populous and business areas are "exploded" on varying scales to show every detail of these subdivisions.

An important bonus that Sidwell offers its subscribers, on a fixed fee basis, is the annual updating of the Legal Descriptive Atlases. Pages that are revised due to changes in subdivisions, streets, indexes, etc., are automatically sent to subscribers as replacements for those pages that have become outdated. Thus, a Sidwell Atlas never becomes obsolete and the investment of the agency or individual who subscribes to this continuing service not only is protected, but increases in value.

The above covers only a few of the highlights of Sidwell's complete Legal Descriptive Atlas service. There are several other features that will be explained in the text that follows.

The advantage of having an area completely mapped and a Legal Descriptive Atlas prepared cannot be better illustrated than by citing a case history of a project that Sidwell Studio, Inc., carried out for businessmen of Kane County, Illinois, in 1960.

Cartographer drafts subdivided area, making breakdown by lot and parcel lines. Many boundary description errors are detected when map is drawn.

Kane County is one of six counties comprising the Greater Metropolitan Chicago Area. Its two major cities, Aurora and Elgin, are located at either end of the county on the Fox River. The five river townships are fairly urbanized, with the balance of the county, which covers 540 square miles, being mainly rural agricultural.

For several years prior to 1960, realtors, bankers, savings and loan officials and leading businessmen concerned with the development and transfer of real estate, saw the great need for an up-to-date Atlas of Kane county. As is so often the case with counties, municipalities, etc., legal descriptive information was not complete and what was available was poorly organized. The cost of properly researching property records was a good deal higher than it should have been. Part of the inadequacy in the Kane County real estate records was due, of course, to the postwar population explosion phenomenon.

In the decade between 1950 and 1960, Kane County's population had increased from about 150,000 to 208,000, a gain of 39 per cent. (Today the population is approximately 234,000.) Aurora's population had grown from 50,000 to 64,000, and Elgin's from 42,000 to 46,000, a combined increase of 16 per cent. Population of the other urban areas was up about 50 per cent in the decade. Prospects that the population would continue to expand were strong due to the county's proximity to Chicago and the many advantages and resources it has to offer.

After a Sidwell consultant explained what would have to be done to update Kane County's real estate records and prepare the necessary Legal Descriptive Atlas, the go-ahead to do the work was given. It was emphasized, incidentally, that Sidwell Studio, Inc., would set up a real estate record system and method of mapping that a layman could readily use. In addition, the complete system would be set up to allow for all future expansion and growth in real estate activity.

Here is a step by step summary of how Sidwell researched the existing Kane County records, completely mapped the county and then prepared a workable, easy-to-use Legal Descriptive Atlas:

- Our technical staff compiled data by microfilming recorded plats of sub-divisions and surveys and obtained copies of tax rolls and all existing county maps. This data was minutely analyzed to determine its accuracy and completeness. Missing material was filled in and errors and discrepancies corrected.

- Our Aer-O-Plats Division obtained aerial photos of the entire county. Two flight scales were used—from low altitudes for construction and preparation of urban maps—and from a higher altitude for preparation of rural land maps. Enlargements of the aerial photographs were then used as an engineering

Instant information on all property is available in a Sidwell Atlas because pertinent details of each subdivision are recorded in easy-to-read numerical code.

tool in the actual drafting of the various township sectional maps. It should be noted in passing that aerial photos are of great value in the final drafting of maps because they show with great clarity such features as property lines, road and highway rights-of-way and important topographical features such as streams, rivers and lakes.

● With all real estate records thoroughly checked and the county completely mapped, the final step was the compilation of the Atlas, by now a relatively easy matter since all the groundwork had been laid. These items were incorporated in the Atlas:

a. Each sub-division in the entire county was alphabetically indexed by sub-division name, legal descriptive location, and page or pages in the Atlas on which the sub-division is indexed;

b. A base county map and city street maps were prepared for geographical locations and indexing purposes.

c. City house numbering systems were applied to maps so that the user of the Atlas can work from either a legal description or a street address in locating a specific parcel of property.

Following completion of the master maps, a final editing was made to insure the greatest possible accuracy. The masters were then used for the printing of Atlas sheets, which were collated and bound into loose-leaf post binders. A Sidwell representative delivered each Atlas to Kane County purchasers and gave them complete instruction in the use of it.

SIDWELL STUDIO, INC.
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Topographic Maps

THEY ARE INDISPENSABLE TOOLS IN TAKING INVENTORIES, CITY PLANNING, HIGHWAY LAYOUT AND MANY OTHER THINGS

The use of topographic maps in inventorying stockpiled material has become quite common in recent years. Yet people who aren't aware that aerial photographs, reduced to black and white tracings in contour intervals of as little as one foot, can be used for inventory taking purposes, are somewhat amazed upon learning that it can be done.

Not long ago, Sidwell Studio, Inc., carried out such an inventory project for a branch of a large gypsum company. In the matter of a few minutes, aerial photographs, taken at two altitudes, were made of six huge piles of gypsum, part of which had been recently brought in by barge. From these photos, accurate topographic maps, scaled at one-foot intervals, were quickly drawn. The number of cubic yards in each pile was then easily determined.

