Downer College Land Value if Subdivided
for Residential Purposes

Rough Estimate by

Paul Downing and Mason Gaffney

September, 1963

1. 40 acres x 43,560 = 1,742,400 ft^2

2. 20% dedicated to streets, sidewalks, parkway, and other public uses. *Seems high - only 16% of city is given to all r.o.w.*

   net ft^2 = 1,393,920 ft^2 @ 2.00/ft^2 = $2,787,840.00

   ($2/$ft^2$ is a generous figure, presupposing an intensity of duplexes or apartments)

3. Average lot size east of Downer is 60 x 120 ft. or 7,200 ft^2.

4. Total number of 60 foot lots possible on the Downer College campus = 194

5. Cost of improvements to lot (other than building) (from City of Milwaukee, Department of Public Works) 1963

Pavement, Curb, Gutter and Walk	(60 x 16.00)	$ 960.00
Sewers (Sanitary and Storm)	(60 x 9.00)	540.00
Water main	(60 x 5.24)	314.40
Laterals to curb		475.00
		$2,289.40

   $2,289.40 x 194 = total improvement cost = $444,143.60

6. Total value of subdivided improved lots $2,787,840.00
   Less cost of improvements - 444,143.60

7. Total value of Downer College land (w/o bldgs.) = $2,343,698.40

8. Value per acre (after street acreage removed) of land without buildings (32 acres) $73,241/acre

9. Value per acre (with street acreage included) of land without buildings (40 acres) $58,592/acre

Cost of Expansion of UW-M in three principle directions, as alternatives to acquisition of Downer College land.

East*

area 42.594 acres (not including streets & churches) how about alleys?	
Acquisition cost estimate	$5,656,303
Cost per acre	$ 132,796/acre
Cost per acre East of Lake Drive	$56,192/acre
Cost per acre West of Lake Drive	$182,939/acre

South*

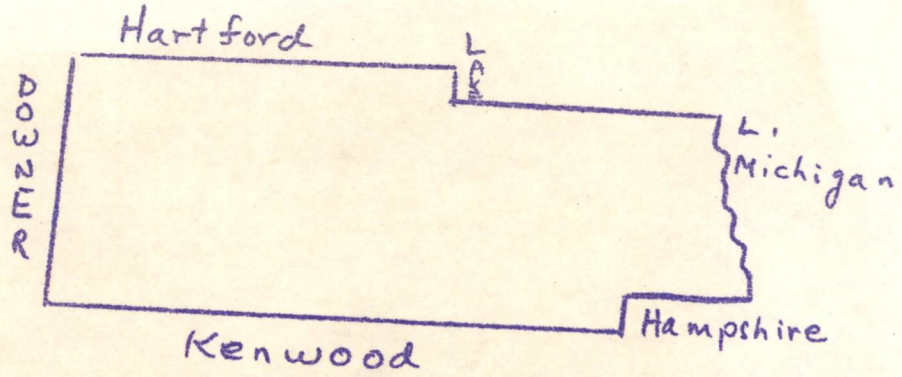
area 40.585 acres	
Acquisition cost estimate	$6,791,298
Cost per acre	$167,335/acre

West*

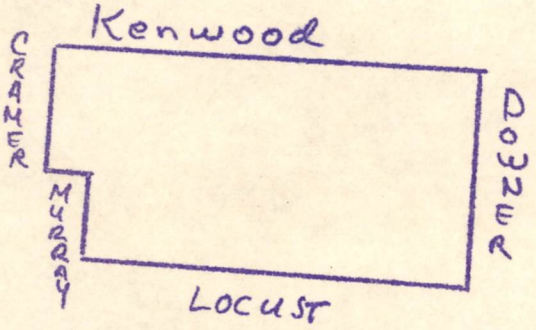
area 41.723 acres	
Acquisition cost estimate	$5,978,973
Cost per acre	$143,302/acre

*See boundaries on page 3.

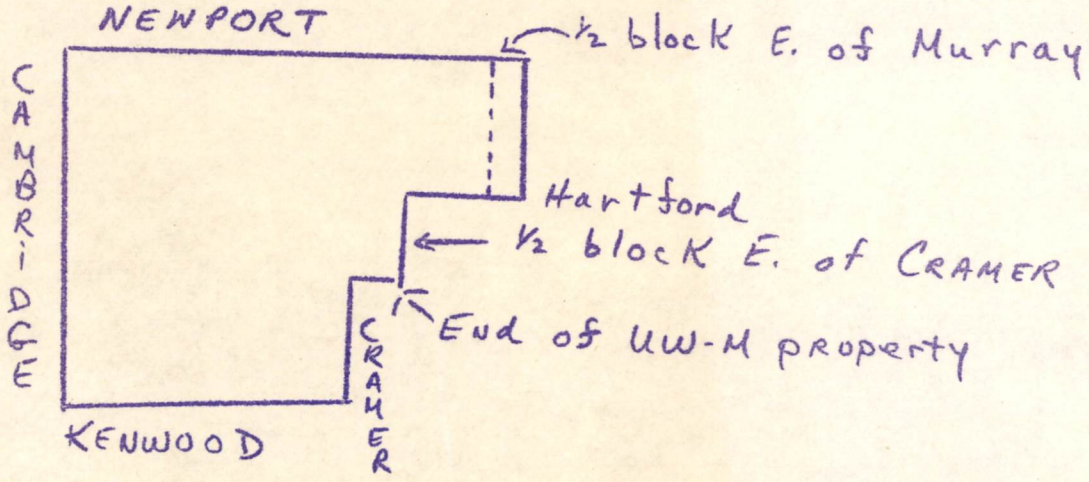
East



South



West



Downer College Land Value if Subdivided for Residential Purposes

Rough Estimate by

Paul Downing and Mason Gaffney

September, 1963

1. 43 acres x 43,560 = 1,873,080 ft^2

2. 20% dedicated to streets, sidewalks, parkway, and other public uses.

   net ft^2 = 1,498,464 ft^2 @ 2.00/ft^2 = $2,996,928.00

   ($2/$ft^2$ is a generous figure, presupposing an intensity of duplexes or apartments)

3. Average lot size east of Downer is 60 x 120 ft. or 7,200 ft^2.

4. Total number of 60 foot lots possible on the Downer College campus = 208

5. Cost of improvements to lot (other than building) (from City of Milwaukee, Department of Public Works) 1963

Pavement, Curb, Gutter and Walk	(60 x 16.00)	$ 960.00
Sewers (Sanitary and Storm)	(60 x 9.00)	540.00
Water main	(60 x 5.24)	314.40
Laterals to curb		475.00
		$2,289.40

   $2,289.40 x 208 = total improvement cost = $476,195.20

6. Total value of subdivided improved lots 2,996,928.00
   Less cost of improvements 476,195.20

7. Total value of Downer College land (w/o bldgs.) = 2,520,732.80

8. Value per acre (after street acreage removed) of land without buildings (34.4 acres) $73,277/acre

9. Value per acre (with street acreage included) of land without buildings (43 acres) $58,622/acre

Cost of Expansion of UW-M in three principle directions, as alternatives to acquisition of Downer College land.

East*

area 42.594 acres (not including streets & churches)	
Acquisition cost estimate	$5,656,303
Cost per acre	$ 132,796/acre
Cost per acre East of Lake Drive	$56,192/acre
Cost per acre West of Lake Drive	$182,939/acre

South*

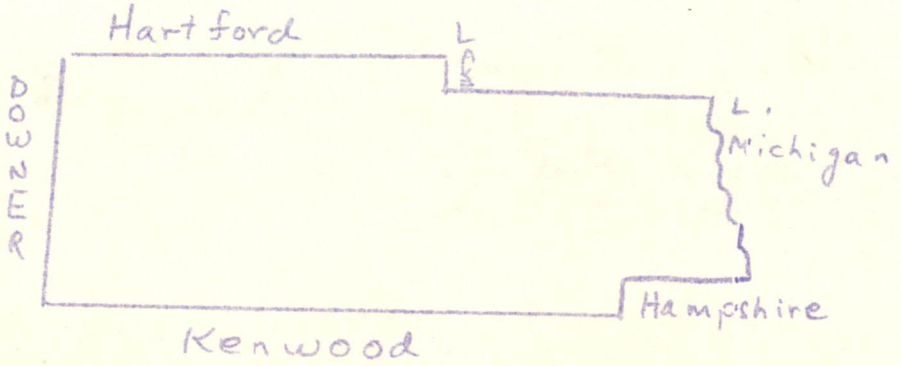
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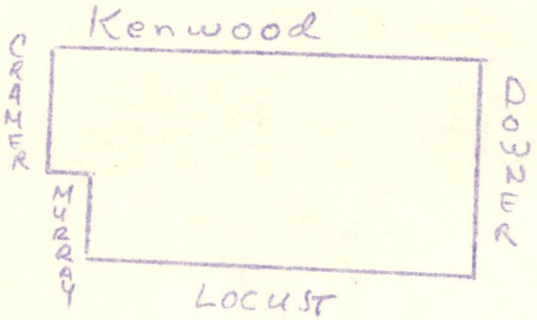
area 41.723 acres	
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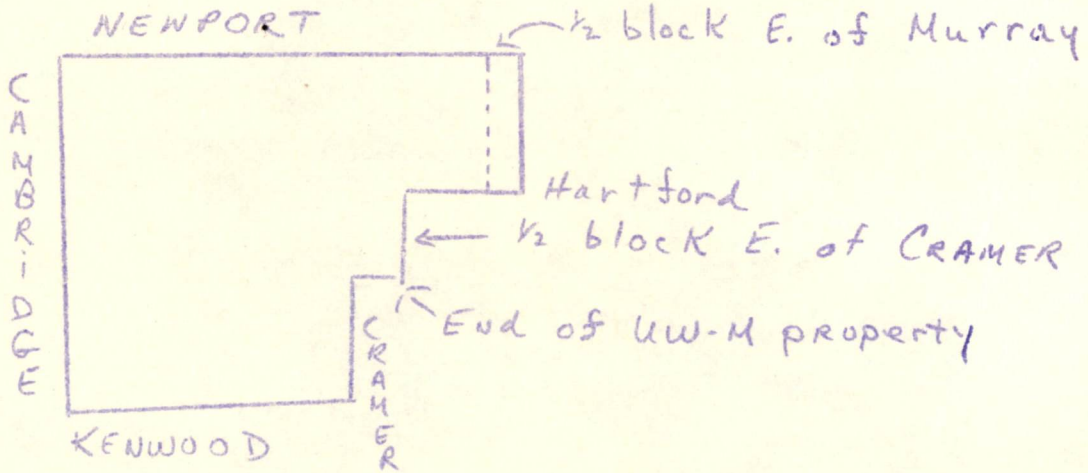
East



South



West



There is a just plain new bldg. in CBD:

Jordan Miller's "Office on the Square" s.e. Jeff. & Wells.

Puts good faces to streets; blank sides to neighboring lots. No integrn. w. neighbors at all. Can't forecast or control their actions? No, not so. Designed for expansion to east. Only on n. side is it unintegrated.

Why design so small a bldg. for future expansion? Wd. save cost to bld. all at once, & isn't a big market factor.

Wells & Jeff. doesn. is n.e. of center of things. More fragmentation of CBD; the push to n.e.

Of the various CBD out-thrusts, n.w. follows pop. mvmt, and gets CBD out of its corner, made by Lake & Mem. Valley. Access from s. being bad, it's a corner.

Milwaukee Sentinel - January 31, 1970

By DAVID E. LINK

Editor, Modern Living Section

RUST-bleeding bays, balconies and banks of windows, all tied together with a warm, brown brick. These are the structural elements of the newest office building on downtown Milwaukee's East Side.

Although new, the eight story building seems to be settling well into its aging surroundings.

It stands at the southeast corner of Jefferson and Wells, where its neighbors include Cathedral Square Park, stately St. John Cathedral, nearby Old St. Mary's Church, and some interesting old houses turned into stores and offices along the west side of Jefferson St.

THE building is appropriately named "Office on the Square" by its ~~owner, Architect~~ Jordan Miller. He's a partner in ~~Miller & Waltz~~ Architects & Associates, with offices at 777 N. Jefferson.

"We like the East Side — and this seemed like a good location for an office building," Miller said. "The site overlooking the park gave us an opportunity to design what we believe is a gracious office structure."

The rust?

It's bleeding onto the sidewalk from the Core Ten steel that's used for bays, balcones and under windows.

The bleeding process will ntinue for four or five ars, Miller explained. But n it will stop and the steel l have taken on its own manent rich, rusty patina.

WE think the Core Ten brick materials are totaln keeping with the East of Milwaukee," Miller tained.

ven the bays which rch up the west side of the ilding seem to borrow from e architecture of yesterday hen bays were common.

But the bays serve more nan a decorative architectural purpose. They serve the practical purpose of providng much needed solar heat and light control for the building.

Direct west exposure of the bays is shielded from sun penetration by panels of Core Ten steel. Windows are on both sides of the bays, letting light into the interior and at the same time providing the occupants with some interesting slices of downtown Milwaukee's architecture.

THE BAYS also provide interesting opportunities for office decor and arrangement on the interior, according to Miller and Thomas Lehnen, an associate in the architectural firm who has done much of the interior supervision.

"The result is rather pleasant inside, not having to face the usual box treatment," Miller said.

In addition to the bays, there are balconies placed at various locations around all eight floors of the building. These were planned to provide tenants with some means of relating to the outdoors, Miller explained.

The north side of the building features one large bay, with glass walls, overlooking the park.

USE OF glass and full exposure to the view of the park was possible on the north elevation because there is no sun problem there, Miller explained.

Some observers have criticized the seemingly chopped off and blank look of the east and south elevations of the building. These are in sharp contrast, architecturally, to the west and north elevations.

The explanation is simple, however. The building was designed for expansion to the east, with tentative plans for duplicating the eight floors and 54,000 square feet of space that now stands on the corner. The exposure to the north is on the lot line, and presumably will one day stand against another new building.

Miller said that the space in the building is about 85% leased. Rental rates average about $6 a square foot.



Looking South

Streaks of rust, forming on the bays and under windows of the new "Office on the Square" are part of the aging process of the Core Ten steel. After four or five years the rusting will be completed, forming a permanent finish and color. The bays (right) are on the west side of the building. The north exposure overlooks Cathedral Square Park (above) on the east side of downtown Milwaukee.

—Sentinel Photos by George P. Koshollek

conditions should be sought for every investment contemplated.

In preparing this bulletin the help and advice of the following persons is gratefully acknowledged.

Mr. Ben Chadwell
Kona Kai Marina
San Diego, California

Mr. Gordon Frazar
Frazar Brothers
San Marcos, California

Mr. Ben Hagar
Mission Bay Park Director
San Diego, California

Mr. Garrick O'Brien
Islandia Hotel
San Diego, California

Mr. Kenneth Sampson
Orange County Harbor District
Orange, California

Mr. Don Vynne
Aquatics Director
Mission Bay Park
San Diego, California

Mr. Roger DeYoung
Frank Ayres & Sons
Newport Beach, California

THE BOATING MARKET

The general boating market is much greater than that portion of it which influences marinas and urban waterfront properties. A few statistics will give a measure of the vast appeal boats and boating have for the American public. Here is obviously an attraction that has yet to be fully realized by community builders.

1963 was a good year for boats. According to the magazine *The Boating Industry,* 38,390,000 persons used the waterways of the nation more than twice. For this pleasure, they spent $2.58 billion. Not counting rafts and inner tubes, they were carried on 7,678,000 recreation boats, divided among 813,000 inboard powered (including auxiliary sail), 495,000 sailboats, 4,239,000 outboard boats, and 2,131,000 rowboats, canoes and lesser craft.

Those who spurned the wind, or their own muscle, powered 949,000 inboard and 6,390,000 outboard engines with 535,000,000 gallons of gas. Of this, inboard engines consumed more than their share of strength by swallowing 160 million gallons vs. 375 million gallons for outboards.

In 1962, lenders did a thriving business as $984 million of borrowed money went across the counters of dealers, banks, and finance companies to help the buyer get his feet wet.

In 1963, there were 3,300,000 boat trailers in use along with 4,500 marinas and 1,150 yacht and boat clubs with waterfront facilities. The average marina did an $87,000 average annual gross.

Generally speaking, more people spend more money on more boats and more powerful engines each year. Water safety has been improving even as the waters become more crowded.

While outboard power dominates the boating field, *The Wall Street Journal* has pointed out that sailboard retail volume in 1963 was $25 million, an increase of 66 per cent over 1961, compared with an overall increase in boating spending of 3 per cent.

Even without standing such numbers on end or comparing them with the national debt, they are impressive.

One conclusion is obvious. The greatest use of boats is in those which can be trailered, not in the glamorous, over-$10,000 market.

COMMERCIAL MARINA OPERATION

The ownership and operation of a marina is a specialized business with more features unlike rather than like conventional real estate investments. It is not the purpose here to detail the many facets of this business, but rather to mention the principal source of information.

In a fashion similar to the trailer coach industry, the manufacturers in the recreational boating field have through the National Association of Engine and Boat Manufacturers fostered and published research data and general information on the ownership and operation of marinas.

The complete and well-organized publications of the Association include:

Marinas—Recommendations for Design, Construction and Maintenance

The Modern Marina

Accounting Manual for Marinas and Boatyards

Boat Handling Equipment in the Modern Marina

Study of Marinas, Yacht Clubs, and Boatyards

Study of Marina Revenues and Expenditures —1960

Study of Marina Revenues and Expenditures —1962

Since the publications are available to the possible investor through the Association at 420 Lexington Avenue, New York 17, New York, the purpose here will be to comment from these publications insofar as it might interest the real estate investor.

As differentiated from other shoreline development, the marina is meant here as a service facility for recreational boating and boaters. Service is in essence the commodity offered in the form of a berth, fuel, dockside utilities, personal services, food, ice and liquor, automobile parking, and boat servicing. The key is convenience with cleanliness. The facilities may or may not include every possibility, but those facilities must be provided with a maximum of service. It is in the area of service that the distinctions between successful and unsuccessful operation will lie.

The prime purpose of any marina is the berthing of boats. As such, slips and storage facilities must be safe and convenient. Additional facilities may include fuel, marine stores, motel, restaurant, groceries and ice, liquor, soft drinks, boat hauling, yacht sales, and many other boating related installations. Services can include launch service for moorings, dockside deliveries, shore transportation, boat maintenance, weather information, security service, and refuse collection. The degree and extent of facilities and service with any one marina will depend upon local conditions and competition.

Since surveys have indicated a profit spread from nothing to 30 per cent, each facility provided must be weighed separately. Each category must be planned and adapted to local conditions. Cost control is important within the overall operation in order that inefficient or money-losing portions may be weeded out or modified. It is to this end that the Association has prepared its Accounting Manual.

The majority of marinas, in addition to offering slips or moorings, provide gas and oil, boat accessories, paint, hardware, ice, cordage, and canvas. A lesser number offer diesel fuel, bottled gas, bait and fishing equipment, and groceries. The majority also have sales facilities and repair services. Fewer than half offer restaurants and sleeping accommodations.

Sources of revenue in decreasing order are: berth rentals; sales of hardware, equipment and paints; repairs; sales; and sales of fuel and lubricants. Best profit ratios are found in rentals, repairs, sales, and fuel in that order. Overall industry net earnings are below 5 per cent. Direct costs are about 75 per cent of gross and indirect costs are about 20 per cent. According to the Association, the industry as a whole needs better business practices.

The wide variation in income is illustrated by the wide divergence in rental charges reported by the Association. Facilities for comparable craft may vary from $5.00/slip/month to $70/slip/month. Averages will vary widely from region to region.

The spread of services provided is also wide-ranging. While ¾ of the marinas will provide automobile parking, electricity and water, only

25-35 per cent provide laundry and dry cleaning. The percentage providing crane service, mail, and garbage disposal falls in between.

Financing of marina development is a field unto itself. To quote the Association, ". . . marina operation does not have a historic record of success in financial circles." Since operations may not develop profits for two or three years, the investor will have to plan on his own resources providing more than the normal percentage of capital required in a real estate venture. The increase in waterfront activity and the more than average rise in waterfront property costs makes the problem more acute. For this reason, financing of marinas requires more than average ingenuity on the part of the developer.

The marina market can be as varied as the types of boats and the conditions of the shoreline. Power boaters have slightly different needs depending on whether they have inboard or outboard power. Larger power boats have obviously different needs and limitations than small boats. Sailboats have another set of requirements and these in turn depend upon size and whether or not there is auxiliary power.

Since few marina operations can afford to be specialized, most tend to adopt compromises on such matters as slip length, boat segregation, and facilities provided.

A marina is essentially a form of residential development with secondary commercial possibility. The first source of income is from the rental of slip space.

Slip rentals vary within a range determined by the competition, cost of development, occupancy factor, operation and maintenance costs, taxes, and other typical real estate expenses.

Normally, slip rental is computed on the length of the boat berthed, or the length of the slip being rented, whichever is greater. Rental can be on daily, month-to-month, or long-term rental.

The prevailing rental can in large measure influence the boating activity in an area. A typical 30-foot cruiser or auxiliary sailboat costing in the neighborhood of $12,000 depending on the rate, can cost the boat owner from $24 to $90 per month for "parking." Since this is the major current expense of boat ownership, such a variation can be a real consideration to a prospective boat owner. It is also typical of boat owners to trade up to more expensive and longer boats so a minimum footage rental can help stimulate this natural tendency.

In a growing market, a marina operation should allow for a vacancy factor as in a growing apartment market. Initially, the vacancy factor will be high while the new facility finds its place. Reservation of from 5 to 10 per cent of the space available to be used by visiting craft at daily rates can be good public relations and will give the marina a chance to demonstrate itself to yachtsmen. The actual amount of such space available will depend upon other attractions of the marina as well as the general state of repair and program of maintenance.

In general, most marinas can find slip locations, whether planned for or otherwise, which weather, tide, and traffic make less desirable for rental slips but still satisfactory for occasional use.

Second to slip rentals and a good income producer under certain conditions is a fuel dock. Since a separate fuel dock installation requires a relatively high initial cost of from $75,000 up or can cost $10,000 if incorporated with other facilities, and like any filling station requires attendance, maintenance of sales volume is essential. The operator's normal share of the sale price is in the vicinity of $0.02 per gallon. To get a gross net income of $1,000 per month demands pumping 50,000 gallons. Since a typical fuel capacity is 50 gallons, a quick calculation shows that a successful fueling requires either a large number of yacht users or at least some larger commercial customers.

This is not to say that a marina cannot provide fuel services on a minimum basis. A potential investor should remember that a less than full installation becomes a convenience service rather than a commercial investment. In such a case, the operator should not look to fuel sales to help profits appreciably.

A potential source of revenue to the marina operation as well as a convenience to boat owners and stimulator of activity is a boat brokerage. The additional space requirements are minimal since in all but the largest facility the brokerage can operate out of the general office.

Yacht brokerage operates on a commission basis much like real estate brokerage. The sales commission normally runs up to 10 per cent on used boats and 20 per cent on new boats with the salesman taking 40 per cent and the

INTRODUCTION

Since 1950, the Urban Land Institute has endeavored to present material and information on the planning and development of marinas and other shoreline real estate. The principal results have been the May, 1950 article in *Urban Land* by Joseph E. Choate entitled, "Today's Marinas and Community Planning"; Technical Bulletin No. 14, *Marinas—Their Planning and Development,* by C. A. Chaney; the 1960 ULI convention in Ft. Lauderdale, Florida; and the October, 1962 Community Builders Council meeting in San Diego, California. During the period between the first and last of these efforts, the investment in and growth of boating and boating facilities has been remarkable.

Along with this increase in boat ownership has been a growing willingness of both public and private investors to develop the bays, rivers, lakes, and harbors of the country. River and harbor appropriations by the federal government have amounted to several billion dollars since 1950. Much of this money has gone into facilities and waterways used by the boating public. Local and state agencies have likewise invested millions.

Even a brief tour of waterfront projects will demonstrate that the fascination of waves and water is not confined to boating. From the fine apartments overlooking the Saint Francis Yacht Club and the Golden Gate to the towers of Manhattan viewing the East River and the ships on the Hudson, mankind is drawn to the water as a backdrop to living. Hence, it is not sufficient to examine marinas only, important as they may be, but also the relationship of the water's edge to other forms of realty.

It is the purpose of this bulletin to explore the financial and investment aspects of marinas for the land development industry and to cite examples of the successful adaptation of real estate projects to waterfront location. While certain special conditions will be found to exist, and while these special conditions will vary from location to location, they do not change but rather fit within the normal rules and procedures of real estate development.

Since the technical literature published by the Corps of Engineers, Bureau of Yards and Docks, American Society of Civil Engineers, National Association of Engine and Boat Manufacturers and others cover well the design and construction of shore facilities, we need only mention that such exist. Current development and investigation are adding to this library and are available to the designer and engineer.

Waterfront facilities as investments have much in common with other real estate endeavors. They involve a fixed location with high capital investment in a rapidly changing market situation. Design, engineering, development costs, land costs, financing, land title, and a multitude of other aspects must be dealt with here as elsewhere. The problem becomes more complex with the introduction of such elements as tides, currents, and other water hazards. The fact that boating itself is a relatively luxury commodity narrows the breadth of the market. The geographic limit to suitable shoreline real estate further confines investment consideration.

To offset these limitations, the years since World War II have seen boating change from the pastime of the well-to-do to a hobby of national breadth, touching a range of income groups from those able to afford an $800 outboard runabout to those fortunate few who still do not count the cost. This transformation has created a new and vital market for the enterprising developer.

While this enthusiasm may be nationwide, the basic character of the business is regional. Water conditions, market, construction costs, and financing vary so markedly, even within regions, that few specific answers can be found that will apply nationally. With the exception of a few class boats, even the manufacture and marketing of boats is primarily within small market areas.

Marina operation is principally a local business. No chain operations are evident. Local construction methods seem to predominate and operations are more on the scale of apartment houses than national retailing.

It is the hope of this bulletin to point out some of the pitfalls and to indicate future possibilities. With a few exceptions, the examples cited are taken from Southern California. To apply the financial figures used to other regions should not be tried. Competent professional advisors with a knowledge of local

broker 60 per cent of the commission. While new boats provide a higher commission, used boats will provide 90 per cent of the activity.

Multiple listing is common in the yacht brokerage business. This makes it possible for yachts to be listed at the home slips and be sold through other marinas and in other cities. Inspection of the advertising in yachting magazines will indicate boats listed by a broker as at his own docks, nearby ("just a few minutes away"), or out of town. The commission on a multiple listing service will divide 64½ per cent to the selling broker (and his salesman), 34½ per cent to the listing broker, and 1 per cent to the listing service.

The principal cost of yacht sales, as in any large item brokerage selling, is advertising. Active selling even in a receptive market requires constant activity. The cost of a full page ad in the well-known yachting magazines runs around $250 per issue. It is not unusual for a brokerage to spend $1,000 per month for advertising. A large, multiple office operation will spend much more.

A combination slip rental and brokerage buisness can offer the seller the opportunity to deduct slip rentals during the listing period from the sales price, in effect carrying a major expense for the owner during the time he would be most wanting some advantage.

Boat owners are notoriously fickle in their affections toward their boats. While they may lavish great care on their present possession, they are forever comparing boats hoping for one a little bigger, or faster, or with greater cruising range, or drier, or anything more. An active marina with boats for sale provides a major drawing card.

Among minor possible sources of revenue are a marine store, locker rental, vending facilities, charter services, and coffee shop.

Marine store items, particularly in the yachting field, involve higher quality and price than comparable home items. A full service facility can service a great number of boats, but it is more probable that a convenience store would be located at a given marina. Such a small store should be considered only where a volume of $5,000 per month or more might be expected. This figure probably would require at least 250 yachts being served.

In contrast to the marine store, owners' lockers are a desirable service. A yacht requires a multitude of odds and ends, tools, and spare parts that the owner is often reluctant or unable to store aboard. Since all owners have different requirements, it is well to provide lockers as an extra service at from $5 to $10 per month. Because of the high fire hazard in many marine supplies, owners like to keep as much of the hazard off the boats as possible. The marina operator cannot afford to let this pile up on the slips nor can he normally devote expensive floating space to storage. The result is that lockers are best located in a central shore location susceptible to good management control and policing.

A central area for vending machines can be a small income producer with relatively few problems. Ice, cigarettes, soft drinks, coffee, and other vendable items can be provided by vending services. Ice machines will produce from $.25 to $1.00 per month per slip in net revenue to the marina. Most smaller yachts do not have refrigerators because occasional use will not permit sustained refrigeration. Ice cubes should not be overlooked. Fuel and liquor appear to be more necessary than food.

Early risers and teenage children make a convenient coffee shop almost a necessity. Fishermen demand food before dawn and youngsters require food at all hours. A coffee shop can easily provide package lunches and pick-up items such as beer, bread, and milk.

Not to be overlooked in connection with a brokerage business is the sale of marine insurance. With negligible costs, a $1,000,000 a year brokerage volume should generate $250 a month net to the operator. Selling of insurance through the casualty agent should emphasize the special nature of the insurance and also the fact that the insurance representative who also oversees the boat will have both interests in mind.

Where slip rental is the basic source of revenue, the controlling element on the cost side is cost of occupying the real estate, whether this be the lease or sublease rent or the return expected on a fixed investment.

Development of safe and sheltered waterways is normally a massive and expensive undertaking. The pleasure yachting features are becoming only one facet of the overall objectives of waterway development projects whether these be flood control dams, inland commercial waterways, deep water port devel-

opment, marine park developments, navigable river development, or other major capital investment. For the greater part, such massive investments involve public funds, private capital being reserved for the finishing touches.

As a result, the private development of marina facilities often involves a leasehold payment to a port district, municipality, or state agency. The method of determining rent depends upon the agency. A minimum can be 7 per cent of the gross income against a minimum square foot rental of land and water. In Southern California, the minimum ranges from 17 per cent in San Diego Bay to 25 per cent in Los Angeles Harbor.

The lease rate obviously reflects the extent of the improvements needed and the risk involved. Mission Bay, California lease rates are 7-10 per cent of the gross against 8¢-10¢/s.f./yr. for both land and water.

Depreciation, barring calamities unique to the waterfront, is a fairly stable expense. While, for tax purposes, five years for wooden floats and longer for concrete is a permitted period, the practical life is longer, up to 10 years for well-built wooden structures and longer for concrete. In any growing market, it is probably best to arrange a depreciation schedule which more closely ties to the projected growth in income rather than crowd most depreciation into the first and leaner years.

Maintenance expenses are, of course, influenced by a multitude of factors such as original construction, weather, water conditions, age, the length of lease, and the temperament of yachtsmen. Probably a figure of $4 to $5 per slip per month is not an unreasonable amount.

Management can be a serious consideration and lends support to the idea of combination of slip rental and boat brokerage. General supervision of boats is important, but not a great problem; but the combined salaries of a manager at, say $800 a month, and a dockmaster at, say $400 a month, is better spread over more than slip rentals.

Most marinas provide water and power, both 110V and 220V. Depending again on local conditions, the cost of these services will cost the marina from $1 to $2 per slip per month. Few yachts are equipped to generate in-port power and fewer can afford it even if capable.

Telephone service is desirable in a modern marina, but control through central switchboard is seldom worth the trouble if not the expense. Those owners who wish it should be able to subscribe directly with the phone company. Pay booths strategically placed are probably a good idea. Yachtsmen often like to justify the expense of their hobby in part because they "get away from the phone."

As with any public service facility, a marina operation has a fairly high insurance risk exposure. A well designed, well ordered marina is its own best protection, but the premiums on liability, fire, and theft, and other broad form coverage can easily run $3,000 and up per year.

Careful minimizing of risks through proper slip lease agreements is most important. Even the most peaceful waters have difficult periods, and the breaking away of one boat can create havoc in close quarters. Hundreds of individual gasoline and butane tanks are fire sources along with typically temperamental shipboard electrical systems. Paints and solvents are equally notorious.

A typical income-expense sheet for one year of operation of a hypothetical 200-slip marina may illustrate these income and expense relationships better than separate discussion. These figures are illustrations only.

For purposes of discussion, let us assume that the operation exists on a municipally owned waterfront. The operation holds a 50-year lease and has borrowed ⅔ of its capital at 6 per cent for 15 years. Slips are single side tie-up and 30 feet long.

Initial costs:	
Slips, docks, and piers	$240,000
Lockers, offices, etc.	60,000
Coffee shop, store	35,000
	$335,000
Interest during construction	10,000
Lender's fee	10,000
Administration costs during construction	5,000
Architects, engineers, and legal fees	30,000
	$390,000
Investment capital	$130,000
Borrowed funds	$260,000
Repayment	$26,400 p.a.

Foreword

Any residential land developer who has the urge to try his hand at waterfront property, be it on river, lake or tidal estuary, will find in this bulletin an authoritative, concise and informative analysis of the subject. It may temper his first enthusiasm for a particular stretch of shoreline, but it also points up the potentials as well as the problems that exist in properly bringing together various forms of land and water for use by the rapidly increasing number of human amphibians who seek such locations, either as a diversion or a way of life.

William B. Rick, who prepared this report for ULI, is a graduate of the University of California and a member of the Rick Engineering Company of San Diego, California, where he has been associated with his father, Glenn Rick, in the practice of civil engineering and land planning for the past ten years, including numerous waterfront and marina projects. In this bulletin he has made a realistic appraisal of waterfront planning and development in terms of the real estate market, land values, development problems and marina operation as they affect the developer and the investor.

MAX S. WEHRLY

Income—Slips:
200 slips @ 30′ @ 90 per cent occupancy @ $1.00/ft./mo. = $72,000 per month.

Brokerage assumptions:

$1,000,000 @ 6 per cent	$ 60,000

Income summary:

1. Rentals	$ 72,000
2. Brokerage	60,000
3. Insurance	3,000
4. Marine stores	1,200
5. Lockers	6,000
6. Vending machines, net income	500
7. Coffee shop, net income	1,200
Total income:	$143,900

Expenses Summary:

1. Land and water rent	$ 15,000
2. Maintenance	9,600
3. Management	16,800
4. Utilities	7,200
5. Insurance	3,000
6. Taxes	6,000
7. Brokerage advertising	12,000
8. Depreciation, 10 yr.	39,000
	$108,600
Income less expenses:	$ 35,300
Net cash before loan amortization	$ 74,300
Net cash less amortization	$ 26,400
Net cash	$ 37,900

The preceding might be considered as a summary of a broad service facility for boats 25′ and longer. The largest number of boat owners cannot afford or do not wish to spend $25-$35 per month for parking. They may spend some lesser amount to save the trouble of launching or retrieving their boat each time. For them there might be a low-cost marina. Assuming here a larger number (300) and a smaller water area (1 and ½ acres) ; ⅔ on bow snubbers and ⅓ (100) on short (16′) slips.

Income:

1. Slips 80% x $12.00/month x 100 spaces x 12 mos.	$11,520
Bowties 80% x $8.00/month x 200 spaces x 12 mos.	15,760
2. Brokerage	none
3. Vending machines	$ 2,400
	$29,780

Operations:

1. Rental: 5% x gross	$ 1,500
2. Maintenance	1,500
3. Dockmaster	5,000
4. Insurance & utilities	1,200
5. Taxes	1,500
6. Depreciation	15,000
Total	$25,700
Balance	$ 4,080

Marinas, like all other real estate investments, thrive or fail within a competitive market. Price is a primary consideration, but there can be other competitive advantages. It is well, then, to consider some of these possible fringe benefits that will draw boat owners.

A marina subleased from or operated with a waterfront resort hotel can offer the recreation advantages of the hotel at little or no additional cost to the owner. Swimming pools, golf courses, shuffleboard courts, tennis courts can be attractive. The yachtsmen and their families will probably not overtax these facilities. The fact that they are available will be the incentive. The threat of removal of the privilege can be used to keep the conduct of boat owners, particularly the younger set, within bounds.

When one visits a marina area on even the best of boating days, the one condition most noticeable is that boat owners rarely use their boats, or when they do, it is for a short period. The real aficionados belong to yacht clubs and take their sailing seriously in Stars, 110's, and other class boats. Intense fishermen are a minority. The balance vary from the fellow who keeps a $35,000 floating bar, but never goes to sea, to the family who cruises on the good days. A small percentage, probably not over 5 per cent, lives on board.

The point here is that yachtsmen are still landsmen and the more clublike features provided, the more attractive the marina.

Many sailors and powerboaters do not wish or cannot afford to belong to yacht clubs, yet racing and cruising events are as important to marina boaters as to club boaters. With as many classes as exist, it is often difficult for a club to schedule all the events its members desire. An alert marina operator can fill a need by sponsoring and arranging class and open events not in conflict with the clubs. The

principal effect is that it gives his tenants a chance to participate in a full range of yachting activities, thus taking the edge from less active or more distant marinas.

A marina operator should bear in mind that the yachtsman sheds more than his business suit when he puts on his dungarees. In contrast to apartment dwellers, boaters are, even more than mobile home dwellers, inclined to be gregarious. Besides quickly picking up the sailor's habit of swapping tall tales, he seems to have a great curiosity about the other man's boat. As mentioned, no real yachtsman would admit to being satisfied. Their sense of competition is open to exploitation by the marina operation.

The need for protection from adverse tides and weather forces marinas to seek sheltered locations. Normally, these smaller water areas are not as attractive to sailing as either the ocean or other main body of water. The marina that can reduce the cruising time to racing course, fishing grounds, or cruising water has a considerable advantage over its competitor located farther away. Five miles per hour is good auxiliary speed for sail and 10 miles per hour is common for most cruisers. Thirty minutes to an impatient sailor are enough to tempt him to change berths.

Many areas of the country, such as the Chesapeake Bay and Puget Sound regions, are blessed with protected and interesting cruising possibilities. Other areas like Miami and San Diego are excellent fishing areas. The open sea without relief is a formidable element. Yachtsmen, like everyone else, want to be "doing" something.

No real estate investment being an unending joy, it is well to mention a few of the problems, special and otherwise, that come in the package.

The water itself is the principal hazard. Fortunately, total destruction from ice, tidal wave, or tidal bore is rare, but recent examples such as the losses at Santa Monica or the hurricane damage of recent years along the southeast coast illustrate the point. There is no general insurance pool against such hazards similar to hail insurance, hence one reason for rapid tax write-offs.

Water pollution is an ever-present threat. This will range from bay pollution from sewage as formerly was the case in San Diego Bay, river pollution as on the Columbia and Willamette Rivers in Oregon, to inlet pollution from adverse winds and failure of the tide to clean as evidenced in some parts of the Miami region. As long as it is not offensive to his eye or makes him hold his nose, the yachtsman seems to have a high tolerance of pollution. Where surface pollution floats around his slip or causes him unusual maintenance, this same yachtsman does an about face. The only sure prevention is intelligent planning and engineering investigation. It is relatively simple to work with the wind and tides. Try not fighting either one.

In the summer, 24-hour operation is in order; in the winter, probably much less. The principal objection to 24-hour operation is the cost of supervision. Placing live-on boats throughout the operation will discourage petty theft and vandalism. Private police patrol will probably be needed in the summer, not so much to guard against walk-in trouble as to prevent swimmers from venturing their extra energy in minor vandalism. Rental agreements should leave the management not responsible for theft or damage by the elements.

Showers, toilets, and dressing facilities are a must. In addition to encouraging use of the facilities during the work week, they make it possible for the weekender to combine work and socializing on his boat. Facilities for three men and two women per 100 slips is a recommended figure. Good maintenance here is esential.

With rare exceptions such as Catalina Island, moorings are not an advantage. Provison of small boat storage, need for double-end anchorage, the occupying of waterway, all point against use by most boats suitable for marinas.

Since parking is presumed by the public to be free, and since different activities have different periods of peak activity, it is well, if possible, to combine parking for a marina with some other use. Unfortunately, most waterfront activities draw their peak crowds on the same day. Estimates vary but one space per two boats is a common figure. At this rate, one half acre of parking lot is needed per 100 boats.

PLANNING AND DEVELOPING WATERFRONT PROPERTY

TABLE OF CONTENTS

	Page
FOREWORD	5
INTRODUCTION	7
THE BOATING MARKET	8
SHORELINE DEVELOPMENT	9
EFFECT OF WATERFRONT ON REAL ESTATE PRICES	10
CASE STUDIES	11
Lake San Marcos	11
Royal Palm Yacht and Country Club	13
Newport Shores	14
Bahia Mar Yachting Center	15
Islandia	16
COMMERCIAL MARINA OPERATION	17
ECONOMIC STUDIES OF MARINA INVESTMENT	23
CONCLUSION	24

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ECONOMIC STUDIES OF MARINA INVESTMENT

Any economic analysis is a combination of statistical research, quantity and cost analysis, selective interpretation, wisdom, and crystal gazing. There is little difference between analyzing a shopping center or a marina.

You begin with an estimate of the merchandising area. How many existing marinas are there, what are the expansion possibilities of existing facilities, how many potential locations are there? Answers to these questions can be found by a thorough examination of the waterfront using Coast and Geodetic charts.

Next, what are the population growth projections for the region, community and vicinity? Many area planning departments, counties, or state agencies have made predictions. What is the direction and rate of change of family incomes of these same units?

How does the proposed site fit in the present and future road and highway pattern? City and County road departments and highway planning agencies can provide this information.

Within the service area what are the numbers of trailered and moored boats? What has been the past rate of change in boat ownership within the area? How has this change in ownership progressed in relationship to the development of existing marina facilities? Taxation records are probably the best sources of boat numbers and value. Aerial photographs can be a good way to check on moored boats. Counting trailered boats on a typical weekend will help in forming an opinion. Gasoline tax refunds can be a broad gauge. Projecting past information into future years using logarithmic paper can help in forming predictions.

Having now some idea of the relation of population to boats in service, estimates must be made as to the primary and secondary marketing areas of all existing and potential marinas. Using equal travel time contours is an effective method which gives a graphic display which can be converted directly into areas and populations.

Income must now be put into the population figures to determine the number of families which might own boats requiring slips and those which would use trailers.

Assumptions are made to determine the percentage of owners within the various marketing areas who would use the proposed facility. Since yacht club members will probably not transfer on a distance basis, they can be eliminated. 85 per cent to 90 per cent of the owners within the closest market area can probably be attracted to the facility, other factors being equal. The next farthest group may berth only 15 per cent of its boats with the facility, etc.

Having theoretical figures on the number and grade of potential customers, a study can be made of facilities and services offered by competition. Early discussions have mentioned a full range of yachting requirements; not all may be needed at a particular facility.

With a survey of current rental rates and service prices in hand, an estimate of potential income is possible. This can be adjusted for seasonal use, for initial rate of use, for future competition, inflation, and other factors.

The next job is a thorough engineering and management cost estimate. Because of the wide variation in construction cost, an engineering estimate should be made only by a knowledgeable consultant. Soil tests at this stage can be critical. There is no excuse for hasty work in preliminary cost studies. Once a construction budget is set up and work is underway, errors in preliminary figures will come to light, often with fatal results.

Management figures will be even more difficult to evaluate. Salaries, lease expenses, advertising, maintenance, insurance, and estimates of sales commissions can be based on past real estate experience, but adapted to marina practices.