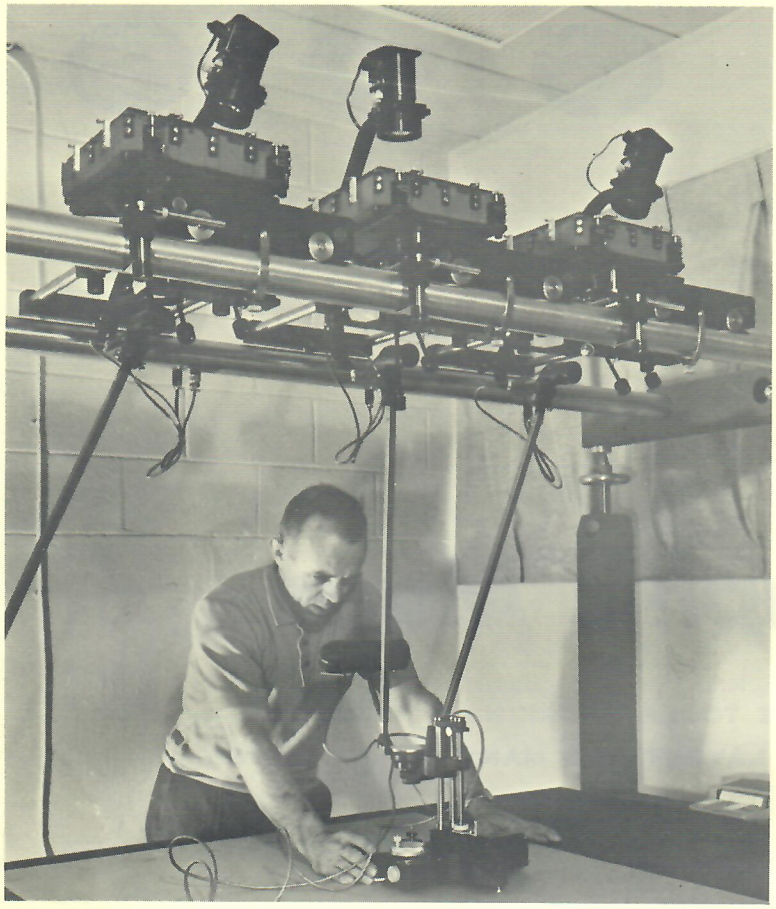
When the inventory job was completed—in only a few days—officials of the gypsum company were greatly impressed. If branch personnel had been detailed to take the inventory, a large portion of the staff would have been tied up for at least a week and only a "guesstimate" of the amount of gypsum in the stockpiles would have been obtained.

There is a further advantage in measuring stockpiles by the topographic method. It gives a company which purchases materials such as stone, coal, ore, etc., in huge quantities an accurate check on the amount of materials actually delivered. There is no necessity for taking the supplier's word that the order has been filled to the last ton.

Topographic map making is about 50 years old. It is based on the stereoscopic principle of viewing two overlapping photos, placed side by side, through a combination of lenses and prisms to get a three-dimensional impression. Using sensitive stereoscopic projection equipment, Sidwell's stereo compilers translate the almost infinitesimal ground elevation differences they pick up through the equipment into orthographic projections which are drawn on topographic maps at desired contour intervals.

Making inventory counts for industry as well as government is only one facet, and a small one, of photogrammetry (the science or art of obtaining reliable measurements by means of photographs). Topographic maps are indispensable tools in city planning, locating power transmission lines and pipe lines, and laying out highways. Engineers involved in land use exploration, mining operations, river studies, etc., probably have more need of topographic maps than transits. Soil scientists place great dependence on them. They are used extensively by oil hunting geologists and people in private or public forestry service and management.

The most common use of topographic maps is in city and subdivision planning and design, and street and highway construction. Sanitation, water supply and



Three projector stereo plotter with stereo image alternator produces precision topographic and planimetric maps economically. Contour interval range: 1 to 20 feet.

drainage are playing such an important part in the planning and redevelopment of our cities that it is imperative that engineers have accurately detailed topographic maps from which to work. If storm and sanitary sewer lines can't be installed to take advantage of natural ground slopes, a good deal of money has to be spent in making necssary excavations and in installing pumping systems to control runoff. The engineering of water supply systems is equally dependent on topographic delineation. After water supply sources are located, engineers have to make intelligent use of topographic maps in determining the most efficient way to bring water to city consumers.

The use of topographic maps in city planning and design doesn't stop here. There are numerous other ways in which the maps can be used to advantage. They are particularly valuable in laying out and constructing streets, determining how much land may have to be moved or filled in in street construction projects, and in many cases showing what right-of-way easements have to be obtained. The new emphasis on recreation and conservation calls for the use of topographic maps in locating and planning parks, golf courses and forest preserves. The maps also play an important role in the construction of expressway systems and access roads, location of bridges and airports and the installation of lighting systems, gas mains, etc.

It should be kept in mind that topographic maps are not merely used in planning or redevelopment work and then discarded. Their utility never wears out. In our rapidly expanding towns and cities they can be used over and over in planning for new subdivisions and annexations and in solving problems relating to re-zoning and the re-routing of traffic.

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Aerial Photography

The benefits of the use of aerial photography are many and varied. Since aerial photography is an exact science, hundreds of engineering problems can be solved through its proper use.

Each photograph is exact to scale so that accurate measurements are always available. With aerial photographs and aerial mosaics specific information on drainage patterns, road patterns and land use data becomes available. The photos and mosaics can be used in highway and street planning, city or county planning, house counts, commercial and factory counts, vacant plot counts, railroad valuations, ownership boundary facts, tax evaluation data and plat maps. Aerial photographs and mosaics are invaluable for school boards, which are considering a new school location or planning school bus routes. They are indispensable in the planning of commercial bus routes . . . for land utilization and sewer planning . . . as location references. They are widely used in insurance and fire control studies and in setting up police patrol routes. Civil defense authorities shouldn't be without them in determining the location of shelter areas or in establishing evacuation patterns. Aerial photographs and mosaics, too, are being used more and more as a public relations tool by all administrative bodies of government — park boards — P.T.A. groups — and other civic groups.

Since each photo is to exact scale, the information contained in it is absolutely accurate. The savings in time, effort and money that is derived from using them easily offset the small cost of aerial photographs and aerial mosaics.

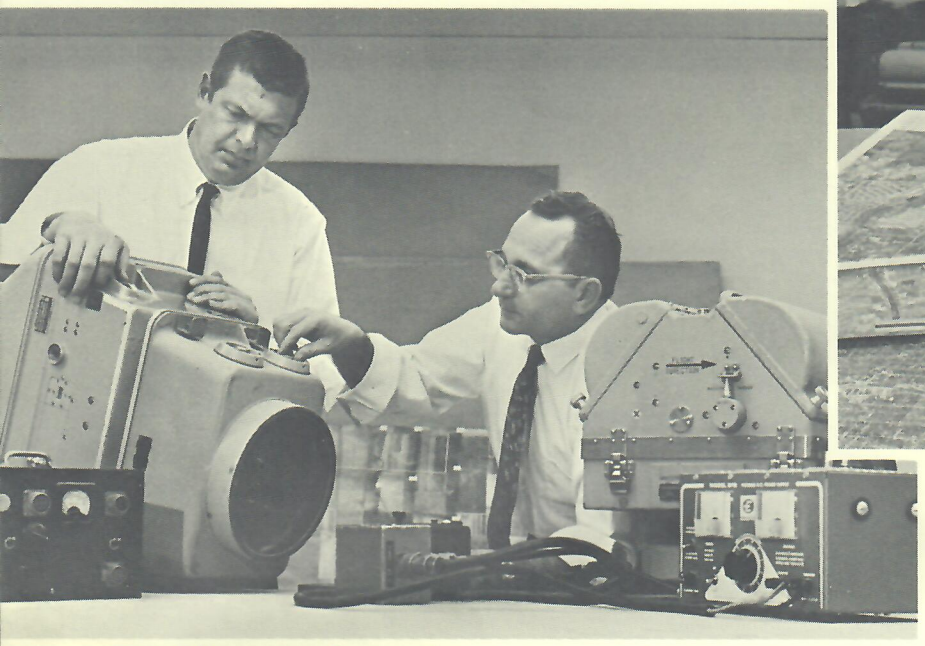
An aerial mosaic is made up of many aerial photographs, expertly matched and fitted together so that any area can be completely covered. Sidwell Studio, Inc., produces aerial mosaics that cover from one square mile to several thousand square miles — from one small portion of a community to an entire city, township, or county.

Aerial photographs give far more accurate information than ground methods and are available in approximately one-fifth the time at one-fifth the cost. And, they reveal hundreds of details that it is impossible to show through expensive ground mapping methods.

Many officials in government are now using aerial photographs and mosaics to better serve their communities and to save time, effort and money in the administration of their offices.

Engineers

City and County Engineers find aerial photographs invaluable in all phases of planning: i.e., of new streets, highways, etc. Photographs quickly and accurately reveal drainage patterns, greatly assisting Engineers in the proper planning of sewer and drainage projects. They show road patterns and land use data and enable Engineers to intelligently plan for land annexations, subdivisions, commercial, residential and industrial zoning. These are but a few of the uses of aerial photography that enable City and County Engineers to wisely plan and execute their work.



Aerial cameras shown with test equipment. Aerial survey model (left) is used for right-of-way mapping, taking photos for mosaics, etc. Precision 6-inch model (r) is cartographic camera.

County, city governments use aerial mosiacs extensively in planning. Largest one-piece mosaic obtainable is 8-feet wide, 12-feet long

Assessors

County and Township Assessors usually find that aerial photographs are a means of adding many additional thousands of dollars to tax revenues. As an illustration, one Township Assessor recently added more than $10,000,000 in tax valuations, collecting close to $500,000 in additional taxes. This was accomplished through the use of our aerial photographs along with our legal descriptive map service. Sidwell Studio is the leading firm actively engaged in supplying accurate legal descriptive maps in conjunction with aerial photography. We can quickly show County and Township Assessors how they may add thousands of dollars in additional tax revenues by bringing onto the tax rolls properties that previously have not been included.

Administrative • Civic • Private

Village and County Boards, in conjunction with their Engineering Departments, use aerial photographs in industrial, commercial and residential zoning; for real estate engineering; and in considering subdivision and annexation problems and drainage and sewer problems. Aerial photographs are a must for Police and Fire Departments in establishing patrol routes and in making fire control studies. School Boards use the photographs extensively in selecting new school sites and in studying population shifts so that bus routes can be established and kept up to date.

Civil Defense shelter areas and evacuation routes are planned with the aid of aerial photographs. Park Boards use them for locating new parks and acquiring land for laying out additional parks. P.T.A. groups, insurance companies, subdividers, industrial engineers and many others all find dozens of uses for aerial photographs and mosaics.

Service • Quality • Price

Aer-O-Plats, Inc., a division of Sidwell Studio, Inc., has the latest and most modern equipment . . . the proper aircraft and cameras for each job . . . the finest technicians, thoroughly experienced in all phases of aerial photography. These combined factors insure clients of the highest quality work at all times.

Our service is unrivalled, as trained and skillful technicians are available at all times to render quick and efficient service in the shortest possible time. Sidwell's consultants are happy to give you all details covering aerial photography and mosaics without obligation on your part.

The cost of an aerial survey of a city or county depends on the map scale desired. The cost can be surprisingly low.

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TAX MAPS

and

THE PERMANENT REAL ESTATE INDEX NUMBERING SYSTEM

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ILLINOIS APPRAISAL MANUAL

(Tax Maps and Index Numbering)

CONTENTS

REAL PROPERTY ASSESSMENT MANUAL
STATE OF ILLINOIS

Section regarding Tax Maps and the Permanent Real Estate Index Numbering System.

INTRODUCTION

This section of the REAL PROPERTY ASSESSMENT MANUAL of the State of Illinois is related to the preparation of acceptable tax maps for properties within the assessor's jurisdiction, and the creation of a permanent real estate index numbering system for each parcel of real estate. In devising the index numbering system consideration has been given to the need for creation of new parcels through the subdivision of existing tracts of land into two or more separate parcels. This expansion of the numbering system will be brought about by splits and divisions of existing parcels or through the creation of new plats and subdivisions from acreage tracts.

An assessing official's task consists of locating, inventorying, and appraising all property within his respective county, township, or jurisdiction. The first need in inventorying and locating the property in a county is a complete set of maps which shows each parcel of property within the county that is separately owned and used. The extent of the properties within any given county is such that no Assessor's office can be efficiently systemized without a basic set of maps. The basic set of maps must be a co-ordinated system prepared in accordance with certain standards for the entire county.

An assessing office can operate efficiently only with a complete set of Tax Maps upon which each tract of real estate is clearly shown with all pertinent data recorded thereon. The purpose of this section of the manual is to set forth the fundamental requirements and basic specifications for a co-ordinated tax mapping system that will permit efficient operation of an Assessor's office and the preparation of a complete and equalized assessment roll.