With all the income and expense figures in hand, an estimated operating financial picture can be drawn and a return on investment figured.

CONCLUSION

The meeting of land and water can offer the developer and investor a fascinating variety. From luxury shoreline homes to commercial boatyard, from marina to lakeshore-fairway development, the potential is enormous. Probably in no other field of real estate is there such an opportunity for satisfaction as well as financial reward. The variety is unlimited. The mature developer can become again the small boy with his sailboat and look back on his dry-land days as dull and uninteresting.

Technical Bulletin
49

Planning and Developing Waterfront Property

by

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San Diego, California

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Technical Bulletin
49

Planning and Developing Waterfront Property



Bahia Mar Yachting Center, Ft. Lauderdale, Florida

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to a minimum. Periodic bluestone treatment controls algae growth. Thirty thousand dollars per year covers the expenses of maintaining the lake.

Ownership of the lake and a 30-foot-wide border strip vests in a private corporation. Water rights are owned by the developers, having come with the land. Under state license, 500 acre feet of water may be impounded and 200 acre feet withdrawn per year. The dam is subject to State inspection.

Complete access control to the lake is kept with the owning corporation. Since by State law any public access to the lake would make it a public waterway, all public streets stop short of the water's edge; the one bridge is privately owned.

Homesites fronting the lake are granted a 20-year lease to use the lake and the 30-foot border strip for $3.00 per front foot per year. Homesites away from the water have individual leases on the recreation lodge, owned by the developers, for $75.00 per year. Long term lease rents are tied to the cost of water from the County aqueduct.

The lake is used principally for boating and fishing. Gasoline engines are prohibited. Swimming in such a man-made, non-potable water body is against State law. Waterfronting owners can purchase individual floats for $850.

The sales and price pattern at Lake San Marcos is a vivid illustration of the influence of the waterfront on real estate values.

Prior to the start of Lake San Marcos, the area had had only spotty development, and, while there had been speculative increases on land prices, there was generally a depressed market for homes and lots. Five thousand dollars was and still is a high price for a 6,000-7,000-square-foot lot outside Lake San Marcos.

Within Lake San Marcos, a successful sales program has been achieved within the following price ranges:

Single family homes (1,200 to 1,600 s.f.) on 60′-70′ wide lakefront lots—$40,000 to $45,000.

Duplex units (1,000 to 1,500 s.f.) on 30′ × 133′ lakefront lots—$34,000-$50,000.

Condominium units next to the lake (800 to 1,000 s.f.)—$18,000-$25,000.

Fairway homes (1,200 to 1,600 s.f.) on 60′-70′ wide lots—$29,100-$35,000.

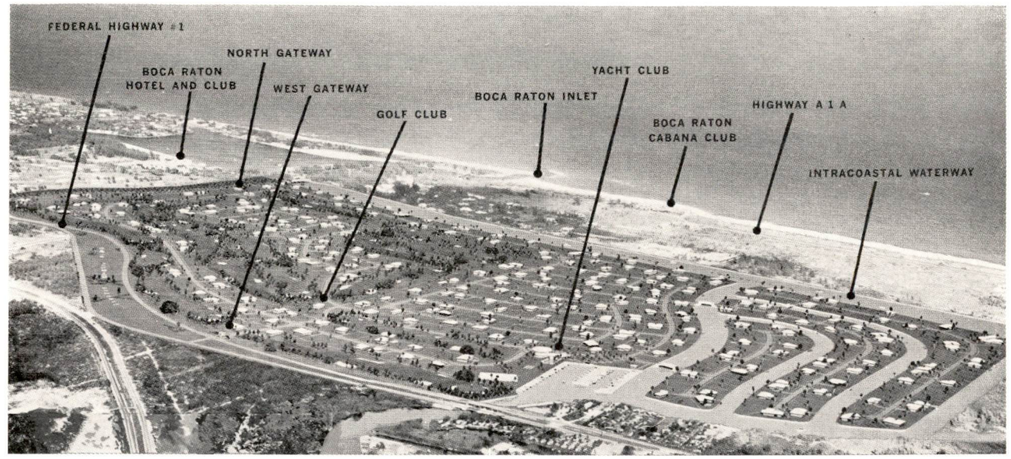
Comparable units cost $8,000 more when situated on the lake compared with off-water units. The developers value single-family lakefront lots at $20,000 without homes compared to a value of $5,000 for comparable lots outside the development.

The practicalities of the plan are seen in the sales of 200 units with 150 built as of February 1964. Thirty per cent of all sales are cash. The most expensive products have sold best and waterfront sites have sold first.

Since San Marcos is 45 minutes from San Diego and 90 minutes from Los Angeles, it is apparent that a superior design and use of water have been the key to a successful, livable community. The required initial investment of $12,000,000 was itself a bold step.

Rounding out the completeness of the community are a community lodge, 47,000 square feet of shopping center, and 32-unit motel and dining room, 6,700 yard golf course, and garden apartments renting from $175 to $475 per month.

ROYAL PALM YACHT AND COUNTRY CLUB



Royal Palm Yacht & Country Club Residential Development

Between the Intracoastal Waterway and Federal Highway No. 1, just south of Boca Raton, Florida, is Royal Palm Yacht and Country Club. Developed by Arvida Realty Company of Boca Raton, this exclusive residential development of 743 homesites on 450 acres combines waterfront, fairway and interior lots with custom, rather than developer-built homes.

The key feature is the Royal Palm Yacht and Country Club available to residents. The yacht club and basin, golf club, 18-hole golf course, and all real estate connected with them were deeded, debt-free to the members by the developers. Facilities cost in excess of $1,000,000. Membership is divided between regular, which include golf privileges, and social, without golf privileges, memberships. Dues carry the cost of operation.

Exclusiveness of the area is maintained through the Royal Palm Improvement Association, a prerequisite to property purchase within the development. The Association has the right of approval of all building plans and requires a minimum home area of 2,000 square feet.

The marina, located two miles cruising distance from the Gulf Stream, is constructed of poured-in-place reinforced concrete decks facing 1500 feet of bulkheading. Facilities available include gasoline, diesel fuel, power and water.

Original lot pricing (1960) is an interesting demonstration of the relative values of comparably sized lots. 100′ × 150′ sites on the Intracoastal Waterway were priced at $23,000 to $25,000. Fairway lots were priced the same as interior waterway lots. Interior lots without direct fronting on either fairway or water were quickly sold in the $15,000 range.

Lots were originally sold on an all-cash basis with 5 per cent discount or 25 per cent down, the balance in four years at 6 per cent interest.

The success of this development again points up the worth of the extra features in real estate development. Good design, all-underground utilities, imagination, and a carefully organized, well-run association started with professional care have insured good reception and continuing maintenance of values.

NEWPORT SHORES, NEWPORT, CALIFORNIA

Newport Shores, a development by Frank Ayres and Sons, experienced West Coast builders, illustrates the attraction of even a small waterway when the location and market are favorable. The total project comprises 435 homes on 40 acres leased from a major oil company and developed at a 100-home per year rate over the past four years.

Newport Shores was originally subdivided in the 20's and sold on a speculative basis. While a few homes were built, the property tax-defaulted and came under one ownership. The property, located on the old Santa Ana River was essentially unusable until the Corps of Engineers undertook the multi-million dollar job of realigning and channelling the river.

To create usable land, up to seven feet of fill was brought in and the adjoining waterway dredged. There is only one channel bordering the site varying from one to eight feet in depth. Unconnected to the ocean or any other channel, it maintains its water level by percolation. The channel beach is City-owned.

Lots are 30 to 34 feet wide and 75 feet deep with 20-foot alleys in the rear. A small waterfront community center with courts, swimming pools, meeting house and beach is maintained by the property owners' association. Originally built by the developers for $50,000 and given to the association, it operates at a cost of $5.25 per home per month.

Channel-fronting homes of 2,000 s.f. sell from $38,000 to $45,000. Interior homes of approximately 1,500 s.f. sell for $28,000 to $30,000. Architecture is modern and varied. Groups of approximately 70-80 units each have been sold in advance of construction.

As in most Newport developments, the land is leased, not sold, for 10.5¢/s.f./yr. or $12.00 to $37.00 per year. Leases are net with all taxes being paid by the home owner.

Streets are fairly narrow by Southern California standards, having 32 feet of paving on 40 feet of right-of-way. Front setback is 5 feet. In spite of dense land use, careful architecture and use of alleys have maintained the quality of the site.

While most of the homes are occupied year round, a good percentage are weekend or summer homes. Located just off the Pacific Coast Highway, they are close to an excellent ocean beach as well as the many marinas of the Newport area.

There are a number of comparisons which can be made to illustrate this value of the waterfront. A few miles away from the coast in Orange County 1500 square feet of comparable home on a 6,000 s.f. lot can be purchased for $21,000 as compared with $28,000 in Newport Shores.

In Newport, a short distance away, 40-year-old homes on 30′ × 80′ lots start at $35,000 with the price rising if the home is newer. A comparable house and lot on the bay might well be $70,000; the same house on a 30′ × 80′ interior lot would sell for $25,000. All are figured for single family homes.

An interesting neighborhood nearby is Lido Sands, near to the beach but not on any waterway. Now 7 years old, these homes on 40′ × 80′ lots sold for $18,000 to $20,000 and are reselling for $28,000, all on leased ground. This development is a successful demonstration of private streets with homes fronting on a mall.

For comparison at another extreme is Dover Shores, a Maeco development, on land leased from the Irvine Company. This is a luxury community with expensive, custom built homes. Waterfront lots are in the neighborhood of 70′ × 100′ and front the water along a concrete bulkhead. Leases are from $900 to $1,800 per year. In addition, each lessee pays a "bonus" for his lease. This initial investment is from $23,000 to $70,000. The average lot value, if the lease price is capitalized and added to the bonus, is $60,000.

Dover Shores is, of course, an unfair comparison to Newport Shores, since it sells an exclusiveness that is found in one of those few locations off and on water which can command a high price irrespective of locale.

examples. The following are selected because of the wide variation in character:

1. Lake San Marcos, an inland housing development on an artificial lake.
2. Royal Palm Yacht and Country Club, a luxury lot development on Biscayne Bay.
3. Newport Shores, a small neighborhood development with channel frontages on only a small percentage of lots.
4. Bahia Mar Yachting Center, a full service marina.
5. Islandia, a resort hotel combined with a marina.

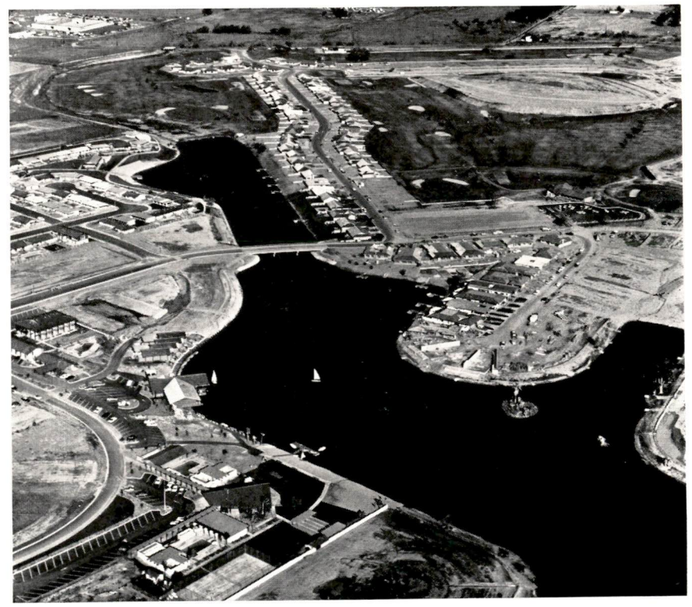
LAKE SAN MARCOS

Of the many diverse projects combining waterfront, residential, commercial, and recreational development, few can rival Lake San Marcos in northern San Diego County, California. Developed on 1500 acres of semi-arid Southern California countryside, this new community shows a high degree of imagination seldom found in either oceanfront or inland development.

The developers, Frazar Brothers, Inc., experienced California builders, realized the potential value and advantages of an existing, unkempt reservoir in an area where privately-owned lakes are practically non-existent. Around this center, they are creating as attractive a community as can be found in the booming Southern California region.

Prior to development the lake was well below present levels and used largely for agriculture. Excavation and shaping have produced 80 acres of water surface with 15,000 feet of shoreline. The accessible 10,000 feet of waterfront is divided 9,000 feet for homes, and 1,000 feet for commercial-recreation use. Depth varies from an 8-foot minimum to 40 feet at the dam with the greater portion 12 feet or over.

Gordon Frazar advises that the cost of developing the existing lake was $250,000, but had the corporation had to create the dam and lake from original ground, the cost of land, water, and dam would have been $600,000. Cost of filling the lake with water purchased from the local water authority was $30 per acre foot and a total of $12,000. The lake receives runoff from 27 square miles of watershed and normal rainfall will help maintain the water level.



LAKE SAN MARCOS. COMMUNITY CLUBHOUSE IN LOWER CENTER; PRIVATELY OWNED BRIDGE IN CENTER; CLEARING FOR COMMUNITY SHOPPING CENTER AT LEFT.

Maintenance has proven reasonable. The lakebed is a clay soil with practically no seepage or percolation losses. Prior to filling, the shoreline was sterilized to a depth of 6 feet. Careful control of incoming drainage has kept silting

Mke. is missing out on all these potential gains.

EFFECT OF WATERFRONT ON REAL ESTATE PRICES

Waterfront real estate is such a relatively limited commodity that when it is not adversely affected by industry or the elements it commands premium prices. When the waterfront is on usable, quiet water suitable for boating, this premium is further enhanced. It is not unusual to find a value ratio between lots just off the water and lots on the water as great as 1 to 4. in warm climate

The added value between adding or not adding docking facilities is largely a function of the cost of these facilities which vary widely from place to place. Costs for bulkheading can vary from $30 per foot in Fort Lauderdale to $60 per foot on the West Coast. Costs seem to run from high to very high depending upon the multitude of construction problems which can present themselves.

Rather than limit private boating facilities to only those lots fronting the waterway, some developments have created convenient community play facilities close to groups of homes. This tends to create a greater total value in more homesites than a high value in only a few sites. This practice has the added virtue of equalizing values throughout a development.

Mke. needs this

One group of homes in Newport, California faces a private street running into a private pier. Each home owner on the street enjoys the benefit of the pier and ships; the Property Owners' Association is responsible for maintenance. Resales in this subdivision are currently $30-50,000 and compare with new home prices of comparable quality in the vicinity.

Newport, California has an established (and overcrowded) boating harbor. Waterfront homes range in value from $45,000 to over $200,000. Experienced real estate men are of the opinion that water frontage or ready access to water adds $15,000 to $50,000 to the value of a home.

Even small bodies of water can have a marked effect on land values. On Lake San Marcos (San Diego), California, the same house sells for $8,000 more if on the water. In this case, the water is a small, artificial lake suitable for only the smallest boats.

The difference in value of apartment sites off and on waterway frontage can be even more marked. Apartments with slip privileges on Mission Bay, California rent for $50 per month more than comparable units across the street and off the water.

As with any real estate investment, however, the price of waterfront lands is relative. Potentially usable lands on the Florida Gulf Coast may have a price of $3,000 per acre as compared with over $100,000 per acre for the limited properties within commuting distance of Los Angeles. That the value of such properties is relative to demand is further illustrated by the cost of lagoon frontage 80-100 miles south of Los Angeles at $10,000 per acre, compared with otherwise comparable land one-quarter mile away priced at $3,500 per acre.

Experience seems to indicate that when available with off-water properties, waterfront sites are the first to be sold and occupied. Assuming reasonable maintenance, waterfront properties appear to maintain value to the extent that in a growing market and without changing land use, the depreciation of improvements is offset by the appreciation in land value.

While, normally, the price of undeveloped, waterfront real estate is subject to the same supply and demand influences as another commodity, the limited amount of property in certain situations can upset the normal pattern. In Newport, California, $12,000 per unit for land may be an economic limit, but a wealthy person may pay $100,000 for the land for a single family home.

On the West Coast, the principal limit to waterfront projects is a geology with few river deltas and navigable inland waterways which severely limits the shoreline available, combined with government policy of keeping or acquiring this shoreline for the public, and the fact that West Coast area population is concentrated in three areas, Los Angeles - San Diego, San Francisco, and Seattle.

The East Coast, while having a much greater and more widespread population, has a geology with more river deltas and many more and larger protected waterways.

Boating, while becoming much more widespread, is still a luxury, and a recreation activity means that shoreline development tends to follow as community wealth increases.

Perhaps the best device in the study of shoreline development is to examine a few diverse

BAHIA MAR YACHTING CENTER

As complete a marina development as can be found is Bahia Mar at Ft. Lauderdale, Florida. A city-owned and operated facility, it enjoys great popularity in an area principally devoted to private waterfront development.

The site was purchased by the City of Ft. Lauderdale from the Coast Guard in 1946 for $600,000, 60 per cent of the appraised price of $1,000,000. Construction was financed by $2.5 million in revenue bonds and took from February, 1949 to December, 1949.

From opening until June, 1952, Bahia Mar was privately operated under a 20-year, 6 per cent-of-gross lease. The lease was cancelled by the City and came under municipal management.

The 27-acre project includes three miles of concrete docks, a restaurant and bar, 28 stores in a shopping complex, marine supply store, marine repair yard, hoist, swimming pool, and fuel dock. Among the stores are a ships' commissary, drugstore, gift shop, clothing shops, barber shop, beauty shop, and post office.

Services to yachtsmen include free outdoor movies, dockside water and electricity, showers, mail service, private gear boxes at the berth, messenger service, auto rental, and service station. Telephone connections, check cashing, garbage collection, 24-hour watchman, and tide and weather information come with the slip rental.

Because Ft. Lauderdale is a prominent tourist and sport fishing center, 26 charter boats and 7 sightseeing boats are docked at the entrance. Bahia Mar has room for over 400 boats from 30 feet in length to over 60 feet.

Its location on the Intracoastal Waterway gives protection from the Atlantic, yet there is quick access to the Gulf Stream via the Port Everglades and Hillsboro Inlets. Downtown Ft. Lauderdale is but a short walk away and some of the country's finest resort hotels adjoin.

In contrast to most coastal areas, Ft. Lauderdale enjoys only a two-foot tidal fluctuation. As a result, piles and docks can be of fixed construction and seawalls built with a minimum cost. This last gives maximum use of the more valuable inshore water.

Business is largely seasonal. November through April is considered the season and during this period berths rent for $2.00 to $8.00 per day. May through October, rates are $1.00 to $3.00 per day. Because it is available to a great number of east coast boaters, Bahia Mar slips double as resort hotel room with as many as 800 persons living aboard during the seasonal months.

ISLANDIA

A contrast with the previous Atlantic Coast example is the Islandia marina on Mission Bay, San Diego, California.

Located on deep water Quivera Basin (26 feet deep), Islandia is privately operated on lease from the City of San Diego. Land and water were created cooperatively by the City and the Federal government. Starting with dredged land and a rip-rap sea wall, the lessee has created a beautiful resort hotel, restaurant, and marina.

Varying from the Florida project, slips here are wooden with fiberglass floats. A nine-foot tidal fluctuation results in a long brow between docks and shore.

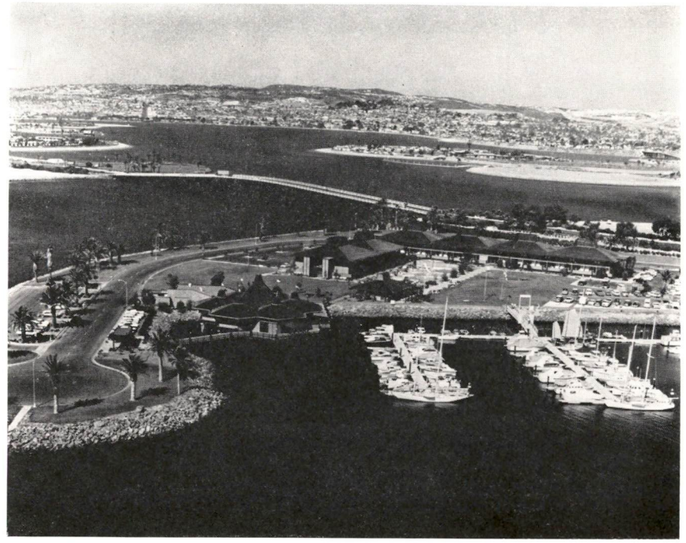
With yachting popular year-round, there are no seasonal rates. Berths rent for $.85 per foot per month with a minimum of $17 and a maximum of $110 per month. Occupancy is 92 per cent year-round, with 5 per cent of ship space available to hotel guests at no charge.

The operator pays the City 7 per cent of gross rentals, but since the marina rents are grouped with other hotel income, this figure is lower than the normal 17-20 per cent of gross usual for straight marina leases.

Boat owners are entitled to membership use of hotel swimming pool and pitch and putt golf course. Facilities furnished include water, power, telephone (by subscription), garbage and trash collection. Quivera Basin is 10 minutes by boat from the open sea, yet the marina is well protected from waves and weather.

Since commercial charter, sportfishing, fuel, and repair facilities adjoin Islandia, these services were not included within the installation itself.

The principal drawback to this development is the number of slips. The 120 constructed are all possible within the water lease area; and, while this number is profitable, 120 have essentially the same overhead as 200-250 would have.



Islandia Hotel-Marina. Deep Water Basin in Foreground; Recreational Boating Beyond Bridge; Restaurant to Left of Slips.

A key element in the success of Islandia is the yacht brokerage business operated off the marina docks. The broker doubles as marina manager and the commissions from the $800,000 annual gross are a strong plus on the balance sheet.

Original cost of these docks was $5.40/s.f., but present reproduction costs would be higher.