The Assessor's work, in both office and field, requires constant filing of and reference to information relative to a particular parcel of property. This reference to property is for bringing records up-to-date as to ownership, entering appraisals on office records, recording appraisal data, etc. Efficient performance of the work on the tax maps and records by the clerical and appraisal staff necessitates a numerical reference to the tax maps and records. Property can be more efficiently indexed and more readily referred to by a numerical reference rather than by metes and bounds description or subdivision description. Any organization which deals with a large number of property descriptions, assigns a number to the property, since they have found that the records cannot be accurately nor efficiently kept without doing so.

TAX MAPS AND THE PERMANENT REAL ESTATE INDEX NUMBER SYSTEM

The Assessor's Basic Records. Maps are the language used in any study of land. Maps are the basic tool for the performance of the assessment task which involves the locating, inventorying, and appraising of all real property. The first requirement for an Assessor's office is a properly designed set of maps where all property description information is co-ordinated into an efficient map system. The requirements for an efficient map system have been determined from an analysis of the requirements of the repeated inventorying of all property in a county, the keeping of that inventory up-to-date, and the appraisal of the property in that county.

The Permanent Parcel Numbering System is simply a description, by numerical reference, to land parcels on the Assessor's tax maps. Since maps are the basic record used by the Assessor in the assessing of real property, his office must have a suitable map system and parcel numbering system. When the Assessor has such a map system, he can delineate on those maps the parcels of property in the county as they are actually owned and used, and assign a parcel number. Then

any particular parcel of property in a county can be referred to by giving the respective parcel number.

When all appraisals and other records are indexed according to parcel number, a very efficient co-ordinated system results.

DEFINITIONS

Tax Map. A tax map is a picture of one or more parcels of land showing the boundaries of subdivisions of land, with the length thereof, and the areas of individual tracts for the purposes of describing and recording ownership. It is a graphical representation on a flat surface of some portion of the earth's surface. It shows the relative size and position of the land with respect to other properties, roads, highways, and major topographic features relating to the value and use of the land.

Parcel. A parcel of land, for the purposes of this manual, is a contiguous area of land under one ownership and one general use. "Parcels" of land show land areas as they are actually owned and used rather than as they may have been platted in subdivisions. It is the largest area of land that in the opinion of the Assessor should be included under one description for assessment purposes after considering all legal and practical factors. A parcel may have been conveyed by one deed or by several deeds and it may contain several lots or fractions of a lot. Each parcel represents one property record card, one item on the tax roll, and one item on all other tax records.

SYSTEM FOR THE PREPARATION OF TAX MAPS

A comprehensive, uniform, co-ordinated set of tax maps is essential for the entire county. In the preparation of an over-all county mapping and parcel numbering system, it is important to begin with the design of the permanent parcel numbering system which will graphically delineate each of the parcels in the county. The key to the permanent parcel number system is a complete, detailed set of base tax maps. The maps are the essential link between a written legal description and a parcel number. A parcel as delineated on a map is the graphic representation of a complete proper legal description.

A base mapping system is achieved by dividing the county into geographical areas following the established and recognized permanent boundary lines of the Federal Rectangular Survey System; i.e., township and range lines, section and 1/4 section lines. In areas not covered by the Federal Rectangular Survey System, the area should be gridded to create uniformity.

The use of these permanent divisions—i.e., township, section, 1/4 section—in the organization of the mapping and parcel number system, thus creates parcel numbers that are in themselves a partial legal description identifying the township and section and 1/4 section location of each parcel. Also, by using fixed survey boundaries, the map boundaries become permanent.

The base maps should be prepared in such a manner that they show in full detail all property, both subdivided and metes and bounds, enabling the user to readily identify and interpret parcel size, land use, and real property improvements.

The preparation of the maps should be founded on complete research of the county records relating to real property.

MINIMUM REQUIREMENTS OF TAX MAPS

1 The maps should be organized to cover geographic areas. An alphabetical index of recorded subdivisions by map area and page number should be prepared for efficient referral to subdivisions.

2 The maps must be of sufficient scale and detail to accurately show ownership boundaries and location and valuation of improvements.

3 The maps should be prepared to suitably show topography, soil types, acreage, and land use.

4 The boundary lines of the maps should be street or survey lines, such as section or 1/4 section lines. Map boundary lines should seldom cut through property.

5 The maps should be cross-indexed and tied together by showing the map number of each adjoining map.

6 The maps should be in a blocked area system adaptable to systematic division into maps of larger scales.

7 The maps should be prepared to a minimum of 1 to 2% accuracy in scale.

BASIC TAX MAP UNITS

The standard map system as recommended contains the following units:

1 A "County Index Map" showing the area of each map book, area number, survey townships, township and range lines, and location of cities and villages.

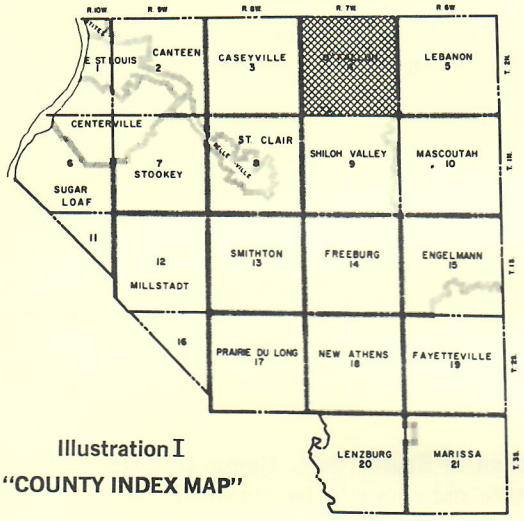


Illustration I
"COUNTY INDEX MAP"

2 A "Township Index Map" for each township area. These maps should be of sufficient scale to show all streets, railroads, lakes, and rivers, as well as section lines and numbers. The map should show the area covered and page number of the detailed maps. City and School District boundaries may also be shown on these maps if desired.