At the present time, there are 1,400 yachts berthed on Mission Bay, with slips available at 6 locations. Thirty per cent of these boats are owned by residents outside of San Diego County. The City is gradually eliminating moorings as additional slips become available. No marina on the Bay maintains moorings.

SHORELINE DEVELOPMENT

Buying waterfront property at high tide is like proposing to a girl under a full moon. It is better to wait until a morning low tide for all the mud flats to be exposed.

The capital investments necessary to make waterfront property usable range from high to very high. Even such a fortunate area as Florida is not without major development costs. The net result is that most recreational waterfront development is assisted or underwritten by government, and in large part by the federal government. It is a rare area that can be fully developed a small section at a time. Inland waterways need river channelling and dams. Seaboard sites depend on breakwaters, harbor dredging, bulkheading, bridging, and the like. While each situation may be different, each has a common feature of high initial cost.

River and harbor development is generally viewed from a broad benefit to cost ratio; that is, the relation of the dollar value of the activities encouraged to the dollar amount required for the basic facility. Fortunately, it is possible for joint use of federal, state, local and private money. The Corps of Engineers has control of navigable waterways, and, where a favorable benefit/cost ratio is evident, can recommend federal funds for flood and river control, breakwaters, and commercial waterways. The state and local agencies can, through bond issues and capital outlays, provide funds for recreational harbor and shoreline development. Private enterprise can then proceed to develop the waterfront facilities.

Private investment can, of course, run the gamut from leasing and operating on prepared public-owned waterfront to dredging and developing water and land communities.

One of the most comprehensive programs is that carried on by the Orange County, California, Harbor District. To understand its activities, it is well to summarize the conditions within the area it serves.

Orange County itself had a 1950 population of 216,224, a 1960 population of 703,925 and predicts a 1970 population of 1.45 million and a 1980 population of 2.5 million. It adjoins the County of Los Angeles which gives populations of 4,151,687, 6,189,600, 8,367,000, and 10,000,000 for these same times.

The Harbor District has three principal projects: Newport Harbor, now with 30 years of activity, and proposed Sunset Harbor and Dana Point Harbor.

Newport Harbor has been a joint effort of federal, City of Newport, Orange County, and private investment. Each has contributed about one-fourth of the costs. According to Harbor Manager Kenneth Sampson total investment has been $7,232,434.

A conservative estimate places the benefit/cost ratio in Lower Newport Bay at 8 to 1 over the past 30 years. Gross annual business from pleasure boating and commercial fishing in this area alone increased from $373,900 in 1933 to $8,935,000 in 1948. This one example demonstrates the influence of capital investment on harbor development.

A small marina development is the proposed Sunset Harbor Aquatic. This will be a general recreation area with 185 berths, launching facilities, and swimming and picnic areas. Estimated cost is $2,000,000 with a benefit/cost ratio of 1.178 to 1.

The previous two projects developed existing river outlets and bays. Dana Point Harbor will be a breakwater-created facility similar to Los Angeles Harbor. Protecting arms will shelter from the open sea. These facilities and other general navigational facilities will cost around $8 million. This total is being planned against a benefit/cost ratio of 2.3 to 1. This investment will result in berthing for 2,000 small boats and launching facilities for 1,000 trailered boats per day.

It is the opinion of District management that the projected harbor development itself is a spur to the rapid growth of Southwest Orange County. The general experience of the District is that marine needs are outpacing the population growth. This will continue to be true as the general income level increases, and as communication with the waterfront improves for inland cities.

To proceed from the general statement that shoreline development is expensive to a discussion of specific costs is foolhardy, if not unwise. The best rule to follow is to get a thorough engineering investigation of each site.

Very good. p.4, 5

Author? Date? Title?
Schenker & Wilson, submitted to S E J

THE USE OF PUBLIC MASS TRANSPORTATION
IN THE MAJOR METROPOLITAN AREAS
OF THE UNITED STATES

Many studies in the urban transport field discuss or define a number of crucial variables that are thought to determine the actual or potential role of mass transit in an urbanized area. It is generally accepted throughout the literature that income level, residential and CBD density, automobile ownership, housing conditions, and racial characteristics are each an important determinant of mass transportation demand. It is the purpose of this appendix to examine eleven such variables and their relationship to current mass transport demand in twenty-three of the largest U. S. metropolitan areas. The study is done on a cross section basis, comparing current population, housing, and other area characteristics. The results of the statistical study indicate the importance of the variables in explaining interarea variations of mass transit demand. Some very interesting and controversial findings are made; in particular, the relationship between personal income level and mass transit demand, and the implications of a city's racial content lead to conclusions that are not in complete harmony with current beliefs. The general conclusion is that automobile ownership is the population characteristic most highly correlated with transit ridership.

Table I lists twenty-three metropolitan areas and the data pertaining to each. Mass transit use analysis is here confined to work-trip demand since it is the work-trip that is the prime generator of peak demand and congestion problems in urban areas as well as the major source of mass transit patronage. The percentage figures under "transit use" refer to

S. METROPOLITAN AREAS

Median Family Income	Non-white percentage of C.C. Population	Two or More Cars (Per Cent of Households)	No Automobile (Per Cent of Households)	Rush Hour Commuters (CBD)	Per cent of Families in 1-Fam. Units	Per cent of Pop. in Units built since 1950
6,548	14.7	9.6	46.8	800,000	28.7	19.9
5,195	37.4	15.9	34.2	75,000	59.6	27.4
7,342	23.6	15.3	28.1	200,000	46.3	23.3
6,433	26.7	17.6	28.1	150,000	81.0	23.6
6,687	9.8	16.0	27.0	150,000	47.3	15.9
7,577	54.8	20.3	25.2	150,000	59.6	36.7
6,962	28.9	22.6	20.2	75,000	62.9	25.2
6,995	8.9	17.8	21.6	50,000	56.3	28.1
5,954	16.8	15.4	13.7	75,000	76.4	21.8
6,199	35.0	17.2	27.7	75,000	78.4	28.0
7,092	18.4	24.7	22.5	100,000	63.9	28.4
6,318	21.8	18.9	26.1	35,000	56.8	22.5
5,758	38.3	27.7	21.5	75,000	73.8	39.8
6,275	28.8	17.4	23.0	75,000	67.9	27.0
6,840	3.1	22.7	17.2	100,000	68.6	29.6
5,348	22.6	23.8	21.2	17,000	66.6	52.7
6,825	29.2	25.1	17.3	75,000	75.5	29.6
6,317	18.8	22.7	20.0	25,000	73.7	30.6
6,896	8.4	27.4	18.6	35,000	76.6	30.5
5,925	19.3	31.4	15.4	50,000	82.0	43.0
6,551	7.1	33.4	15.9	25,000	74.8	41.4
5,666	5.8	18.9	20.4	50,000	51.5	18.0
7,066	16.8	32.2	15.9	100,000	71.7	41.0

TABLE 1

CHARACTERISTICS OF TWENTY-THREE U. S.

	Transit Use (% of Work Trips)	SMSA Population	C.C.Population Density (Per sq. mi.)	SMSA Density (Per sq. mi.)	CBD Density (Rush Hour Commuters per sq.mi)
New York	54.8	10,694,633	24,697	4,977	200,000
New Orleans	32.0	907,123	3,157	777	187,500
Chicago	31.9	6,220,913	15,836	1,675	200,000
Philadelphia	27.5	4,342,897	15,743	1,224	68,181
Boston	25.1	2,595,481	14,586	2,672	107,142
Washington	23.7	2,001,897	12,442	1,348	24,590
Cleveland	22.5	1,909,483	10,789	2,611	37,500
Milwaukee	22.4	1,232,731	8,137	1,502	41,666
Pittsburgh	19.6	2,405,435	11,171	788	107,142
Baltimore	19.6	1,727,023	11,886	956	93,750
San Francisco	18.3	2,648,762	16,599	840	76,923
Cincinnati	17.7	1,268,479	6,501	1,468	70,000
Atlanta	17.6	1,017,188	3,802	590	44,118
St. Louis	16.9	2,104,669	12,296	646	62,500
Minneapolis-St. Paul	14.5	1,482,030	7,305	702	141,384
Miami	13.3	935,047	8,529	455	18,888
Detroit	13.1	3,762,360	11,964	1,913	68,182
Kansas City	12.4	1,092,545	3,494	633	27,777
Seattle	11.5	1,107,213	6,295	262	50,000
Dallas	11.4	1,083,601	2,428	297	83,333
Denver	9.6	929,383	6,956	254	62,500
Providence	9.1	821,101	11,592	1,287	166,666
Los Angeles	8.0	6,038,771	5,451	1,393	62,500

Sources: Population, SMSA Density, and Transit Utilization, Developing Metropolitan Transportation Policies: a guide for local leadership, A Statement of National Policy by The Research and Policy Committee for Economic Development of the CED, Washington, April, 1965, Table 6, p. 26. CBD Density and Rush Hour Commuters, Meyer, Kain, & Wohl, The Urban Transportation Problem, Harvard Press, 1965, p. 86. Income and Non-White % from the Statiscal Abstract of The United States 1965, Washington, U. S. Department of Commerce. Car Ownership, CC.Density, and Housing Unit Data from The County and City Data Book 1963, Washington, W. S. Department of Commerce.

the percentage of work trips that are made by public transport modes (bus, rail rapid transit, and commuter rail).

In addition to transit use, Table I presents data on:

1. SMSA Population (Standard Metropolitan Statistical Area).
2. C. C. Density (Central City).
3. SMSA Density.
4. CBD Density (Central Business District).
5. Median Family Income.
6. Non-White Population Percentage.
7. Multiple Car Ownership.
8. Percentage of Households owning no automobile.
9. Number of commuters to CBD during the Peak hour.
10. One Family housing units.
11. Age of Housing units.

In the regression analysis, transit use, the dependent variable, is designated as variable zero, and variables one through eleven are the independent variables. Table 2 gives the simple linear correlation and determination coefficients for any set of two variables. To read the correlation and determination coefficients for any two variables, simply follow the appropriate row and column to the intersection point. The values in that box are the "r" and "r^2" pertaining to those two variables. (The same procedure as in reading an intercity mileage chart on a highway map.)

Now let's take a closer look at each of these independent variables with particular attention to their relationship with actual transit use.

Population:

Table 2 indicates that there is a significant, but not particularly

TABLE 2

CORRELATION AND DETERMINATION COEFFICIENTS

			0	1	2	3	4	5	6	7	8	9	10	11
0	Transit Use	r^2												
		r	1.00											
1	SMSA Pop.	r^2	46											
		r	.68	1.00										
2	C. C. Density	r^2	44	50										
		r	.67	.70	1.00									
3	SMSA Density	r^2	56	57	50									
		r	.75	.76	.71	1.00								
4	CBD Density	r^2	31	21	15	16								
		r	.55	.46	.39	.40	1.00							
5	Med. Fam. Income	r^2	01	13	13	09	02							
		r	.09	.36	.36	.29	-.14	1.00						
6	Non-White Pop.	r^2	04	00	00	00	05	00						
		r	.20	-.04	-.01	-.04	-.22	-.03	1.00					
7	Two or more Cars	r^2	56	13	38	30	29	00	01					
		r	-.75	-.36	-.62	-.55	-.54	.07	-.12	1.00				
8	No Automobile	r^2	87	36	39	45	32	01	05	65				
		r	.94	.60	.63	.67	.58	-.11	.23	-.81	1.00			
9	CBD Rush Hr. Commuters	r^2	71	74	52	69	28	03	00	26	62			
		r	.84	.86	.72	.83	.53	.18	-.03	-.51	.79	1.00		
10	1 Fam. Dwellings	r^2	47	26	33	57	32	03	02	39	45	44		
		r	-.69	-.51	-.57	-.76	-.57	-.17	.13	.62	-.67	-.67	1.00	
11	New Dwellings	r^2	22	08	28	27	29	02	04	54	24	11	24	
		r	-.47	-.28	-.53	-.52	-.54	-.16	.19	.73	-.49	-.33	.49	1.00

Source: Table 1

overpowering, relationship between transit demand and metropolitan population ($r = .68$, and $r^2 = .46$). However, the obvious exceptions to this general observation (see Los Angeles and New Orleans in Table 1) suggest that it is not overly presumptive to suspect that the existing relationship is largely a reflection of the fact that the SMSA's with the largest populations are often those with the greatest density (see the correlation between population and density measures in Table 2). That being the case, much of the variation in transit demand explained by population volume is repeated in the density correlation figures.[1]

Density:

In this analysis we examine three separate measures of density; SMSA residential density, central city residential density, and central business district (CBD) density. The density figures in Table 1 refer to persons per square mile. Surprisingly enough, these three measurements are not as homogeneous as one might expect. For example, the "r" between CBD and SMSA density is .40 and for CBD and CC density "r" is .39. Only the two residential density measures, CC and SMSA, seem to be significantly correlated ($r = .71$). The CC and SMSA density figures are primarily important as indicators of mass transit's residential collection process, while CBD density has traditionally been thought of as a major indicator of the distribution process. Both residential and workplace density should be quite high if fixed rail transit is to be successful. On the other hand, if CBD density is low while residential

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[1]These and other interrelationships are dramatized by comparing the simple linear correlation coefficients in Table 2 with the partial correlation coefficients in Table 3.

density is moderately high, bus operations may prove successful where rail transit would fail. (See Table 5 for a city-by-city breakdown into auto, rail, subway, and bus commuting). The lack of both workplace and residential density would be discouraging to any public transportation mode. Table 2 indicates that over the experience of 23 major metropolitan areas, it is a general rule that mass transportation utilization is more closely related to residential density than to workplace density.

Income:

The cross section relationship between public transport use and income is very interesting and quite surprising. It is usually implied that mass transportation demand and income level are inversely related to a substantial degree. That is, as personal income in an area rises, one would expect to find fewer and fewer people relying upon mass transportation due to their increased ability to turn to more expensive alternatives. This, of course, places mass transportation in the economists "inferior good" classification. Strangely enough, the calculations do not bear out this expectation. It is indeed likely that within any single metropolitan area the inverse relationship would exist, but over the twenty-three areas, there is virtually no correlation at all. Our data strongly indicate that income variation is irrelevant when making intercity comparisons.

Race:

Turning to the racial consideration which has received considerable attention in recent urban transport literature,[2] we find virtually no

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[2]For example, see John F. Kain, "The Commuting and Residential Decisions of Central Business District Workers," Transportation Economics, NBER, Columbia University Press, N. Y., 1965, pp. 245-274, and Meyer, Kain, and Wohl, The Urban Transportation Problem, Harvard University Press, Cambridge, Massachusetts, 1965 (chapter 7).

correlation between large Negro or non-white percentages and mass transit use. In fact, an examination of Table 2 reveals that non-white population does not appear to be related with any of the variables. This is very interesting, since in the light of current political issues we would expect to find some correlation between areas with large Negro populations and conditions such as high residential density, old dwellings, low incomes, low rates of automobile ownership, and high mass transit utilization. Clearly, any such relationships are not identifiable in this data. In fact, the small trace of existing correlation indicates that non-white populations are related to areas with new dwellings, one-family dwellings, and lower density. These relationships, however, are so insignificant that it is most accurate to say that the data indicate no relationship between non-white populations and the other variables.

Car Ownership:

This study reveals that car ownership is the variable most highly correlated with transit use. As might be expected, the data indicate that there is a very substantial negative correlation between automobile ownership and mass transportation ridership.[3] Table 2 presents data for both multiple car ownership and for households possessing no car. The two measurements are highly correlated with each other (r = .81), and both are highly correlated with mass transportation utilization; "no car" being

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[3]It should be cautioned here that we are defining "relationship" and not "causation." It may be that high auto ownership rates are a product of mass transit non-availability just as transit use may be dependent upon auto ownership.

somewhat more important than "multiple car" (r = .94 and r = -.75), respectively).

Dwellings:

Finally, the age of dwelling units and number of families per unit have often been cited as important determinants of mass transportation demand. One family dwellings, as might be expected, are negatively correlated with transit use (r = .-69). This variable also demonstrates substantial correlation with automobile ownership and, not surprisingly, is negatively related to residential density. Automobile proliferation has generally been recognized as one of the moving forces behind urban sprawl and the trend toward one-family units. Thus, the relationships evident in Table 2 conform to general expectations. "New Dwellings" refers to the percentage of dwelling units constructed since 1950. This final variable demonstrates only a very marginal negative relationship to transit use (r.= -.47) and is more highly correlated with multiple car ownership (r = .73) than with any other variable.

The Partial Correlation coefficients in Table 3 tell us what correlation exists between mass transit use and the independent variable while other variables are held constant. Since the independent variables are intercorrelated, as one changes we would expect each of the others to change proportionately. As a result, the correlation coefficients in Table 2, derived by the simple linear method, are exaggerated in that they define the relationship between transit use and a given independent variable assuming that all variables are free to adjust to a given change.

TABLE 3

TABLE OF PARTIAL CORRELATION COEFFICIENTS*

Population	.241
C. C. Density	.130
SMSA Density	.363
CBD Density	.336
Two or more cars	-.286
No automobile	.668
CBD Rush Hour communters	.135
One Family Dwellings	.290

*The variables with correlation coefficients below 0.5 in Table 2 have been dropped.

The partial correlation coefficients in Table 3 eliminate this assumption of mutual variability by indicating the relationship between mass transit use and the respective independent variables, assuming that all other variables remain constant. With this added restriction, the importance of automobile ownership as the primary determinant of mass transit use is reinforced.

The Regression Equation

With values derived from data on the twenty-three cities listed in Table 1 and using all of the eleven independent variables, we may calculate the percentage of work-trips using mass transit with the equation

$$T = -46.871 - .00069\,X_1 - .00012\,X_2 + .00285\,X_3 - .00313\,X_4$$
$$+ .00413\,X_5 - .00456\,X_6 - .32783\,X_7 + 1.13656\,X_8$$
$$+ .00081\,X_9 + .13346\,X_{10} + .20624\,X_{11}$$

T = Percentage of work trips using mass transit
X_1 = Population (in thousands)
X_2 = Central City Density (population per square mile)
X_3 = SMSA Density (population per square mile)
X_4 = CBD Density (rush hour commuters per square mile-hundreds)
X_5 = Median Family Income (SMSA)
X_6 = Non-white percent of population (Central City)
X_7 = Per cent of Households with 2 or more cars (SMSA)
X_8 = Per cent of households with no car (SMSA)
X_9 = Total PEAK HOUR CBD Commuters (hundreds)
X_{10} = Per cent of households living in one-family units
X_{11} = Per cent of population living in housing constructed later than 1950

This regression equation, calculated from cross section data, is unusually accurate. The coefficient of multiple correlation is .97, and standard error of estimate is 3.6.[4] This means that the regression equation

[4]The Durbin-Watson Test gives a value of 1.86.

explains 94 per cent (r^2 = .94) of the variation in transit use, and the calculated "T" value will be within 7.2 per cent of the actual transit use percentage 95 per cent of the time. Of course, this equation is quite bulky, and several of the variables that we started with have proven to be insignificant. In fact, by using only X_8 (car ownership) we are able to estimate transit ridership almost as accurately. The equation

$$T = -12.55 + 1.38\ X_8$$

explains 87.5 per cent of the variation in transit use with a standard error of 3.7.[5] Table 4 is an illustration of this estimating equation in action. It is applied to eight cities not used previously in the calculations.

Table 4 indicates that auto ownership can be used to estimate transit ridership to a remarkably accurate degree. Since the cities in Table 4 were not used in calculating the equation, the resulting accuracy is not the result of a bias. Thus, this appears to be a reasonably good test.

Turning briefly to the type of mass transit mode used in our major metropolitan areas, Table 5 indicates that motor bus is, by far, the dominant mode. Naturally, only the very large cities, demonstrating unusually high residential and CBD density, find it economically feasible to develop extensive fixed-track rapid transit service. New York and

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[5]Durbin-Watson Value = 1.89.

TABLE 4

ESTIMATING MASS TRANSIT RIDERSHIP

City	Actual Transit Use	Estimated Transit Use	Error
Houston	10.39	(16.7)(1.38)-12.55=10.50	+0.11
Rochester	15.56	(18.9)(1.38)-12.55=13.53	-2.03
Portland	10.60	(17.2)(1.38)-12.55=11.19	+0.51
Indianapolis	12.55	(19.5)(1.38)-12.55=14.36	+1.81
Jersey City	44.93	(39.7)(1.38)-12.55=42.24	-2.69
San Diego	5.79	(13.6)(1.38)-12.55= 6.22	+0.43
Buffalo	16.06	(20.9)(1.39)-12.55=16.29	+0.23
Columbus	14.40	(17.6)(1.38)-12.55=11.74	-2.66

Source of Actual Transit Use data: 1960 Census

TABLE 5

TYPE OF VEHICLE TRANSPORTATION USED
FOR WORK TRIPS IN MAJOR
U. S. METROPOLITAN AREAS (1960)

(Thousands of Persons)

City	Private Auto (Incl.Car Pools)	Taxicab	Bus	Subway	Rail
Los Angeles	2,002.9	2.6	195.4	---	0.9
Chicago	1,280.0	7.3	449.7	167.3	120.7
New York	1,244.8	32.3	481.0	1,518.3	203.8
Detroit	965.9	3.5	161.5	---	2.1
Philadelphia	894.8	3.9	287.5	99.5	46.1
San Francisco	697.6	1.8	181.2	---	9.2
Boston	562.6	5.0	96.2	125.7	17.0
St. Louis	507.5	3.4	119.1	---	0.6
Washington	496.3	8.7	183.2	---	1.4
Pittsburgh	496.0	1.7	148.5	---	4.5
Cleveland	444.9	1.1	142.4	4.4	0.9
Baltimore	404.5	3.7	118.5	---	1.4
Minn.-St. Paul	392.5	1.3	78.3	---	0.3
Houston	346.1	0.9	47.8	---	0.2
Dallas	327.9	1.1	46.9	---	0.1
Buffalo	313.0	1.5	74.7	---	0.6
Seattle	302.6	0.7	45.8	---	0.2
Kansas City	291.5	2.0	46.3	---	0.3
Milwaukee	283.7	0.6	98.5	---	0.6
Atlanta	269.7	1.9	65.0	---	0.3
San Diego	265.0	0.3	22.2	---	0.1
Denver	261.4	0.8	32.6	---	0.1
Cincinnati	256.2	1.2	64.3	---	0.5
Miami	244.1	1.0	43.5	---	0.2
Providence	222.0	1.7	25.8	---	0.8
Portland	221.8	0.4	30.3	---	0.2
Indianapolis	198.1	0.7	31.6	---	0.1
Columbus	181.6	0.6	36.8	---	0.1
New Orleans	154.9	1.6	89.2	---	0.5
Rochester	150.6	0.4	34.4	---	0.1
Jersey City	96.4	0.5	74.3	12.2	6.4

Source: U. S. Census, 1960.

Boston are the only metropolitan areas in the United States in which more people commute by rail than by bus. In all others, even where subways are in operation, the majority of public transportation users are bus riders. Table 5 also shows that New York is the only city in which there are more transit commuters than automobile commuters. In addition to 1.5 million subway riders and 481 thousand bus riders, there are 204 thousand rail commuters and 32 thousand taxi users in New York as compared with only 1.2 million private auto commuters. Los Angeles, on the other hand, is an example of an area almost completely dominated by private automobile traffic. It is interesting to note that even Chicago has more auto commuters than does New York. Rail transit (subway and commuter rail) played an important role in only 4 areas in 1960; New York, Chicago, Philadelphia, and Boston; while bus operations accounted for over ten per cent of all work trips in every city except Los Angeles and San Diego.

SUMMARY

This appendix has discussed public transportation demand in the major metropolitan areas of the U. S. We have seen that area characteristics such as population, residential and workplace density, and housing conditions are correlated with mass transit use. Surprisingly, on a cross section basis, personal income level and the racial content of a city are not at all correlated with public transit use. In fact, non-white population does not seem to be correlated with any of the variables that current issues lead us to suspect.

The most striking relationship of the study emerges between automobile ownership and mass transit use. It was shown that automobile ownership can be used to estimate current public transportation demand in large metropolitan areas with the equation: $T = 12.55 + 1.38\ X_8$. Finally, the data in Table 5 also show clearly that bus transit is, by far, the major means of public transportation in all cities but New York and Boston, and that the private auto is the primary commuting vehicle in all metropolitan areas except New York.

Intro –

Study called for by Douglas Comm. Kaiser Comm.

IDA --- & here it is.

...problem as it applies to Federal housing subsidy ...

...limited pre-emption of zoning and elimination ... Workable Program requirement are proposed ... promote free choice in residential location and ... create a wider variety of neighborhoods for all ... consumers to choose among. If these rec... recommendations are followed, for example, employ... of an industry which moves its plants and ware... from the central city to the suburbs would ... more likely to find adequate housing near their ... We think sponsors of subsidized housing proj... should be free to build anywhere they think ... will be demand for their units. Allowing them ... freedom would seem preferable to a policy of ... the location of most projects by law to ... part of the metropolitan area.

4. *State Governments Should Consider Establishing Procedures for Reviewing the Reasonableness of Local Zoning Ordinances To Assure That They Do Not Interfere With the Meeting of Metropolitan Housing Needs*

5. *State Governments Should Review the Reasonableness of Both State and Local Restrictions on Mobile Homes*

B. Reducing the Cost of Land

The clearest roads to reducing land costs lie through reform of zoning and subdivision regulations and revision of property tax assessment techniques. Besides the recommendations just offered, the following is proposed:

1. *State Governments Should Be Encouraged To Adopt Uniform Subdivision Regulations Which Do Not Unreasonably Add to the Cost of Building Housing*

2. *A Detailed Economic Study Should Be Undertaken of the Impact of Federal Income Taxes and Local Real Estate Taxes on Land Development*

Prevailing tax policies are not neutral in their impact on the consumption of housing or on the cost of land as compared to other commodities. The effect of Federal taxes is less understood that the effect of local property taxes, which have been subjected to considerable scrutiny in recent years by Richard Netzer and others.

Heavy reliance on property taxes as a source of local revenue is certain to delay progress in improving housing conditions. Netzer calculated that in 1965 the property tax on all non-farm housing in the United States averaged 19 percent of rental value or the equivalent of 24 percent excise tax on the consumption of housing. He concludes:

> It is simply inconceivable that, if we were starting to develop a tax system from scratch, we would single out housing for extraordinarily high levels of consumption taxation. More likely, we would exempt housing entirely from taxation, just as many states exempt food from the sales tax.

Another defect in the property tax is that it is sharply regressive, falling relatively more heavily on poor families than richer ones. This regressivity is somewhat disguised, since occupants of rental units do not pay the tax directly. They do pay indirectly, however, since the tax on the structure is shifted by landlords to renters in the form of higher rents. Netzer estimates that families earning less than $2,000 a year devote over 8.5 percent of their total income to property taxes, in contrast to families earning over $15,000 a year, who devote only 1.4 percent of their income to this purpose.

The effect of Federal and local tax policies on low-income housing is very complex. The Urban Institute, or other appropriate bodies, might study this problem on a comprehensive and detailed level. Particular emphasis should be placed on the question, which has been debated since the days of Henry George, of the potential beneficial effects of shifting more of the relative burden of property taxes from land improvements to land itself. Heavier taxation of site-values has the apparent advantages of discouraging speculative withholding of land from development, and of enabling the public to recoup more easily the benefits it bestows on local landowners through improvements like roads and sewers. Lighter taxation of buildings might remove existing tax disincentives which discourage new construction, rehabilitation, or adequate maintenance of housing. This area seems to be a promising one for reform.

C. Aggregating Large Parcels of Land

Large parcels of land are usually better sites for new housing construction than smaller ones. Scale economies in construction are possible which could not be achieved on smaller sites. Secondly, the developer of a large parcel can be more creative and flexible in his site plan. In addition, the larger the site, the more likely the developer will find it economically feasible to provide community facilities like parks, recreation areas, or community centers.

Because of these advantages the following recommendations are offered to assist in the aggregation of large parcels of land as sites, in whole or part, of subsidized housing.

Kaiser Comm. Rept., 1968

M E M O R A N D U M

February 7, 1969

To: Messrs. Arch Woodruff
Al Pleydell
Dave Lincoln
Vie Peterson
Arnold Weinstein
Ray Moley
Herbert Miller
V. H. Blundell
M. Mason Gaffney
Arthur Becker
John Nagy
Percy Williams

From: P. I. Prentice

On the chance you may not have seen it I am sending you this xerox of what the Kaiser Commission had to say about Land Value Taxation.

Of course I could wish they had gone all out for it but it seems to me the last paragraph is all to the good, just as I am happy that the Douglas Commission on Urban Problems unanimously recommended that "State Governments vigorously explore the desirability and feasibility of placing new or differentially higher taxes upon land values".

* * *

According to the Philadelphia Bulletin, the Governor's Housing Task Force in Pennsylvania has included among its recommendations "a system of regressive taxes on capital improvements with heavy taxation of abandoned or substandard properties".

I think this would mean less taxes on improvements and more taxes on misused land.

A member of the committee uses somewhat different words to say the Task Force proposed "that a system of regressive taxes on capital improvements be instituted to provide a tax incentive for maximum improvement of a property and to stop rewarding those property owners who do nothing or permit their properties to deteriorate with the aid of underassessments for real estate taxes".

* * *

Attachment

Core Group Unable to Get OK on Land

The Midtown Neighborhood association failed Thursday to get a statement of support from the redevelopment authority for its plan to build low cost housing for large families on Vliet st. between 20th and 21st.

Officials of the association were told they would have to bid competitively for the property, which will be purchased by the authority, cleared and resold in the Midtown Conservation Project.

Richard J. Steinberg, attorney for the association, appeared before the authority to ask that the land be designated as a site for construction of low and moderate cost housing.

"Inexorable Policy"

Steinberg said the association was not requesting preferential treatment, but wanted only to be considered as a possible redeveloper for the property. But he said that, unless some special designation was granted, the federal housing authority would not lend the association money to buy the land and build the housing.

Members of the redevelopment authority had inferred from a letter Steinberg wrote to the authority that he wanted the land sold through noncompetitive private negotiations between the city and the association.

Five Bedroom Houses

Authority member Robert E. Gratz told Steinberg the authority followed a "firm, fixed and inexorable policy" of refusing to negotiate privately.

Rudolph P. Witte, president of the Midtown Neighborhood association, said the organization wanted to build 14 four or five bedroom houses in the block. This would quickly fill in the cleared land and stimulate more building, he said.

He said he did not think the FHA would be satisfied with the redevelopment authority's action. He added that the association probably would have to wait until the block is vacated to get some stronger indication of approval from the authority.

In other action, Atty. John H. Murphy, representing the Milwaukee School of Engineering, reported to the authority that delays in congressional appropriations has stalled MSOE's plans to build a $3½ million library-classroom building on land owned by the authority.

Without congressional action the school cannot get a $1,250,000 loan it has been promised by the federal government and without the loan it cannot raise the $200,000 it needs to hire an architect, Murphy said. The site of the new building is bounded by State, Kilbourn, Jackson and vacated Jefferson st.

Endowments Noted

Gratz told Murphy the school should draw on its endowments from Milwaukee industry to hire an architect or arrange a contract which would allow for possible failure of the project if federal funds were not granted.

The authority adopted a resolution directing the county park commission to go ahead with its plans for development of Red Arrow Park across N. Water st., from the new Performing Arts Center. Creation of the park now would deprive some city employes of parking but City Development Director Richard W. E. Perrin said the need to have the park finished when the center opened outweighed that inconvenience.

Rains Soak Portugal

Lisbon, Portugal –AP– Lisbon's heaviest March rainfall in 48 years soaked the city and surrounding provinces Thursday taking two lives and causing extensive flooding.

Failure of urban renewal.

A constant repeated tale of non-performance. Many approvals needed; no pressure to implement, perform.

Reder. Authority - buys, clears, writes down. Holds; has option to hold.

FHA - refuses to ~~lend~~ underwrite.

Pvt. redeveloper - refuses to go non-FHA

Pvt. lender - requires FHA

Finally, Reder. Auth. sells land very cheap, to give buyer equity, as security for FHA.

Meantime, dead inventory grows.

New element today that makes central revival tougher than in past is the public school. Now, much higher % pop. goes.

Derelicts frequenting public places, Gresham's Law, a soluble problem for adults. But schools, tougher.

Hence, can't rely on same forces that saved city in past to do so now.

H. Schmandt and W. Standing, The Miles. MSC

Bloomington: I.U.P., 1965

p. 242 In 1956, Tosa got city water by court order. After that, suburbs lost all interest in consolidation or any kind of metro.

p. 14 Big Gm. pop. gets credit for machine tradition. Here, as elsewhere, labor pool gets credit as major resource.

p. 15 Early retail decentralizn. seen as abnormal; and also, as shopping centers developed, they replaced 2d St. & 12th-Vliet, more than CBD.

Miles. does not serve a big immediate hinterland w. bus. & prof. frms. It mfrs. capl. — not consumer goods. Its mkts. are world-wide. (So demand is elastic — Mke. shd. adopt expansionist policies).

p. 16 1911, Socialists came to power, but Dems. & Repubs. then got State leg. providing for non-partisan elections.

This kept Socialists from, again gaining control of common council. (Thus our weak mayor system resulted ~~as~~ from anti-Socialism. Logrolling & decentralizn. resulted. This may be prime legacy of socialism in Miles.)

p. 17 Dan Hoan, Mayor. 1916-40
Colorful, dynamic able. Efficient & honest adm.
Frank Zeidler, 1948-60

p. 20 $\frac{1}{2}$ of Milw. was annexed after 1945 -- by Zeidler.

p. 21 Council issues directives to Dept. heads.
(See Martin-Weber Rpt., re zoning variances, & council influence.)

p. 33 City Club is like S.F. Commonwealth Club.
But membership now way down to 250, from high of 2500. Members are profnl. & middle-range businessmen.
Has standing Comms., e.g. on finance.
Leo Tiefenthaler, Secy.

p. 34 Greater Milw. Comm. is top drawer. Members, 90% belong to Milw. Country Club; $\frac{1}{3}$ to the very select Milwaukee Club.
Major interest is specific capl. improvements.

p. 41 Labor has narrow self-interests. Controls some councilmen.
Controls Bldg. Inspector's Office. Kept it out of Dept. of City Dev.

p. 41-2 Bd. of Realtors and MBA have no sustained involvement in civic affairs.

(So they're saying councilmen are more responsive to labor than to land developers. Maybe this distinguishes city from developmental suburbs, where ~~sp~~ land spec. & developers dominate.)

p. 42 Jrl. is employee-owned. (!?)

AFL-CIO Labor Press, circ. 100,000. (Subscribe.)

Cf. Sentinel, 165,000

p. 54 City expansion came in 2 big drives

1. 1920s. Density was 17,000 ~~pop~~ / mi.²

(In 1900 it had been 14,000)

City believed it cd. lower density by developing new land.

Created Dept. of Annexation.

Circulated annexn. petitions

Formed booster clubs

Advertized advantages of joining city.

Allied w. residents and developers who wanted city services.

Grew from 26 to 44 mi.²

2. 1945 - 57

Doubled again, ~~to~~

✓ 'annexation - at - any - cost' policy. Hence irregular boundary.

✓ Zeidler saw this as necy. to house the small wage earner, who was excluded from suburbs. (Note inconsistency in his later remark that these modest homes on small lots were not carrying their tax share.)

p. 84 City used water as tool to enforce consolidn.

✓ p. 55 Oak Crk. 2 Franklin, 'paper cities', to stop Metro.

✓ Also Wauk. & Ozaukee Cties. & Germantown in Wn. Cty, after Metro. took 15 acres in Wn. Cty.

✓ 'Functional consol.' achieved in sewer, parks, air pollu., & xway. Failed in health, lib. & museum. (How about welfare?)

✓ p. 56 Movement for sewage comm. came from suburbs. (Water history shows ~~they~~ city feared they wd. lose wtr. as they did sewer)

p. 58 Cty. board accepted city parks, 1936. Involved no statute, so suburbs, which do well in Madison, cd. not block it.

p. 59 Municips. were glad to give air pollu. control to cty., bcs. enforcement cd. be a boomerang.

p. 60-1

Xway made city. fav., 1954.

Mke. had begun in 1952, but got much less from State than expected. Needed suburban support, I surmise. Also needed to cross some suburbs.

Xway Comm. is appted. by Gov.! City. Bd. retains fiscal control, & veto.

p. 64 There is little city. contracting of services or joint ventures by munics. (other than N. Shore water), altho state enabling leg. is there. Each munic. goes it alone.

p. 10 Public interest & action come from cities.

So in my work, stress cities:

Soaring t.r.

Decaying gray ~~belt~~ areas

Riots

Loss of indy. .. & other capital flight

Loss of Braves

Loss of local control of indy.

Traffic deaths

Pollution, loss of lake front

Export of talented people.

Crowding & unsanitation in some areas. (Rats)

Frustration of demand for living space by poor.

Decline of per cap. wealth & income?

Growth of tenancy rate?

Decline of school quality -- (succumb, for a moment, to spreaders of gloom, but not so far as to make renewal impossible.)

Welfare load

[Loaded w. meat]

Land Absorbtion Study, City of Milwaukee, Wis. CRP

Prepared for Dept. of City Devmt., 1-64, by RCRC, ~~by~~ (George Akahoshi)

[If object of retail locn. is max. exposure, then linear spreadout causes all commuters (who choose a given route) to pass all shops. But how much retail is serendipity for commuters? Those who go to an area specifically to shop are major buyers, I'm sure.

Stringing-out does expose store front to view of commuter. To a degree the pattern has fn. of maxg. output of mkt. info., then.

A 2d. fn. is letting surface trolley serve double fn., commutg & shopping. Getting on & off was easy, — altho costly. Thus the retail subsidized the commutation.

Anyway, remember that convenience of location is not entirely, & perhaps not even primarily, ease of access. Exposure to view is also important - hi visibility.

Urban layout is profoundly a way to exchange info]

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p.109 Est. 23,744 a. "absorbed" into urban use, Mke. Cty., '50 - '60. But don't say what they mean by 'absorbed.' 37 mi.^{2}. (c. 1/6 area of Cty.)

City offers low capl. requmts. If there is to be small competitive bus: city must thrive.

(Cf. vs. Chas. Ball)

1½

City of Mke., '62. Survey by Dept. of City Devmt.
— p. 107, RERC Land Absorbtion Study

Land Use	acres (000)	%
Resid.	17.5	28.1
Indl.	5.1	8.1
Comm.	2.4	3.8
Rds. & Hiways	13.4	21.5
Other public	6.7	10.7
Vacant (incl. pkg.)	17.3	27.8
Σ	62.4	100.0

p. 112 Lower fire ins. rates in city. Better police.

p. 115 Among wholesalers, "petrol. bulk plant terminals" are unique in their hi land "requirements". (Thus oil bus. is land-using at every stage: ~~retail~~ consumer, retail, wholesale, mfr., & mining.) (Hence the giants)

p. 116 Long trailer trucks now in use have made obsolete many older whses. bcs. of narrow streets. Better loading facilities needed. (& Xway access).

Trucking terminals are scattered. Concentration desirable for cargo interchange, etc.

p. 117 Past pref. for outlying truck terminals now outmoded. Local pickup & delivery costs ↑d by more than gain. Vague — intimates maybe are moving in again.

p. 117 Besides CBD, 4 shopg centers, only Mitchell, for ethnic reasons, & No. & Fond du Lac are "still thriving". All explained by need for parking. I think they missed some —: Villard, Silv. Sp., Oakland, N. & Oakland, Wauwatosa, W. Allis etc.

p. 118 Foresee no new retail in city. (But new Xway system will change travel patterns, create new opps.)

p. 118 "Freestanding" — i.e. scattered — retail has been ~~grow~~ a "trend" in last 5 years. E.g. conversion of used-car lot to major supermkt.

[There must be much latitude for this, surplus of land zoned commercial & in light use. Hi land prices of last few yrs. incite intensification, but scattered. Also, new intersections

Employment by Indy. Group, the SMSA, 1960 Census of Pop.
(p. 17, Land Absorption Study) (T. 2)

	Emplmt (000)
Extractive &ag.	4.7
Constr.	21.4
Mfrg	190.1
Xpt., ut., comm.	29.1
Wholsle	16.3
Retail	70.0
Fnce	19.7
Services	81.2
Pub. Adm.	19.0
Other	18.5
Total	470.8

Note how constrn. is small share. Should be higher, w. faster site renewal.
Xpt. etc. shd. be less.

or improved ones, open up new sites.
Thus retail scatter develops.]

The call food a "convenience good" — meaning convenient to consumer's home, evidently, where that feature is more important than big selection. [Not a valid category — all goods partake some of this. Zoning guilty. denies the neighborhood store, down the block, the true consumer-oriented location.]

(p. 54, defs., "convenience" goods are goods of daily consumption, or "spot necessity" items. I will call them "Everyday" goods. The other class are "shopper's goods"; in (over)

p. 119 Forecast more space use per employee — projecting w/o reason.

(In mstg. cap/labor ratios, ~~floor~~ floor area per man is a good index, bec. floor is a form of capl. a) Relatively homog. over time; b) Comply. to other capl.)

(But more floor/man ≢ more floor/output. Floor/man may rise much more than floor/output. Since plants are locally produced, subbg floors for line workers does not nec'ly. hurt local emplmt.)

pp. 29-30. Ave. ~~hourly~~ hourly earnings of mfg. employees, '60.

Ave., is $2.63. Near the top.

→ p. 90, T. 25 Housing inventory. Have page copied.

Some highlights: next page

larger s.c.s or cbd. A subclass is "2dry shopper's goods", like furniture & appliances, turning slower, periph. location in s.c. or cbd — i.e. need central access & visibility, but can't pay premium of highest.

Housing Units p. 90, T. 25

Tenure

	City	(000)	City	
Total Units	328		242	
Occupied units	315		231	
Unoccupied "	13		11	(many on fr rent)
Owner-occ.	175		112	
Renter-occ.	140		119	
% own-occ.	55%		48%	

Condition

20,000 units have no plumbing – mostly in city.

That's $\frac{20}{330}$ = 6% all units ! in City.

Age

Year built	(000)		% built in city
1950-60	84	52	.62
1940-49	31	18	.58
1930-39	35	22	.63
1929 & earlier	177	149	.84
Total	328	242	—

1950-60, boom yrs., emplmt. in SMSA Δd 408,000 – 471,000, or by 15% (p. 90). Take as rough index to Δ pop. in Mke. City., & expansion demand.

Say there existed, in 1950, ~~260,000 d.u.~~ X,000 d.u.s, then 1.15 x = 328 & x = 285,000 d.u. in 1950. Thus

There was an expansion of $\begin{array}{r} 328 \\ -\ 285 \\ \hline 43{,}000 \text{ d.u.} \end{array}$

Replacement was: $\begin{array}{r} 84 \\ -\ 43 \\ \hline 41{,}000 \text{ d.u., or } 4{,}100 \text{ per yr.} \end{array}$

$\frac{4{,}100}{285{,}000} = 1.44\%$

Suggesting a ~~forecast~~ replacement pd. = 69 years.
~~But bold~~! This was boom decade. Take the 30 yr. pd. for a better msre.