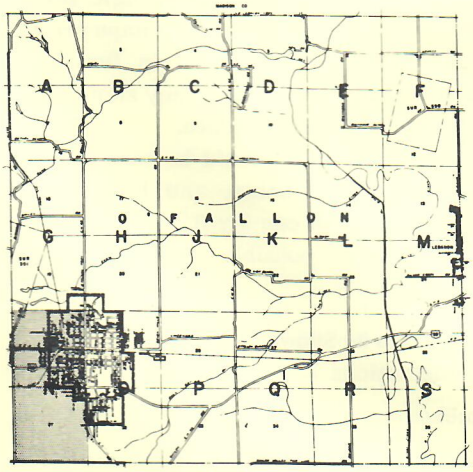
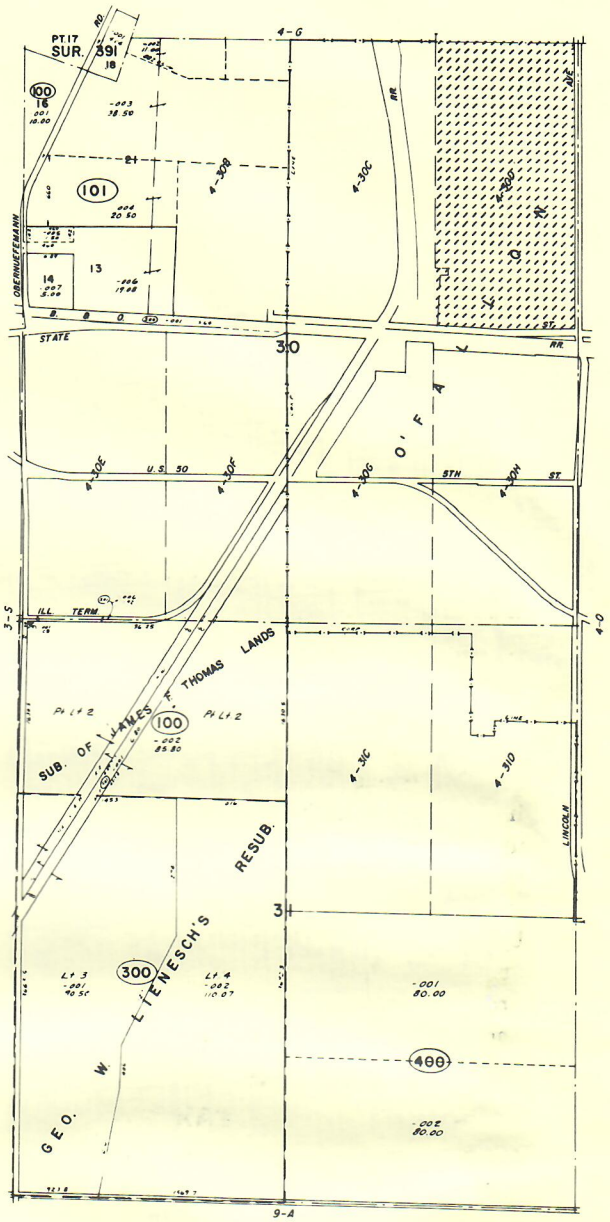


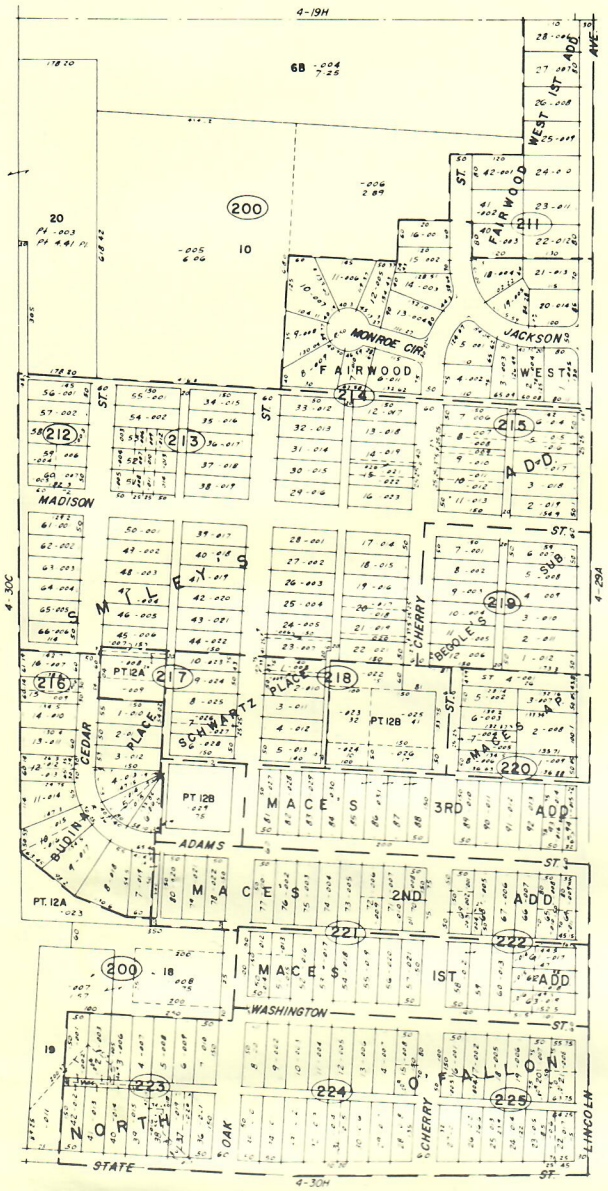
Illustration II "TOWNSHIP INDEX MAP"



O' FALLON TWP.
SECS. 30 & 31 & SUR. 391 T. 2N. R. 7W.

Illustration III "RURAL DETAIL TAX MAP"

3 "Detailed Tax Maps." These maps are prepared at the appropriate scales and coverage to show all property in the detail necessary to properly identify each parcel. Parcel numbers, acreages, lot and block numbers, subdivision names, dimensions, and street and road names are shown. These maps are to be prepared so as to be suitable for both office and field use.



O'FALLON TWP.

E. 1/2 N. E. 1/4 SEC. 30 T.2N. R.7W.

Illustration IV "URBAN DETAIL TAX MAP"

4 "County Subdivision Index." There should be an alphabetical subdivision index for all recorded subdivisions in the county. The index should list the map book and pages where located.

PREPARATION OF MAPS

The installation of a standard map system requires the compilation and co-ordination of all existing survey and property descriptive data into the final maps for the Assessor so that they will be as accurate as possible. The system for preparation of the maps can best be accomplished by the following method:

A **Planning.** The first step is to analyze each area of the county to determine the scale at which it should be mapped. A county map should be marked to indicate the areas to be mapped at each scale. The following scales for maps are recommended. The size of parcels and convenience for use have been the controlling factors in these recommendations.

Type of property	Map scale	
Urban	1" : 50' and 1" : 100'	Maximum size
Suburban	1" : 100'	of map sheet:
Rural	1" : 400' and 1" : 600'	20" x 30"

This layout should be considered preliminary and may need revision as areas are actually mapped. A map drawn at too small a scale for the purpose it was intended will never be completely satisfactory.

B **Collection of Source Data.** Under this step all descriptive data should be obtained. Some of the sources are: County Highway maps; U.S.G.S. quadrangle maps; U. S. Land Survey maps; recorded plats of subdivisions; surveys; Department of Revenue Tax District maps; State Highway Township maps; Department of Revenue Railroad Schedules; Railroad Right-of-Way Maps; deeds; current assessment roll and property record cards; and any existing maps, be they city or village or commercial publications.

One of the most important single sources of information for preparing base maps are current enlarged aerial photographs; in fact they are useful in so many ways that they should be available in every Assessor's office.

The collected data should be sorted geographically, first by township, and then section—so that the draftsman can lay it out and co-ordinate it in the best way possible for the preparation of the layout sheets.

C **Information to be Shown on Maps**
(see Illustrations II, III, and IV)

1 Dimension of property

2 Streets, railroads, rivers, lakes, and streams—and their names.

3 Acreage.

4 Name of subdivision, tract number, section, township and range or survey number, lot and block number.

5 Title and page number.

6 Scale.

7 Adjoining page number references.

8 Parcel numbers and parcel boundaries.

D **Layout Sheets.** This step consists of carefully plotting at the proper scale, all of the survey and property description data. This is a difficult task as much of the data is inaccurate and does not readily fit together. However, properly enlarged aerial photos are a great engineering aid at this stage. It will be possible to trace, from the aerials, section lines, streams, lakes and rivers, roads and railroads, and many property lines while running a constant check against the available data for accuracy. Serious conflicts in property descriptions and boundaries should be noted for further research.

E **Parceling.** After the base layout maps have been prepared as accurately as possible, parcel lines for the acreage and metes and bounds descriptions should be platted. Each description from the assessment roll must be checked and laid out in order to account for and inventory each parcel of land in the county. Parcel numbers can now be assigned by block and individual parcel and recorded and applied to the assessment roll records. Acreage of parcels over one acre should be checked by planimeter and if they differ, both acreages can be noted on the tax map and indicated; for example—by deed—by planimeter.

F **Master Tax Map.** When the respective layout sheets have been completed and parceled, the master map can be inked. It is recommended that the master tracing be made on dimensionally stable (Polyester) drafting film, with waterproof ink. This will insure long life of the master with good reproduction qualities. Drafting is work that requires craftsmanship and skill in the use of tools as well as an artistic sense of proportion. The line weights, type, style and weight of lettering of the sample maps in this manual are standards to be followed for consistent uniformity.

G **Checking.** Upon completion of the "masters," each map should be checked in every detail. The maps should be proofread against the source data and layout sheets. Every word, figure, number, title, page number reference, and dimension should be carefully checked to assure accuracy and completeness. Maps needing correction are returned to the draftsman and are re-checked upon his completion.

H **Printing.** After all corrections have been made, several copies of each map should be made. Tax maps should be made available to the County Assessing Official, County Clerk, County Treasurer, and the Township Assessor. Therefore it is advisable to prepare four or more copies. The map copies should be punched and bound with hard covers and screw posts. Each book should be assembled to cover a township and contain the following items:

1 Set of binders

2 Fly sheet

3 County index map

4 Township index map

5 Detailed tax maps at the appropriate scales.

6 Label indicating contents

I **Filing and Care of Maps.** Tax maps are official records of assessment data and as such are subject to constant use. County and city offices, title and abstract men, real estate brokers, surveyors and engineers, etc., are interested in this information. Therefore, a set of map copies should be made accessible to the public where they can use the maps without interfering with office work. The master map tracing should never be accessible to the public and should be stored in a fire-proof drawer cabinet. The masters should be used only to reproduce additional copies or when they are being brought up-to-date by the draftsman. The masters represent a considerable investment and if damaged, lost, or destroyed, would seriously hamper the work of the Assessor.

J **Maintenance of Tax Maps.** Once installed, the tax maps and all other assessment records must be kept up-to-date. This requires constant viligance on the part of the Assessor. All types of assessment records soon become out of date and much

of the original value and investment is lost unless all changes and corrections are made at least once a year.

The basic map system for the Assessor's tax maps is designed for flexibility and growth and in the majority of counties requires constant maintenance because of development in the respective county.

The simplest possible procedure should be followed by the draftsmen for maintaining the maps by keeping them up-to-date with new parcels of property, new subdivisions, new highways and other property boundary changes.

Maintenance consists of two general phases. The first phase consists of indicating on the maps new property boundaries where property is subdivided by an owner in the selling off of one or more parcels of his property or by the filing of recorded subdivisions. This phase would also include the cutting up of property and changes necessitated by new highways or by changes in highways or other public works.

Transfers which involve a change in description are of four general types:

1 Subdivision of one parcel into two or more smaller parcels.

2 Combining two or more parcels into a single parcel.

3 Sale of a portion of a parcel to the owner of an adjoining parcel.

4 Description which changes from acreage to platted whenever an acreage parcel is subdivided and a new plat recorded.

The second phase of the maintenance is the correcting and constant improvement of the maps from new and more accurate survey data. Surveys may be made for many purposes and whenever new surveys are made they supply basic information for the correction of the maps so that they will be more accurate. Such survey information should be used and the map books corrected accordingly.