But note, even in boom decade, constn. only covered expension of popn. & 1.4% replmt. per yr. of base stock.

[In one sense we did replace adequately. New hsg. doesn't directly replace oldest hsg, but ~~obsolescent~~ 20-30 yr. old hsg. which is passing into another mkt. In '50 there ~~was~~ were only 66,000 d.u. < 20 yrs. old, & they were fully replaced by 84,000 new d.u.s. But the part of the mkt. demand is houses from 15-35 yrs. old is now hard put. Etc.]

(The new d.u.s. are worth much more than the retiring ones, so they shd. not be matched vs. demolitions, but vs. depreen. of whole stock. Esply the new & middle-aged, where most depreen. occurs, & most value resides.

As rough msre. could adjust no. of d.u.s. by ave. age, deducting 2 or 3% from a coeff. for each yeen. Ave. age falls as result of boom.

Supply of new hsg. is easy to augment, sensitive to price. Supply of

old hsg. much harder to Δ. Thus takes on more of the qualities of land. Except one – can demolish it, so can't tax away all the rent. Could take most of it, tho. Thus a 25-30 yr. freeze is perfectly ok. Might get a few premature demolitions, is all.

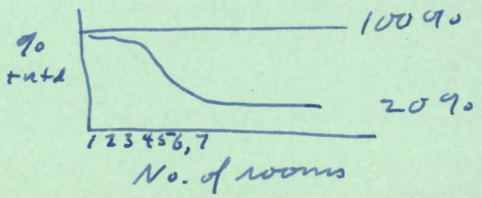
Hsg. stock was upgraded & its value expanded in '50s, bec. there was so little depreciation to offset – most stock being past age of fast depreciation, i.e. over 30. (Except for locational obsolescence & Δ l.v. kind of depreciation of bldg. residl. value, but that doesn't Δ supply)

Conclusion: simple measures are inadequate. This opens up a complex topic. Stick with it!]

p. 91, T. 26 (Have copied)

Modal no. of rooms = 5

As no. of rooms Δs, % tnted. falls;



So fact that ca. 45% d.u.s are tnted. overstates thing. It is systematically the smaller ~~facilities~~ houses & the small apts. that are tnted.

p. 92, T. 27, shows tenure by no. of persons/hshld. ~~It doesn't fall as fast as~~ Large families tend to own more, rent less, but trend is weak. Renters w. large fmlies must squeeze them into few rooms.

p. 94 Bldg. Permits, '53-63. Staggering decline – I had no idea!

p. 99 There are 315,000 households in City.

Table 25. TENURE, VACANCY STATUS, CONDITION AND PLUMBING FACILITIES, AND YEAR BUILT, 1960

Subject	Milwaukee County	City of Milwaukee
Tenure and Vacancy Status (all housing units)	327,736	241,593
Occupied	314,875	230,987
Owner occupied	174,771	111,849
Per cent of all occupied	55.5%	48.4%
Renter occupied	140,104	119,138
Vacant	12,861	10,606
Year-round	12,355	10,185
Sound or deteriorating	11,552	9,476
Available	9,262	7,900
For sale only	1,852	1,249
Homeowner vacancy rate	1.0	1.1
For rent	7,410	6,651
Rental vacancy rate	5.0	5.3
Rented or sold, awaiting occupancy	993	591
Held for occasional use	117	71
Held for other reasons	1,180	914
Dilapidated	803	709
Seasonal	506	421
Condition and Plumbing (all units)	327,692	241,587
Sound	295,185	212,822
With all plumbing facilities	280,093	199,236
Lacking only hot water	1,379	1,118
Lacking other plumbing facilities	13,713	12,468
Deteriorating	27,714	24,580
With all plumbing facilities	21,366	18,930
Lacking only hot water	737	670
Lacking other plumbing facilities	5,611	4,980
Dilapidated	4,793	4,185
Year Structure Built (all units)	327,692	241,587
1959 - March 1960	9,266	5,474
1955 - 1958	35,055	20,302
1950 - 1954	40,120	25,728
1940 - 1949	31,331	18,429
1930 - 1939	34,539	22,345
1929 or earlier	177,381	149,309

Source: United States Census of Housing, 1960.

Table 26 shows the number of rooms per housing unit by whether the unit was owner- or renter-occupied in 1960. It will be noted that while only 44 per cent of all housing units in Milwaukee County were occupied by renters, 94 per cent of all one-, two- and three-room units were renter occupied. In contrast, only 26 per cent of all units having six rooms were renter occupied. To illustrate the fact that there is some relationship between number of persons and the size of the housing units in the housing stock, we have shown in Table 27 the number of persons per unit by tenure. Here again, it will be seen that smaller households tend to be renter households while the reverse is true for larger families. It may also be noted that the number of one-person households is almost equivalent to all one-, two- and three-room units. Furthermore, there exists a general relationship between the size of household and size of unit for all other groups.

Table 26. TENURE BY NUMBER OF ROOMS, MILWAUKEE COUNTY, 1960

Number of Rooms	Total	Owner	Renter	Per Cent Renter
1	10,972	120	10,852	98.9%
2	9,026	505	8,521	94.4%
3	22,514	2,529	19,985	88.8%
4	67,273	29,355	37,918	56.4%
5	105,674	65,264	40,410	38.2%
6	61,241	45,188	16,053	26.2%
7	23,407	18,883	4,524	19.3%
8 or more	14,768	12,927	1,841	
All Occupied Units	314,875	174,771	140,104	44.5%

Source: United States Census of Housing, 1960.

Table 27. TENURE BY NUMBER OF PERSONS PER HOUSEHOLD, MILWAUKEE COUNTY, 1960

Number of Persons	Total	Owner	Renter
1	43,144	12,102	31,042
2	90,308	49,752	40,556
3	60,257	35,022	25,235
4	53,934	34,182	19,752
5	35,385	23,240	12,145
6	17,603	11,625	5,978
7	7,520	4,872	2,648
8 or more	6,724	3,976	2,748
All Occupied Units	314,875	174,771	140,104

Source: United States Census of Housing, 1960.

B. Recent Trends in Housing Construction

Since World War II, new housing units have been constructed in the United States at the rate of about 1.333 million units per year. This has been a rapid expansion of the existing inventory; but on an annual basis, it has been subject to wide fluctuations. During some years, only about one million units were started, whereas in peak years the number has exceeded 1.5 million housing units.

One trend nationally in recent years, however, has been readily discernible --- the constantly increasing proportion of multiple-family units constructed. The postwar housing boom was predominantly at first an expansion of owner-occupied, single-family houses. In part, this preponderance reflected the realization of deferred desire for such homes on the part of families who had previously been unable to achieve the financial status necessary for home ownership; in part it reflected the fact that the producers of new housing --- the developers and builders --- had financing available to them that was more favorable to the buildings of sales housing than to the development of rental projects.

Table 28. DWELLINGS AUTHORIZED BY BUILDING PERMITS, CITY OF MILWAUKEE AND MILWAUKEE COUNTY
1953 - FIRST SIX MONTHS OF 1963

	City of Milwaukee				Milwaukee County			
	Single-Family	Duplexes	Apartments	Total	Single-Family	Duplexes	Apartments	Total
1953	2,655	1,202	456	4,313	5,911	1,488	550	7,949
1954	3,414	844	1,082	5,340	7,372	1,204	1,158	9,734
1955	2,796	754	425	3,975	7,088	1,042	485	8,615
1956	2,570	1,310	803	4,683	6,010	1,524	952	8,486
1957	2,172	1,260	1,466	4,898	4,724	1,496	1,775	7,995
1958	1,829	664	1,432	3,925	4,224	760	1,857	6,841
1959	1,678	584	1,774	4,036	3,830	678	2,125	6,633
1960	1,116	338	2,745	4,199	2,506	412	3,855	6,773
1961	791	336	2,263	3,390	2,231	412	2,769	5,412
1962	780	236	1,676	2,692	2,008	298	2,304	4,610
Total 10 years	19,801	7,528	14,122	41,451	45,904	9,314	17,830	73,048
1963 (First six months)	484	130	1,171	1,785	1,167	184	1,407	2,758

Source: Metropolitan Builders Association.

Table 32. HOUSEHOLDS BY SIZE, MILWAUKEE COUNTY, 1960 AND PROJECTED FOR 1980

Number of Persons	1960	1980	Change 1960-1980	Per Cent Distribution
1	43,144	56,000	12,856	9.2%
2	90,308	127,000	36,692	26.4
3	60,257	89,000	28,743	20.7
4	53,934	83,000	29,066	20.8
5	35,385	54,000	18,615	13.4
6	17,603	28,000	10,397	7.5
7 or more	14,244	17,000	2,756	2.0
All Households	314,875	454,000	139,125	100.0%

Source: United States Census of Housing, 1960; Department of City Development, Milwaukee

As has been previously illustrated, there is a much greater tendency toward renter occupancy among smaller families. Thus while only 44 per cent of all occupied units in Milwaukee County were renter occupied, almost half of the one-, two- and three-person households in Milwaukee County were renters in 1960. Evaluating the projected increase in households by household size, it will be noted that 56 per cent of the net increase in households is expected to occur among smaller households consisting of one, two and three persons.

We have previously mentioned that there are in Milwaukee 42,351 dwelling units which were deteriorating or were deficient in some respect and that 149,000 or 62 per cent of Milwaukee's housing stock in 1960 were housing units in structures built prior to 1930. It is, of course, obvious that many structures that are 30 years of age and older have been well maintained and remain today in good condition. Furthermore, there are varying degrees of deterioration. Also, in some instances, the absence of certain plumbing facilities can be readily corrected. There were, however, more than 4,000 dilapidated housing units in the City of Milwaukee in 1960. The Bureau of the Census defines dilapidated housing as housing which "does not provide safe and adequate shelter and in its present condition endangers the health, safety or well-being of the occupants."

Table 33. PERCENTAGE OF DOWNTOWN EMPLOYEES INDICATING AN INTEREST IN RENTING NEW DOWNTOWN APARTMENTS IN SELECTED CITIES

City	Total Responses in Survey	Number Indicating Interest in Renting Downtown Apartment	Percentage Interest
Aurora	455	47	10.3%
Chicago	8,507	2,453	28.8%
Cleveland	3,080	423	13.7%
Denver	1,844	243	13.2%
Des Moines	2,881	415	14.4%
Detroit	5,210	956	18.3%
Little Rock	1,628	278	17.1%
Louisville	4,976	1,299	26.1%
Minneapolis	5,972	1,611	27.0%
New Orleans	7,514	1,838	24.5%
Portland, Maine	1,434	327	22.8%
Saint Paul	2,975	432	14.5%
San Diego	1,978	496	25.1%
Sheboygan, Wisconsin	316	37	11.7%
Syracuse	999	123	12.3%
Total	49,769	10,978	22.1%

Source: Based upon Retail Estate Research Corporation sample surveys, 1958 through 1962.

M. Sumichrast & Norman Farquhar

Demolition and other Factors in Housing Replacement Demand

(Wm. Hornblds. Press of NAHB, 1967)

Replacement demand at present ('67) is 40% demand for new hsg. -p.1

Net removal rate ≅ 1% hsg. stock ≅ 650,000 d.u./yr., or higher than generally assumed. -p.2

1% is higher than in 1950-60 -p.2

U.S. Housing Inv.

1950	~~58.3~~ 46.1 m d.u.
1960	58.3 m d.u.
1970 (proj.)	69

-p.5

Net Removal % rate also rose:

Pd	Net Removal Rate
1951-55	.45%
1956-60	.87
1961-65	.95
1966-70 (proj.)	1.0

-p.5

Rise of net removal rate due to rise of mergers, fall of conversions (i.e. subdividing old bldgs.)

(The dependence of measured 'removals' on mergers & conversion underscores how fragile this measure is. Real removal is depreciation & reduced serviceability of stock, not too well proxied by 'removals', esp. mergers which aren't even demos.)

(Danger of double counting. Σ losses are demos. + (mergers - conversion) + "Other losses".

"Other losses" are Abandonments, natural demolition, change in use. But Abandonments & change in use might later be counted when demolished)

T.1, p.4:

No. and % of inventory, Annual rate.

Type of Removal	'50-56		57-59		60-64		65-69		70-74
	(000)	%	(000)	%	(000)	%	(000)	%	
Demos	168	.33	264	.46	295	.48	323	.49	
[Merger - Conversion]	-5	-.01	30	.05	44	.07	62	.10	
Other removals	68	.13	203	.35	245	.40	272	.41	
Σ	230	.45	497	.87	585	.95	657	.99	

T. 2, p. 6. Shares of removals

	'50-56	57-59	60-64	'65-69
Demos	.73	.53	.50	.49
Merger-Conv.	-.02	.06	.08	.09
Other	.29	.41	.42	.42

1960, govt. is demolishing 155,000 d.u. yrly
pvt. action " 145,000 d.u. " . -p. 5

But see ~~T. 11, below~~ T. 5, below.

Source of govt. demos; 1960s, yrly. rate

Urban Renewal	55,000
Code Enf.	52,000
H.ways	40,000
Pub. Hsg.	3,500
Misc.	3,000
Σ	153,500

-p. 6

Components of "Other" losses, yrly rate, '60s.

Natural Causes ‡	73,000
Change of use	92,000
Abandoned	86,000
Σ	251,000

p. 6

‡ Flood, fire, storm

Ests. of removal, and forecasts.

Source	Annual removal (000)	
Landsberg, Fisherman, Fisher	1,100.	(Hans says it was a forecast, went wrong too high.)
Trained	ca. 480	
Reinhold Wolff	320	
Robert Bentell	405	
Glen Beyer	750	
Sunni. & Farq.	650	-p.12

Quite a range! Shows how parlous are these estimates. Also, how limited the importance. Diminishing serviceability of stock is the real loss.

S.&T. used Census Components of Change study

T, 5, p.17. Demo., pub. & pvt., qtly. ave., (000)

	Pub.	Pvt.
50-56	67	101
57-59	137	127
60-64	151	133
65-69	181	143

The public demo. is mostly from "fed. programs"; ~~but they don't define that.~~ (but UR & hiway are really partly local programs.) (So is code enforcement)

p. 22, bias betrayed. "U.R. & Code enf. offer the most promising demo. potential."

But see T. 6, below.

p. 24-5. In 1930-50 there were great net conversions, a major source of d.u.s.

1930-39, convns. were 1/3 new d.u.s., 100,000/yr.
1940-45, convns. ~~retention~~ 200,000/yr.
45-50 140,000/yr.
50-60 convns. 160,000/yr.

Remarkable! No. of conversions increased in flaming '50s! (But remember mergers also Δd. This must rep. migration & locational obsolescence.)

p. 21 Mergers were rare, 1930-50, then rose, outnumbering conversions.

T. 6, p. 28, Annual rate of conversion

Pd.	Gross (000)	Net. ≠	Net loss by Mergers	Net loss by Merger less conversion
1910-19	10.3			
1920-29	12.5	N.A.		
1930-39	101			
1940-49	200			
1950-56	204	105	100	-5
1951-59	191	98	128	30
1960-64	210	105	149	44
1965-69	221	110	172	62

≠ i.e., the net Δ

A Disturbing Factor In Suburban Land Prices

No studies, so far as I know, have been made of the extent to which a search for a hedge against inflation, coupled with the fact that long term capital gains by recipients of large incomes are taxable at comparatively low rates, have led to the purchase of farms along the rural urban fringe. The elder Tideman of Chicago, for example, of Chicago, is convinced that this is an important market and price factor for many miles to the north, west, and south of that city.

The attached clipping from the Financial World of 4/1/53, in which Robert P. Crawford describes special real estate deals which hold tax advantages even in urban areas, indicates that such transactions can cause marked deviations in real estate price levels. The "sale and leaseback" type of transaction can operate similarly.

The secretary of the American Institute of Real Estate Appraisers told me several years that the price at which the Palmer House in Chicago was sold to the Hilton chain could not have been forecast or justified by any of the standard appraisal procedures. The life expectancy, total capital value of entire estate, total personal income of each member of the Palmer family were the factors which determined the level at which the sale was most advantageous.

New York Financial World 4/1/1953

Special Deals May Hold Tax Advantages

In real estate field, quirks of the income tax laws may create important profit opportunities for those who can create "special situations" in property deals. Some examples

By Robert P. Crawford

Of all the reasons for buying or selling real estate, a "special situation" may be the most profitable for buyer or seller, or often both. Real estate investors spend many a day and night wondering whether they are already confronted by a special situation or whether one might be worked out to advantage. While there are many large transactions of the kind, there are, strangely enough, perhaps more special situations in connection with smaller pieces of property.

Term Defined

Just what is a special situation? The emphasis here is not so much on a piece of real estate as such, but on circumstances surrounding that property and the financial positions of seller and buyer. A man may be well-to-do and yet be forced to sell a piece of property. At the same time another man may be in very moderate circumstances and yet find it highly profitable for him to buy the same piece.

Of all the special situations the one least appreciated and yet the most productive of opportunity to small investors is the one that arises because of the income tax provision that makes it possible for a seller to spread the profit from a sale of real estate over a period of years. The basic provision in this arrangement is that not more than 30 per cent of the money may be received as a down payment. And the seller pays the income tax on only that portion of the profit he receives each year.

Obviously, most real estate profits are capital gains profits and so are restricted to an effective tax ceiling of 26 per cent after six months holding. But under this plan the seller without much other income may find that he is actually paying only 10 or 12 per cent since only a part of the profits come into the ordinary tax calculation each year. This way he keeps himself far from the 26 per cent level.

A variation of this plan is to sell the property at a higher price but to charge little or no interest. In this way the seller cuts down his income tax since the profit on the original price is figured at capital gains, while interest is current income.

This type of real estate transaction arises frequently in the case of elderly owners who have used up all their allowable depreciation and so find their income tax being hiked considerably because of that fact. Often they have held the property for long periods of years. Sometimes the Government has determined that the property is going to have a longer life than anticipated and so determines that no more depreciation may be taken by the present holder. He has the choice of easing up on depreciation or selling out.

The individual accordingly sells the property for around 29 per cent down and takes his money out over a period of years. The new buyer who may likewise be of modest income gets a bargain in terms if not in actual price. He starts out charging off some depreciation himself on a new set-up of building and land value.

But there are of course special opportunities for those in higher income tax brackets. Just as in the case of stocks, there may be many pieces of property that are too profitable for a man in high income tax brackets to consider buying. He would prefer his return in long-time increase.

Here for instance is a special situation for that man. It arises when a well-located piece of property has been rented on a long-term lease. Fifteen years ago the rent seemed entirely satisfactory and the long-term lease would have been a decided asset in selling the property. But today that lease has become a liability, for the owner is receiving only 50-cent dollars when it comes to paying taxes and making repairs. The writer knows of a quarter-of-a-million-dollar property where the net income before depreciation has been only a little over $4,000 a year for quite a period of time. The present holders of the property do not benefit from depreciation because of lack of other income tax to pay. Obviously this may be an opportunity for a well-to-do individual who wants a fine location and is willing to take his profit in the rise in value. He will gain by being able to charge off interest and taxes, plus a good rate of depreciation. He may actually make the place show a nice loss against other income.

Another such situation arose because the sellers were anticipating that the lease would run out just when "harder times" would be coming on. But hard times fortunately did not come and the buyer had a still bigger bargain.

Even the buying of luxurious homes today constitutes something of a special situation in that interest and taxes are charged off on one's income tax. If it were not for these factors such sales would be fewer.

Further Considerations

There are two additional points to be considered here. Special situations enter into so many real estate transactions today that prices tend to be influenced by them. Obviously the buyer who because of his own financial situation can not be benefited by such a transaction can hardly afford to compete in price with the man who will be benefited. In that way a certain instability in values is created.

Our second point—what of the future? The question naturally arises as to what would happen when and if men of large income either find their incomes reduced or the tax on such incomes reduced. Some of these recent big deals would lose their attraction because there would be less tax to save. But the poorer man—pursuing steady income—even though it decreased—might find that he had not done so badly after all.

Convertible Bonds Have Added Attraction

Interesting profit possibilities, as well as capital protection in uncertain periods, are to be found in the privilege bond group. Issuing corporations also reap benefits

Over the past year an unusual number of convertible bonds have been offered to investors and have been readily taken up. Investors have fared well from the standpoint of market appreciation, which has reflected the general rise in the equity securities into which the new issues are convertible. Those who already have exercised the conversion privilege have benefited from both the market rise in the shares they now hold and the increased return on their investment, since the shares in every case afford generous returns. The corporations have benefited from the fact that the conversions are steadily reducing funded debt totals.



Traded Actively

Ten of the convertibles presented in the accompanying tabulation were issued in 1952 and one, the Sinclair Oil 3¼s of 1983, is of 1953 vintage. All of the 19 are traded on the New York Stock Exchange and most of them have active markets — stimulated by the showings made by the common shares into which they are convertible. With the exception of the Dow Chemical 3s, which were sold to investors at 101½, all of the 1952 issues were sold at 100. Only the medium grade Standard Coil Products 5 per cent bond is currently quoted around its offering price, with advances in the others ranging from five points for the International Minerals & Chemical 3.65s to 34 points for the Houston Light & Power convertibles.

The flotation of convertible bond issues as a means of raising capital at a lower cost to the issuer than bond issues of regulation type appeals particularly to the utility industry, though at times all types of corporations have sweetened bond offerings with a conversion feature.

In effect, the sale of a convertible issue often amounts eventually to the sale of common stock at a price above the market, while providing the company with capital funds at an interest cost well below the prevailing dividend rate on the stock, or even on the company's outstanding non-convertible bonds. Such offerings are particularly attractive to investors during periods when, although the longer term trend of securities appears upward, uncertainties may cloud current and nearby prospects—creating a situation not especially propitious for either a stock or regular bond offering. With a conversion price set moderately above the market of the moment, the investor is asked to accept the low interest coupon as the price for full benefit of any advance in the market price of the stock during the life of the bond.

The investor, however, faces some hazards. The issues frequently are subject to calls for sinking fund purposes, and all of them usually are subject to redemption at any time that the corporation may decide to take such action. For that reason the investor should be willing either to convert his holdings into common stock or to sell his holdings should the market price of his debentures rise beyond reasonable investment levels. Further, the conservative investor is warranted in converting his holdings into common stock only if he is willing to assume all of the risks which are inherent in common stock ownership.

The Principal Listed Convertible Issues

Company and Issue	Standard & Poor's Rating	Amount Out-Standing (Mils.)	Call Price	Recent Price	Approx. Yield to Mat.	Conv. into Com. at	Recent Price of Common
Amer. Tel. & Tel...2¾s, 1961	A1	$160.0	a105	115	0.95%	b$143.84	159
Amer. Tel. & Tel...3⅜s, 1963	A1	57.3	107	121	1.31	c138	159
Amer. Tel. & Tel...3½s, 1964	A1	238.0	k107	123	1.15	e136	159
Bangor & Aroost'k.4½s, 1976	B1	8.66	a103½	92	5.09	f	21
City Investing 4s, 1961	NR	3.41	a102	94	4.90	h	14
Colorado Fuel & Ir..4¾s,1966	B1	48.5	g103¾	100	4.75	22.75	20
Consolidated Edison..3s, 1963	A	6.45	101.43	158	...	25	40
Con. Gas, E. L. & P. (Balto.) 3¼s, 1967	A1	16.5	101	120	1.65	j23	28
Detroit Edison 3s, 1958	A	24.1	102½	124	...	20	25
Dow Chemical 3s, 1982	A1	100.0	a104½	107	2.70	48.38	40
Houston Lt. & Pwr..3¼s, 1967	A	14.3	102	134	0.82	17½	25
Inland Steel 3¼s, 1972	A	24.5	g103	107	2.98	53	43
Int'l Min. & Chem..3.65s, 1977	B1+	20.0	103	105	3.32	50	37
Scott Paper 3s, 1977	A	25.0	a103	111	2.42	56	58
Sinclair Oil 3¼s, 1983	A	102.0	103	106	2.90	44	43
Standard Coil 5s, 1967	B	5.0	105	100	5.00	18½	16
Standard Oil (Ind.).3⅛s, 1982	A1+	140.0	103	109	2.70	87	75
Union Oil (Calif.)..3⅛s, 1972	A	35.0	103	109	2.52	45	43
Wheeling Steel 3½s, 1965	B1	14.2	a103	102	3.30	45	39

a—At lower price during 1953. b—$43.84 cash and $100 debentures. c—$38 cash and $100 debentures. e—$36 cash and $100 debentures. f—Each $1,000 bond convertible into 20 shares of common. g—Call price; at lower price for sinking fund. h—Each $1,000 bond convertible into 50 shares of common. j—Each $100 of bonds plus $15 cash convertible beginning July 1, 1953, into five shares of common. k—Callable after July 1954. N.R.—Not rated.

Land Value Maps are Not New, But Their Utility Needs to be Re-Discovered

H. W. Batt, Ph.D., Central Research Group, Inc., Albany, NY. June, 2008

Land Value Maps in the 1900s

Portraying the value of land through the use of maps, especially in urban areas, has a history dating from the beginning of the 20th Century. Indeed, it is rather surprising to see that their use has not been wider almost a century later.

The earliest land value map that I can identify was done in 1909 by Lawson Purdy, Director of Taxation and Assessment in New York City. Purdy was the preeminent pioneer of property tax administration in his time.[1] Born in 1863, he founded and led a very activist New York Tax Reform Association with Thomas Shearman, and was then appointed to the position of President of the New York City Department of Taxes and Assessments in 1906. Many of the improvements in the administration of property taxation were due to his efforts; indeed his 1914 pamphlet on assessment methodology was largely embodied in a statement of principles published by the IAAO in 1939.[2] The *American Journal of Economics and Sociology* (AJES) printed a Festschrift in honor of his life and work in 1949, and he continued to live another decade until August 30, 1959.[3] From 1890 when he first read *Progress and Poverty*, he was an ardent Georgist, and was in fact President of the Schalkenbach Foundation from 1937 until his death.

The history of property taxation in New York, and indeed in America, cannot be understood without an appreciation of Lawson Purdy's role. Practices which were first initiated and advocated by Purdy were gradually adopted by other states – the professionalization of assessment, the standardization of practices, the increased use of tax maps, and the frequency of revaluation. The formation of the National Association of Assessing Officers (NAAO) in 1934, later to become the present IAAO, was in good part due to his efforts. He advocated the abolition of taxes on all personal property, a campaign he started in 1896, but which was not achieved in New York until 1933. As we well know, many states continue to tax personal property to this day. He was also responsible for instituting the separate listing of land and improvement values beginning in 1902, as well as for their publication. Along with the publication of the City of New York's assessment roll, he initiated the creation of land value maps beginning that same year, recognizing the fact that this would allow any taxpayer to better understand and accept the legitimacy valuation. In fact his contemporaries later wrote that "Mr. Purdy was acutely conscious of the fact that a good job of assessing real estate could not be done without the aid of an accurate set of tax maps," by which he meant land value maps.[4] The Schalkenbach Foundation has a copy of one of his early land value maps of New York, one to later become a model for other American cities.

The antecedent of land value maps were, of course, cadastral maps, which go back to antiquity. We now have a delightfully informative book tracing the history of cadastral maps in Europe and beyond, linking their evolution to land taxation as it evolved in England and Wales. Under the leadership of Lloyd George, the passage of land value tax in 1910 the "finally gave England its first and only comprehensive

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1 The information that follows is taken from a collection of Essays in Honor of Lawson Purdy, LLD., On the Occasion of his Eighty-Sixth Birthday (October, 1949), published in the *American Journal of Economics and Sociology*, Vol. 9, No. 1.

2 Lawson Purdy, "The Assessment of Real Estate," Technical Pamphlet Series No.1, National Municipal League, New York, 1914.

3 Essays in Honor of Lawson Purdy, LL.D., On the Occasion of his Eighty-Sixth Birthday, AJES, Vol. 9, No. 4 (October, 1949); and *AJES*, "in Memoriam: Lawson Purdy, 1863 – 1959," Vi G. Peterson, pp. 16.

4 Albert W. Noonan, "Lawson Purdy's Influence on Assessment Practices," *AJES*, Vol. 9, No.1, p.28.

Notes

mapped cadastral survey covering every individual hereditament." [5] The tax itself, unfortunately, was never implemented.

According to Philip Cornick, Purdy's colleague of many years, the New York City land value maps were revised and published annually on a continuing basis until the Second World War.[6] The grounds for establishing the site value, however, changed with the departure of Purdy. He first invited Minneapolis Georgist William A. Somers to New York because he held that site accessibility was the source of urban land value. Somers argued that "the source of urban land value was accessibility, which extended to private land holdings abutting streets, the public or private improvements in, on, over, or under them, including sidewalks, paving, the sanitary and storm sewers, the water and gas mains, the conduits for telephone and power lines, and the rail lines for transporting passengers." But New York mortgage banker Richard M Hurd published his 1903 *Principles of City Land Values*, which led Somers' experience from 1896 in Minnesota to be cast aside. Philip Cornick traces the dilution of Georgist thinking as it evolved in the aftermath of Purdy's tenure in the New York City Tax Department. His successors made real estate income the dominant factor in establishing land value. Even in the early aftermath of Georgist thought, one can see that the criteria on which land valuation was based experienced competing influences.

To follow New York City's experience with land value maps one step further, a special Report to the Mayor in 1952 recommended that the practice of creating land value maps be resumed. It noted that "land value maps (not to be confused with the tax maps) were formerly published, but for some years publication has been discontinued. We recommend that publication be resumed, in the interest of assuring the public of fairness in assessment procedures."[7] Most revealing was a footnote to that paragraph:

> The Tax Department raises three objections to this proposal: (1) maps are generally prepared far in advance of the publication date of tentative valuations, and rapid changes may destroy their validity; (2) a land value factor can be only a leas-common denominator of utility, and in a given block there may be as many land uses as there are plots; (3) publication of these maps may influence the Court in demanding rigid application of the given factors regardless of the possible justification for deviation. One of our special consultants, Mr. Lawson Purdy, who for many years was President of the Department of Taxes and Assessments, is not impressed by these objections and concurs in our recommendation regarding publication.

A quick perusal of the literature of city management and public administration reveals general recommendation of land value maps nonetheless, especially as a means both of checking the accuracy of the valuation of land sites and as a way of demonstrating to the public that the appraisal process is open and transparent. Dr. Lent D. Upson, another eminent figure in the field of public administration in the early decades of the 20th century, made the following comment in a report to the leaders of Cincinnati and the larger Hamilton County, Ohio in 1924:

> As a result of the lack of a property system of real estate assessment, the way has been left open for personal favoritism and for the circulation of rumors of favoritism even when there may have been none. The most effective defense against the criticism of "politics" and against the requests of individuals for favors is the establishment of a system of appraisement [sic] based on land value maps, unit food

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5 Kain, Roger J. P. and Elizabeth Baigent, *The Cadastral Map in the Service of the State: A History of Property Mapping*. Chicago: University of Chicago Press, 1992, p. 261.

6 Philip H. Cornick, "The Real Estate Tax," AJES, Vol 26, No 3., (July, 1967), pp. 254 ff.

7 *The Financial Problem of the City of New York: A Report to the Mayor's Committee on Management Survey. General Summary Volume of the Finance Project*, by Robert M. Haig and Carl S. Shoup, Directors, City of New York, June, 1952, p. 152.

values, standard units of building value and full publicity.[8]

An equally interesting part of that early Survey are the numerous tables of real property aggregate value for several localities in the county, all separating both land and building value as well as by various property classes. The tables compared assessed values with sales records for the previous year, and revealed a substantial disparity. The aggregate proportion of land value for all of Hamilton County was 35.95 percent of the total. (p. 105) In the city of Cincinnati alone, the land value was $351 million out of a total value of $875 million, or 40.12 percent. The Report went on to show numerous ways in which the assessment practices could be improved upon.

Dr. Upson continued to be interested in assessment practices for many years thereafter. In 1926, two years later, a widely used textbook he wrote entitled *Practice of Municipal Administration*,[9] devoted approximately twenty pages to explaining how real property should be assessed.

"The following features," he said, "are believed to present the chief elements of a modern and scientific assessing system:

> (1) assessment at true cash value, of both real and personal property; (2) separation of the assessment of land and improvements; (3) the district, block, and lot system of indexing property holdings and office records; (4) preparation and publication of a land value map of the entire city; (5) tax maps showing the metes and bounds of all property within the limits of a taxing district; (6) the adoption of the unit-foot as a standard of quantity; (7) the adoption of an approved depth rule, corner influence rule, plottage rule, and other minor rules as may be necessary; (8) adoption of a standard building classification, with unit factors of building value; (9) adoption of rules of economic and structural depreciation of buildings; (10) a file record of all improvements upon all each description; (11) collection and filing for current use of all pertinent information relative to property values, -- as sales, record of deeds filed, building permits issued, etc.; and (12) for personal property, a personal return form to be filled out by each taxpayer ...." He went on to say that properly speaking, "The assessment rolls are made up annually and should carry a description of the property assessed, the separate value of the land, and the separate value of the buildings located upon it. (p. 80)

On the following page, he wrote:

> Essential to a complete assessing procedure are tax maps. A tax map is one showing the exact dimensions of every separately owned parcel of real estate in the city. In the thickly settled portions of the city where parcels are small, such maps should be on a scale of fifty feet to the inch; in other sections, the scale may be 200 feet to the inch. These maps serve as the basis for the preparation of the assessment rolls for the year, each separate parcel shown on the maps being checked with the rolls to assure that all property within the city is on the books for assessment, and that the dimensions of each item on the rolls are collect. Also, the assessors need these maps in their field work of examining property. They should be available for the entire city and be kept current by the engineering department of the assessor's office. Many cities have no maps of their own and use an insurance atlas as a rather unsatisfactory substitute.
>
> To assist the property owners in understanding their land valuations and to enable them to make comparisons with other parcels of land as to uniformity and equity in assessment, a city should prepare land value maps. These maps should

8 The Government of Cincinnati and Hamilton County, Survey Directed and edited by Lent D. Upson, Director, Detroit Bureau of Government Research, Professorial Lecturer in Political Science, University of Michigan, Cincinnati, 1924, p 107.
9 New York: The Century Company, 1926.

not be confused with tax maps, as they do not show the separate parcels of real estate, but only the boundaries of blocks. The value of the land per front foot on every side of each block is indicated, and in unplatted areas the value per acre. The front foot values shown must refer to unit values uniformly, and it is generally found expedient to use a depth of 100 feet as standard. These maps should be open to public inspection at reasonable hours, and in large cities are sometimes published in book form for distribution. The value of such maps in promoting public understanding of and confidence in the system of assessing is evident. Excellent examples of these maps are to be found in New York City, Detroit, and Cleveland.

It is the equivalent assessment of land values that raises the greatest difficulties for the taxation authorities. .... There are, of course, certain factors inherent in real estate which assist in formulating judgment as to value. These principal factors of value are location, utility, shape, and size. As to location and utility, land is valuable in proportion to its nearness to people who will pay to use it, and the most valuable lot in any city is that lot which is located so as to be accessible to the greatest number of people who will buy goods. the effects of shape and size are apparent. To be of greatest value, a parcel of land must be of sufficient size to meet business demands, and so shaped that it can be utilized fully; and recognition of these features in assessing is called plottage. There are other minor factors which help determine value, i.e., transportation facilities, sunshine, street conditions, character of business done, social atmosphere, soil, grades, etc.... (p 83)

A few of his later observations should also be noted in view of his early interest:

Real market value, cash sale value, or fair cash value is the price demanded when the buyer is willing, but not compelled, to buy, and the seller is willing, but not compelled, to sell.

It is possible to approximate the value of certain parcels of land throughout a city, and this information may be used to allocate values to neighboring parcels.

Undeveloped territory is usually valued by the acre; industrial sites by the square foot; and residential and business property by the unit foot, i.e., one foot front by the usual depth of properties in any particular city, often one foot by one hundred or one hundred and twenty feet, located in the center of a block. (p 84)

Upson alluded to several other assessment books, demonstrating that techniques of valuation had been fairly well worked out by the time this book was written. Measures seen in later appraisal books are seen here as well (p 85):

The 4-3-2-1 rule is to the effect that the first, or street, frontage to a depth of twenty-five feet of a lot 100 feet deep is worth forty percent of the whole; the second twenty-five feet, thirty percent of the whole; the third twenty-five feet twenty percent of the whole; and the rear twenty-five feet, ten percent of the whole. According to the Hoffman rule, the street-half of a lot 200 feet deep is worth two-thirds of the value of the whole lot and the Hoffman-Neill rule works out the relative value of the intermediate depths. [Several other rules also named after various people are then mentioned.]

It is difficult to formulate a rule for measuring corner influence, because of its lack of uniformity and there is wide discrepancy in the rules adopted by various cities.

He even gave attention on following pages to matters of irregular parcels, triangular parcels, plottage, and (the influence of) alleys. And he discussed matters of building depreciation in detail. While Dr. Upson mentioned New York, Cleveland and Detroit as having the land value maps of most exemplary character in 1924, other cities were apparently also making progress.

A 1929 issue of the *National Municipal Review* carried an article by one Hazel C. Pratt, on "The Assessment of Real Estate and Buildings in Rochester, NY."[10] In referring to the "new procedure," a land value map figures centrally.

> A detailed description of each structure assessed and all calculations leading to either land or building assessments is kept for each property on a card known as a data card. Every taxpayer is privileged to examine these cards and to see exactly how his assessments and the assessments of his neighbors were determined. (p 87)

Later the article notes that "the tax map is kept constantly up to date and no effort is spared to keep it accurate," and that "the tax map provides the city with the first complete, reliable, and up-to-date record of lot dimensions." (p 89) The whole city of Rochester was recorded on 33 land value maps, and "a complete field survey is made very five or ten years. In the meantime, the majority of structures are continued on the rolls without change in assessment except as may be allowed for depreciation, obsolescence, or appreciation. New constructions are inspected and appraised each year as these are built." The subtitle of the article states that "the adoption of up-to-date methods has given Rochester a scientific and equitable assessment system." (p 91)

Land value maps received even greater greater recognition in 1933. In 1929 President Herbert Hoover established the President's Research Committee on Social Trends, with funding for the research granted by the Rockefeller Foundation. An expert staff was recruited from universities and scientific institutions nationwide, largely supervised by the Social Science Research Council. A series of studies was embarked upon in early 1930 and concluded in 1932. One volume, *The Metropolitan Community*, was by University of Michigan Professor of Sociology Roderick D. McKenzie.[11] Like the slightly later *Encyclopedia of Social Sciences*, the President's Committee Report was valuable benchmark of the social sciences and trends of that period.

It is significant, therefore, that Chapter XVII in McKenzie's study was devoted entirely to land value mapping: "The Economic Topography of the City: Urban Land Values."[12] The first paragraph contained the observation that "a land-value map of a city at any given time affords an important index of the internal organization of the community. And by comparing such maps for different periods it is possible to ascertain the trend in the city's structural development." (p 226) The chapter relied especially on what at that time was the most advanced work of its kind in the country, Olcott's *Blue Book of Land Values*, which later were relied upon as well by Homer Hoyt's pioneering study, *One Hundred Years of Land Values in Chicago*.[13] McKenzie charted changes in the patterns of land and their value for fifteen larger cities in the US, from 1902 to 1925. Data for the city of Detroit allowed tracking from 1896 to 1930. Special attention was given to the value of land, and the proportion of land value relative to the value of buildings. All this was linked to the growth in population, concluding that there was "a tendency for land values to increase in proportion only to the increase in population and not to the square of the population." McKenzie further noted that "If [land] values were charted in topographical fashion, the chart would represent high peaks and low valleys." (p 232) Even for that early period when motor vehicle transportation could not have accounted for the patterns, he noted that

> 1. There has been an exodus of population from the central portions of the city. This exodus is caused in small measure by an increase in the size of central

10 Vol. XVIII, No.2, February, 1929, pp. 87-93.
11 New York: Russell and Russell, 1933.
12 pp. 226-239.
13 Chicago: University of Chicago Press, 1933.

areas utilized for business purposes, but much more largely by the progressive deterioration of structures in large portions of the central areas. The effective of this deterioration is a creeping paralysis, commonly referred to as "blight."

2. The exodus of population from the central areas together with the settlement of new population in suburban areas has caused a drift of the masses of the population outward radially. Much of this drift is due to the promotional and sales efforts which have been made in connection with the development of new suburban areas.

3. With the outward radial drift of population, has come a recentralization of outlying-district business centers, sometimes reaching the proportion of satellite business communities.

4. The provision of rapid-transit facilities has tended to aggravate further the decline of the central area by providing non-stop express service through such areas and non-stop highways for automobile traffic.

... The degree of concentration of value in the centralized and intensively developed financial and central retail area is striking in every city. The relative smallness of the area characterized by intensive uses and high values, however, is not generally appreciated. Land value reaches its highest peak in most cities at fairly accurately ascertainable points. The high values are found distributed along a principal street, falling off abruptly on each side of the street and rapidly, but less abruptly, along the street itself." (p 232-233)

Empirical studies bear out these formulas quite simply. McKenzie's data in Figure 29 shows the dramatic decline in land values as one moves from the highest points in each of four cities – New York, Chicago, Detroit, and Cleveland – in the late 1920s. His Figure 31 shows the land value along a single vector in Chicago as it changed throughout the 1920s on State Street, showing the Michigan Boulevard development. (Note especially that the values as plotted on logarithmic scales.)

McKenzie's Study of Land Value Gradients Figure 29

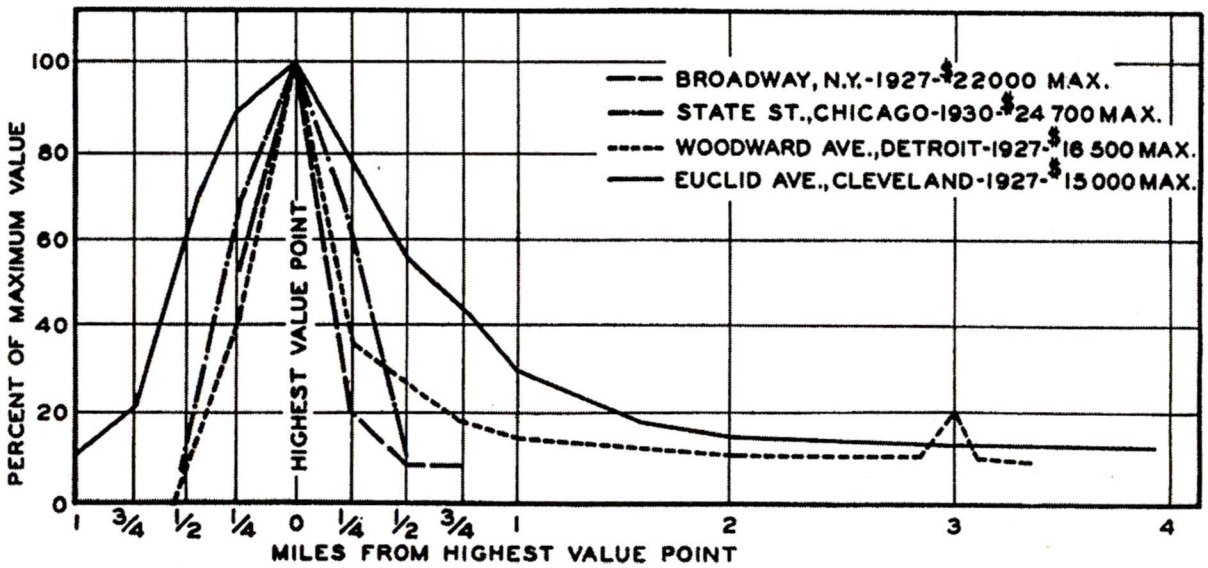


FIG. 29.—Peak value profiles of four cities, equated for comparison. (Unit front foot land values.)