The first phase will necessitate the assigning of new parcel numbers, while the second phase will generally not change any parcel numbers but will improve the accuracy of the maps and may give a more complete and accurate description of the property on the master property record.

The source data for maintenance will consist of:

1 Recorded property transfers.

2 Recorded subdivisions.

3 Recorded licensed surveys and other recorded maps.

4 Highways and road surveys, other government surveys, and miscellaneous types of surveys.

K **Map Changes From Deeds.** As copies of recorded transfers are obtained by the Assessor, they should be checked with the index and the parcel number noted on the transfer. A transfer clerk will proceed to make the transfers of all properties on the records where an entire parcel is transferred. Where only a portion of a property is transferred, that deed transcript with the original parcel number indicated thereon should be referred to the draftsman.

1. The draftsman would then proceed to indicate these cuts in color on the office map copies, making all the cuts in a particular map book for a period of one or several weeks at one time. As part of this same operation the draftsman would assign new parcel numbers.

2. As subdivision maps are filed, the draftsman should plat those subdivisions on the layouts at the standard scales to assure that they fit properly with the existing property boundaries. The more complicated metes and bounds property cuts from the deed transcripts should also be platted on the basic layout sheets. New parcel numbers should be assigned to the subdivision lots and to other cuts. Also, if new highway or other surveys or tax area code lines cut property, new parcel numbers should be assigned. The master map tracings should then be revised and new prints obtained for all sets of maps.

PERMANENT PARCEL NUMBER SYSTEM

After all descriptions have been platted on the tax maps, the next step is to assign each parcel a permanent number.

A property index numbering system should be adopted by each assessing official as a means of identification and control over all real property. The full legal description of property is cumbersome when used on maps, assessment rolls, tax bills, property record cards, etc.

The index number is a combination of the congressional or governmental survey township, section, quarter section, block and lot parcel number.

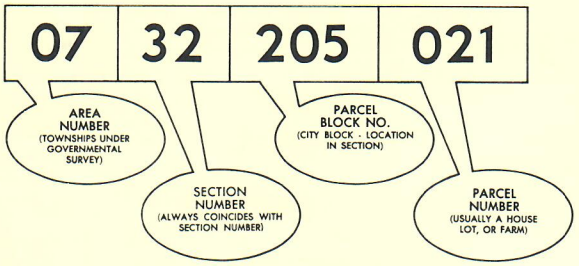


Illustration V

"THE PERMANENT PARCEL NUMBER"

The index system does not follow political township or village lines. Boundary lines of political corporations may be easily changed and this makes it difficult to tie in the index system where the boundary lines are changed.

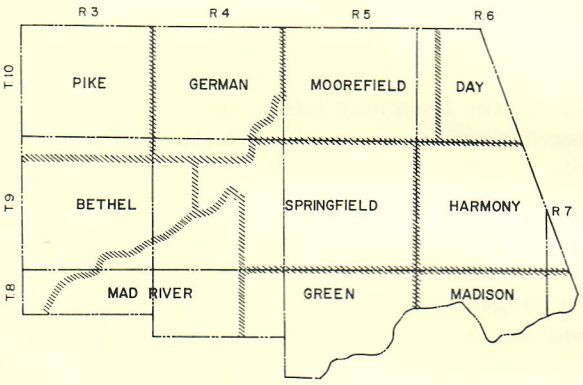


Illustration VI

"COUNTY INDEX MAP"

The correlation of the tax maps and the individual property records requires that permanent numbers be assigned to all survey townships, sections, blocks, lots and tracts where taxable or exempt. These property index numbers are used on all tax maps, property record cards, assessment and tax rolls, tax bills, transfer records and other tax records.

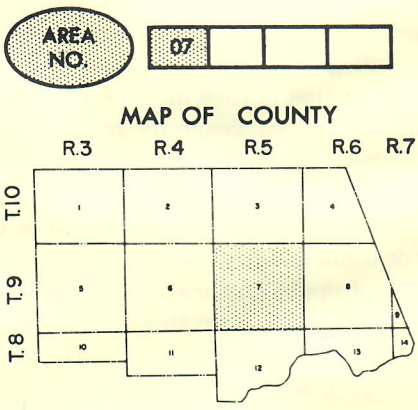
The various parts of the property index system described above combine to form a property identification number. The component parts are always listed in the same sequence. The simplicity of the property identification number as compared to a legal description, is indicated in the following examples:

Legal Description on Assessment Roll	Same Parcel as Described by Property Index Number			
	Area or Township	Sub Area or Section	Block	Parcel
Assessors Div. of E 1/2 SW 1/4 W 1/2 SE 1/4 Sec 11 T 9 N R 5 E Owners Div. of that part Lot 1, SW 1/4 Sec 11 and all Lots 2, 3 and 4. A. T. McIntoch & Co. Glenview Acs., Sub. of part of Sub Lot 3 of Lot 4 Lot 19	07	11	306	003

Such property index system provides the avenues through which the valuation procedure flows. Field inspections, measurements of lands and buildings, calculations of valuations and the other operations on the individual parcels are facilitated by identifying and controlling the parcel records. With such an index system, complete accounting for every lot and parcel of property is made possible with a minimum of difficulty.

Survey Township or Area—The survey townships are first outlined on the county index map. Rather than use a combination of the township designation and range designation; i.e. T 9 N - R 5 E, a two digit number is assigned to each survey township. The number 01 is assigned to the most northerly and westerly township or portion of a survey township in the county. Successive numbers, 02, 03, etc., are assigned to townships lying to the east of the northwestern township. After the northernmost line of townships is numbered, the next number carries again to the western township in the next line of townships. After the number 09, the number 10 is used and successive two digit numbers are assigned until all townships are numbered.

Illustration VII



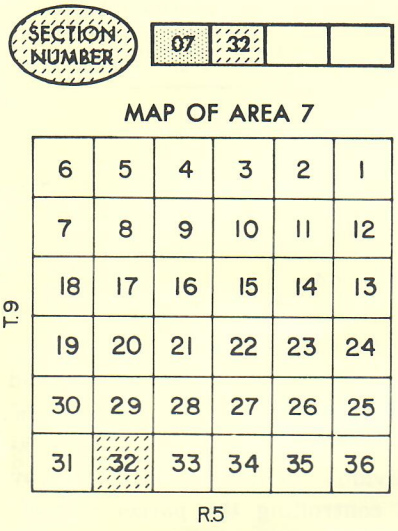


Illustration VIII

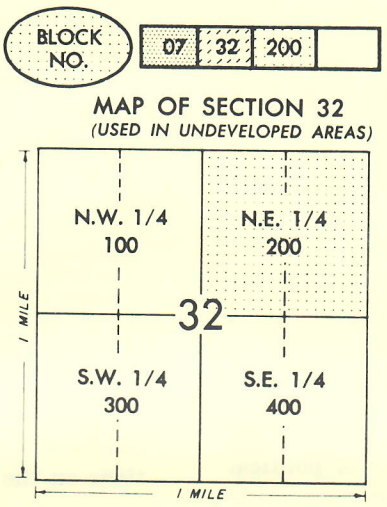


Illustration IX

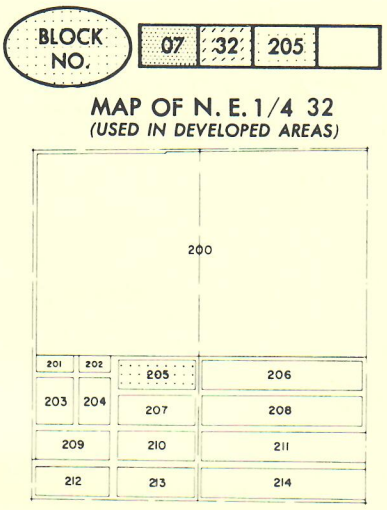


Illustration X

Section or Sub Area—The sections within each survey township are given the legal description number of the section. The most northerly and easterly section is numbered 01 and the numbering carries on to the west, drops down to the section on the western edge of the township directly below the northwestern section and the numbers then carry on to the east. All sections are thus numbered in the familiar serpentine system. (See illustration VII.)

Block Number—Each quarter section is given a three digit number to designate its location or block within the section. The NW ¼ is 100, the NE ¼ is 200, the SW ¼ is 300 and the SE ¼ is 400. (See illustration IX.)

This series of numbers is used for listing blocks or other readily delineated areas in a logical sequence. In rural areas, parcels not grouped into typical suburban blocks carry the quarter section block number and individual parcel numbers.

In city, village, or subdivided areas many blocks are usually located in each quarter section. These blocks are numbered generally from W to E in successive layers from the top of the quarter section. (See illustration X.)

As changes are made in property lines due to splitups or combinations, the old block or lot numbers may be dropped and new numbers assigned to the revised property lines. However, a change in ownership, without a change in property line, does not necessitate a new block number.

Lot or Parcel Number—In city, village, or subdivided areas where blocks are divided into lots, each lot or parcel is given a three digit number starting with 001 in the northwest corner of the block. The remaining lots in the block are numbered successively in an easterly direction for blocks with the long axis east and west, and are numbered in a southerly direction for blocks with the long axis north and south. (See illustration XI.)

Changes in lot lines due to combinations or splitups are made in the same manner as described above for blocks; old numbers of changed lots are dropped and new numbers given to split-up or combined lots.

Once a number is used for a particular parcel, it must not be used again for a portion of a parcel or for another parcel. Once a parcel number is used on the assessment roll, it becomes, for tax purposes at least, a legal description. Thus, if the boundaries of a parcel are changed, the resulting parcel or parcels must have a new number.

A cross index card system must be prepared to provide a cross index of legal description and the permanent parcel number. Two sets of these cards —one filed by name and address, and one by permanent parcel number—provide additional means of locating property rapidly.

The cross index must be kept up-to-date so that both voided and active index numbers can be compared with the complete legal description.

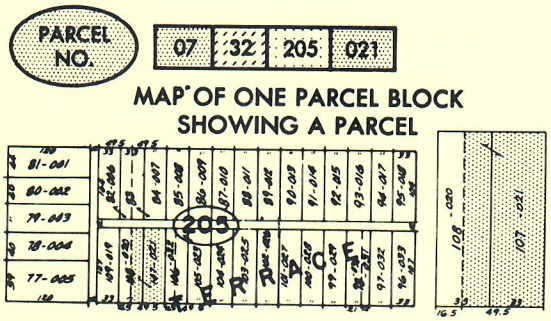


Illustration XI

In addition to the cross index, an index number inventory system should be prepared. The inventory should list the original parcel numbers assigned, new parcel numbers assigned and date of assignment, and show parcels voided and date of cancellation. The inventory would provide a history of each block and would facilitate the accurate selection of new parcel numbers.

ADVANTAGES OF AERIAL BASE TAX MAPS AND A PERMANENT PARCEL NUMBER SYSTEM

Aerial base tax maps provide a complete documentary, visual record of all real property while accounting for every square foot of property. With aerial photographs, a complete real property inventory can be made, while irregularities are noted and prior field work verified.

Preparation of the maps and aerials on an overlay basis will provide for the possibility of periodically acquiring new aerial photos which can be matched to the tax maps for re-assessment.

The aerial base tax maps will provide a complete set of original documents for the county, and enable the county to provide copies for interested county, township, municipal, and commercial offices at a nominal cost. The aerial base tax maps will also provide an excellent engineering base for the plotting and planning of such items as tax districts, school districts, and development of municipal improvements.

The permanent parcel number makes possible the rapid and simplified location and identification of any tax parcel and provides for a numerical method for filing and cross reference of records as well as an alphabetical and geographical listing of property owners.

The permanent parcel number greatly simplifies the use of modern mechanical and electronic office equipment and methods in assessing, tax billing, tax collection, computation, and distribution functions, while providing the average taxpayer with something he can readily identify each year to insure payment on the proper parcel.

Errors are reduced with a permanent parcel number, since it is much easier to copy and check a ten digit number than a lengthy legal description.

A permanent parcel number system has the great advantage of saving time in the performance of routine office work so that more time is left to devote to the Assessor's more important and difficult task of determining the value of property.

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