Noting the slope of land values away from the points of highest activity, the author observed, "the lines shown in the chart indicate the percentage of the maximum value represented by land values at half-mile intervals from the point of maximum value in both directions. The shape of the curves indicates the rapidity with which land values decline as the distance from the point of maximum value increases."(p 235)

McKenzie's Study of Land Value Gradients Figure 31

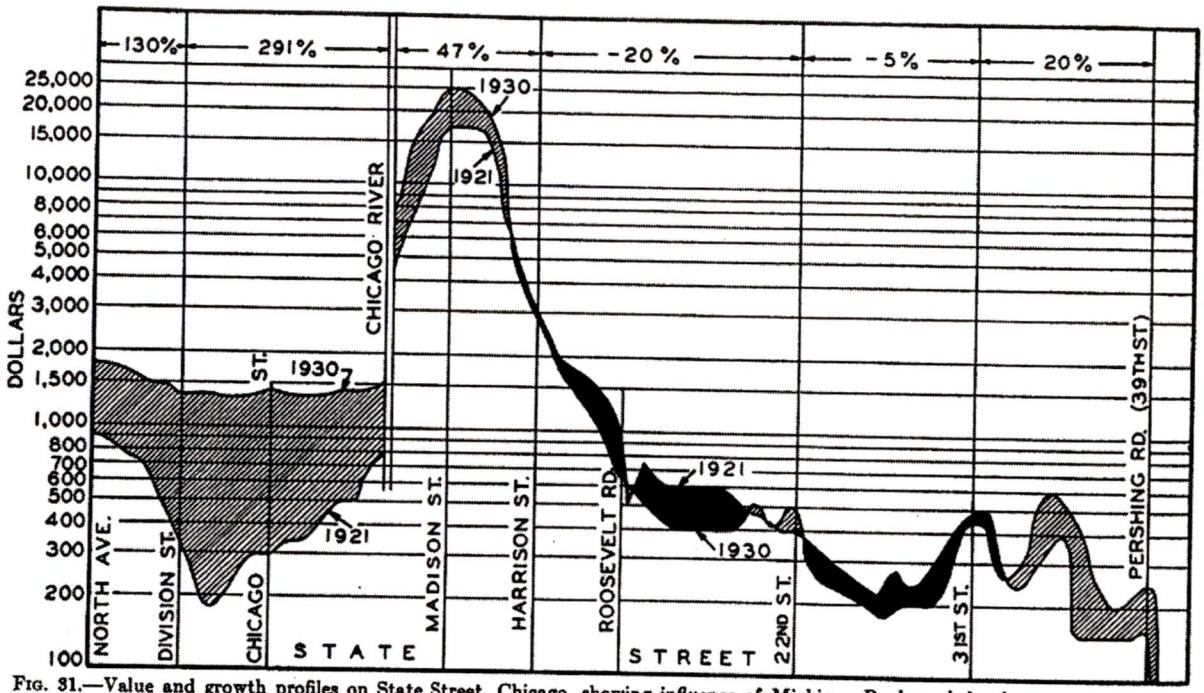


FIG. 31.—Value and growth profiles on State Street, Chicago, showing influence of Michigan Boulevard development, 1921–1930. (Olcott's front foot land values plotted on logarithmic scale.)

In concluding that section McKenzie saw the following trends were apparent:

> 1. The highest value area evidences a high degree of stability but a smaller percentage increases in value than those which occur in outlying areas. 2. Peak-value areas tend to fall at fairly regular intervals along radial arteries, reaching from the central into the suburban area. 3. The influence of transit facilities, particularly street-car service, upon the geographical distribution of subcenter high-value locations is very pronounced.
>
> 4. The uniform tendency for subcenter values to increase at a more rapid rate than the central area probably is a permanent tendency and reflects the influence of the drift of population outward from the central area.
>
> 5. The permanent and far-reaching effects of public improvements upon the distribution of land value are also indicated. (p 239)

Fast forward to the 21st Century

Somehow, during and after the Second War, it seems, land value maps tended to drop out of use. Why is it, some eight decades later, that land value maps have not returned and are today almost unused and unknown in the assessment profession? Mason Gaffney mentions in his 1970 TRED article that he made a land value map of Milwaukee County based on the recorded sales of bare land from 1958 to 1962.[14] His is no small effort given the lack of attention to record keeping. Until very recently, on line searches and indexes in books on assessment do not cite many instances of land value maps at all. One can only wonder in puzzlement given the fact that GIS technology can now make them more easily, more reliable, and more useful than ever.

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14 Mason Gaffney, "Adequacy of Land as a Tax Base," Chapter 9 in *The Assessment of Land Value*, Daniel M. Holland (ed.), Madison: University of Wisconsin Press, 1970.

One can speculate on at least two reasons that seem to be common in the contemporary assessment environment. The first plausible reason is that the logic and attraction of taxing the value of land by itself is less well appreciated today than in the early 20th century. At that time, the ideas of Henry George were widely known and understood. Furthermore, a good part of the assessment community, as well as the political community counted themselves as Georgists. Today, the name of Henry George is almost unknown, even among economists and tax experts. In the immediate decades after Henry George died in 1897, the number of eminent American and world leaders who were active Georgists included Leo Tolstoy, Winston Churchill, Sun Yat Sen, John Dewey, George Bernard Shaw, Teddy Roosevelt, and Clarence Darrow, Louis Post, Andrew Carnegie, Henry Ford, Joseph Fels, Louis Brandeis, and Paul Douglas.[15]

The second plausible reason is the claim of many assessors that it is impossible to separately and accurately assess the land value of parcels that have been improved. In an intensive workshop on the feasibility of a land value tax sponsored by the Lincoln Institute in 1998, property tax expert Edwin Mills of Columbia University put the practical challenge squarely:

> The Most Serious Problem in Implementing an MSA Land Tax is Assessment of Land Values on Developed Properties.
>
> One must start with an understanding that assessment of real property for tax purposes is the most arbitrary part of our extremely cumbersome system of federal, state, and local taxation. In the urban parts of MSAs, nearly all taxable sites are developed. . . . .
>
> An obvious suggestion as to the valuation of land for tax purposes is the cost-of-production approach to property appraisal. . . .
>
> The cost of production approach can be a tolerably accurate basis for appraisal of property values. But when used to estimate land values, all of the errors in estimating market value and production cost are thrown into the estimate of land value. Land value is the relatively small difference between the two much larger values, and estimation errors would be enormous. A variant on this approach is to ask, in stead of the cost of producing the existing building, the cost of producing the building most appropriate for the site if the site were clear. . . .
>
> In principle, hedonic analysis is the only other way to make separate estimates of site and structure values of developed properties. . . .
>
> There is no prospect of a hedonic equation that would be adequate to assess site values of developed residential properties, and much less prospect of an equation that could assess site values of developed commercial property; and there is simply no other way to estimate site values of developed properties.
>
> My reluctant conclusion is that a site tax, substantially substituted for the existing property tax, is theoretically extremely attractive but practically worthless.[16]

This claim has been repeated by many property tax and land use experts, especially those associated with the Lincoln Institute of Land Policy, which many people recognize as the preeminent forum of discussion on the property tax, despite its profession of being Georgist. The fact that assessors are typically not well trained, and have no incentive to accurately value land in an accurate and reliable manner, means that this claim becomes a self-fulfilling prophecy.

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15 An extensive list of eminent adherents of Georgist economic philosophy is available at www.cooperativeindividualism.com/authors.

16 Edwin S. Mills, "The Economic Consequences of a Land Tax," Chapter 2, pp. 31-48 in *Land Value Taxation: Can It and Will It Work Today?*, Dick Netzer (ed.), Cambridge, MA: The Lincoln Institute of Land Policy, 1998, pp.44-47.

That land sites can't be adequately and accurately valued is a paradoxical claim. Other nations that employ land value taxation have no problem in assessing land values according to their market price;[17] indeed many assessors argue that land is far easy to value than improvements.[18] As will be more apparent in the discussion below, modern computer technology makes possible the assessment of land far easier than ever before, as triangulation algorithms, regression and factor analysis facilitate the use of sales records in a relatively foolproof manner.

Much of the difficulty seems to be explained by the inertia of the economics employed to ground taxation approaches and the fact that sales records contain the price of land and improvements totaled together. Since improved parcels are sold far more frequently than other real estate parcels, it is these which have become the benchmark of valuation quality. Residential parcels change ownership as often as once every five years, whereas industrial, commercial, and agricultural parcels tend to have very stable ownership. Therefore the standard of valuation for non-residential parcels is far more relaxed. The official handbook of The International Association of Assessing Officers states that "the chief measure of uniformity [in aggregate analysis] is the coefficient of dispersion (COD), which, depending on the nature of the properties involved, should not exceed 10.0-15.0 for residential properties, 15.0-20.0 for commercial properties, and 20.0 for vacant [i.e., rural] land."[19]

Municipalities have been loath to perform revaluations as often as is properly called for because of the expense involved. Decades have sometimes gone by without any more attention to parcel values except by statistical adjustments in the aggregate. According to the New York State Office of Real Property Services, the 2000 costs per parcel for a complete revaluation are anywhere from $65 (upstate) to $100 (downstate), this perhaps accounting for the fact that the New York City of Troy is now contemplating a reassessment for the first time in twenty nine years. The neighboring city of Albany was compelled finally to reassess parcels in the mid-1990s after neglecting the task since 1939. In recent years the State government has offered incentives to get municipalities to perform updates, but the recent bubble in real estate prices has already distorted the roll's accuracy and reliability. Moreover, investigations by this writer show that the assessment of the land component of property parcels still leaves much to be desired. This failing is most easily and amply demonstrated by drawing GIS maps of land values, even when the conventional assessment to sales ratios are shown to be satisfactory.

Maintaining assessment of parcels commensurate with market prices is very difficult because of the number of variables affecting their value. To start with, one must appreciate that the worth of real estate parcels is typically the sum of both their land values and their improvement values. Improvements -- buildings, that is -- depreciate in market value just as do computers, cars and refrigerators; indeed a recent Federal Reserve Board study calculated that the rate of depreciation is roughly 1.5 percent per year.[20] This means that in the course of the lifetime of a typical mortgage, the market value of a building will likely decline by roughly two thirds. Land values, in contrast, increase in market price at a typical rate at least equal to the rate of inflation and usually

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17 Robert Andelson (ed.) *Land Value Taxation Around the World*. Schalkenbach Foundation, AJES Vol 59, N. 5. Supplement 2000.

18 See the work of Assessor Ted Gwartney, especially at www.progress.org, and searchable using his name at www.askhenry.com.

19 Joseph K. Eckert, et al, *Property Appraisal and Assessment Administration*, Chicago: IAAO, 1990, p.547.

20 Morris A. Davis and Michael G. Palumbo, "The Price of Residential Land in Large U.S. Cities," Finance and Economics Discussion Series, Washington: DC: Federal Reserve Board, 2006.

far greater. A new home with a market price of $200,000 might have a land value of $80,000 and a structural value of $120,000. After thirty years, given the parameters just posited and not taking inflation into account, the home will have depreciated to about $80,000, but the land value will likely have doubled its worth to $160,000 at the least, for a total value of $240,000, besides whatever adjustment might be necessary to account for inflation. The fact that real estate investments are such an attractive venue for speculators means furthermore that they are subject to cyclical bubbles, making it all the more difficult to assess their market values except for short time periods. Land use configurations in urban localities tend to change their market values at different rates as well, so that assessment adjustments cannot be imposed across the board. They are, rather, far more idiosyncratic.

Developing land value assessment technology

The problematic nature of assessing improvements for purposes of property taxation has led many experts to recommend that the tax imposed on them should be eliminated entirely, by being gradually phased out on an established schedule as the tax rates on land sites are increased. When this is done in a revenue neutral and with a predictable program, it not only makes assessment easier but leads to greater conformity to all the principles of sound tax theory.[21] Penalties imposed on titleholders, who might improve their properties and otherwise see their taxes go up, are able to undertake such ventures in response. Developers who might have had to settle for suboptimal locations because they found it prohibitively expensive to build on sites of their first choice, are now able to do so, because the carrying costs of those primary sites now made it worthwhile for their owners to seek a return. The centrifugal forces of sprawl configurations are reversed by the tax imposition on underused parcels raised so as to foster their higher and better use. Many other economic, environmental, and social advantages are to be had by a shift of tax burdens off improvements and onto land sites alone.[22]

Having to deal only with the land component of real estate parcels makes assessment a far easier and more routine task. One might start by turning to the theoretical work of Johann Heinrich von Thunen, a land owner and economic geographer who lived from 1783 to 1850 in North Germany. Scholars have been increasingly willing to grant von Thunen the recognition that he was so long denied. Fernand Braudel argues that he "ranks alongside Marx as the greatest economist of the nineteenth century",[23] and basic urban economics and geography texts now devote considerable attention to his theories.

Von Thunen offered a formula for the marginal productivity of land in his book, *The Isolated State*, in 1826: $R = Y(p - c) - YFm$, where R=land rent; Y=yield per unit of land; c=production expenses per unit of commodity; p=market price per unit of commodity; F=freight rate; m=distance to market. The major variables were the costs of land sites (measured in economic rent) and the costs of transportation to markets. These variables were, in essence, reciprocal, as site rent could be interpreted as capitalized transportation cost. Land with the highest rental value was to be found in market centers, quickly dropping as one moved to peripheral regions. Assuming transportation costs were constant, one could easily calculate the relative site value by knowing its distance from urban cores. In today's world, the cross subsidies for transportation make the cost calculations a bit more complex, but they continue to hold

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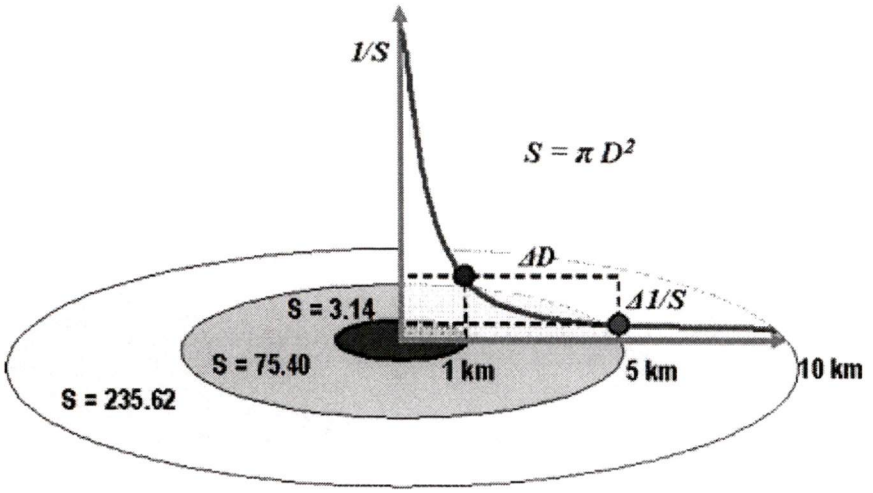
21 For further discussion of the textbook principles of sound tax theory as they have evolved over the years, see http://www.progress.org/cg/battprincip02.htm.

22 See this author's work, especially at www.wealthandwant.com, www.urbantools.org, and www.cooperativeindividualism.org, all searchable especially through www.askhenry.com.

23 Wikipedia on Heinrich von Thunen.

true in principle. A graphical illustration of von Thunen's spatial relationships shows how steeply land values decline as one travels out from the center of urban areas.

Von Thunen's Land Rent Gradients Illustrated



All this seems so transparently obvious that one would think such analysis would be de rigeur in every city. A study done for the 1968 Douglas Commission Report, The National Commission on Urban Problems, done in the wake of the urban riots of the period, made the obvious point that

> implicit within land value theory is the differentiation of value by location of land, with variable rents explained as a tendency toward obtaining a balance between costs of location at a central point of activity and costs of location at a less desirable site plus transportation costs to the center. By definition, the point of highest values and greatest activity is the central business district. With the spreading of residential settlement and nodal points of activity throughout the region facilitated first by mass transit and currently by the automobile, there has been a tendency to expand the definition of "accessibility" to take cognizance of the effects of contrary pulls from other localities than the center, which have reduced, even though they may not yet have eliminated, the dominance of the CBD. The utility of private space per se has also been recognized, and the final choice of location is seen as the result of accessibility, amount of space, and rent.[24]

The study's "major point" is that all this should be easily plotted and would be extremely useful to planners, but that, lamentably, "the surprising lack of detailed, solid information about land values . . . [and the] shortage of good modern data and theory is a severe handicap to anybody who tries to take a fresh look at urban land policies."[25] The principal author attempted to compile land value data and various changes but it is revealing that her findings were so limited.[26]

A quick search of the words "land value map" on line shows that the greatest number of hits come from studies outside of the US. While there are several citations for articles done many years ago, especially in the Georgist-oriented *American Journal*

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24 Grace Milgram, *U.S. Land Prices Directions and Dynamics*, Prepared for The National Commission on Urban Problems, Research Report No. 13, (Washington, D.C., 1968), p.5.

25 *Ibid.*, Forward, p. iii.

26 Grace Milgram, "Appendix II: Estimates of the Value of Land in the United States Held by Various Sectors of the Economy, Annually, 1952 to 1968." in NBER book, *Institutional Investors and Corporate Stock A Background Study*, Raymond W. Goldsmith (ed), 1973. www.nber.org/chapters/c3541.

of Economics and Sociology, there are few others in more recent years. Only a few recent American articles come up, one by Florenz Plassman and Nicolaus Tideman.[27] But looking to Europe, Asia, and Africa, for example, one finds several.[28] Ironically, one study emerges based on cities that lack land markets.[29] It would appear, as Tony Vickers notes, in his several papers, that land value maps are indeed "the next utility."[30]

A recent paper produced by the Research and Statistics Group of the Federal Reserve Bank of New York portrayed the land values of Metropolitan New York based on sales data, showing that they can reach the staggering level of over $12,600 per square foot. Anecdotal stories cited similar values in Tokyo during the 1980s, but the New York study is the first to show empirically how high land values can be.[31] Studies elsewhere, some done by this author, have portrayed land values graphically based on assessment data, but given the tendency by assessors to undervalue the land component, the FED study offers a telling corrective. The graphic of the FED researchers' findings, enhanced and used with its permission, is included below to show the potential of such work. The GIS plotting used parcel centroids rather than parcel polygons, but it is nonetheless clear enough to make the points.

Land value maps can be an important tool to highlight anomalies and errors in land assessment, something that is only beginning to be realized. One instance of a recent city revaluation that could have profited handsomely from a review of its land value assignments is this author's own city of Albany, New York. An illustration of a far better instance of land assessment that had the benefit of a land value map to check their assigned valuation is one for Greenwich, Connecticut. There is no necessary agreed-upon style or standard format to portray land value. In some instances it is based on land value per acre (especially in rural areas); in other instances the measure used is the value per square foot. Ideally one might want to closely link the data to sales of vacant parcels. However, most land value maps rely on the judgment of the assessors.

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27 "A Framework for Assessing the Value of Downtown Land," *Journal of Economic Literature*, December, 2003. Another, taking in high swaths of a sprawling California County contrasts urban with exurban development. See C. Chay Casso, et al., "Predicting the Spatial Pressures of Development in San Lius Obispo County: Is the Transferable Development Credits Program Controlling Sprawl?" A Masters Degree Project, University of California, Santa Barbara, March, 2002.

28 See. Erich Weiss, "Replacing the 'Combined Tax on Land and Buildings' With a Simplified 'Land Value Tax' in the Federal Republic of Germany" (Original in Polish),2004; Nathanial Litchfield and Owen Connellan, "Land Value Taxation in Britain for the Benefit of the Community: History, Achievements and Prospects," Working Paper for the Lincoln Institute of Land Policy, 1997; Ping Ai, "Residential Land Value Modeling: Case study of Hankou, China," March, 2005; Albina Aleksiene and Arvydas Bagdonavicius, "GIS and Land Value Mapping: The Lithuanian Experience," *Fair & Equitable*, November, 2005. Waljiyanto, Nurrohmat, Widjajanti and Suryohadi, "Application of Finite Difference Method to Develop Land Value Map," Urban and Rural Land Management, FIG Regional Conference, Jakarta, Indonesia, Oct. 3-7, 2004; Bernard M. Nzau, "Modelling the influence of Urban Sub-Centres on Spatial and Temporal Urban Land Value Patterns: Case Study of Nairobi, Kenya," International Institute for Geo-Information Science and Earth Observation, Enscheide, The Netherlands, March, 2003; I.P. Williamson, "Lessons from the Swedish Land Data Bank System," *The Australian Surveyor*, December, 1987 Vol. 33. No. 8; Sara Sayce, Tony Vickers, Munir Morad, and Owen Connellan, "Value Maps: The Next Utility?" A Paper delivered at Shaping the Change, the XXIII FIG Congress, Munich, Germany, October 8-13, 2006.

29 Alain Bertaud and Bertrand Ranaud,"Cities Without Land Markets: Location and Land Use in the Socialist City," Policy Research Working Paper, The World Bank, Transport Division and Financial Sector Development Department, June, 1995.

30 For more references to the work of Tony Vickers, see www.landvaluescape.org..

31 "The Price of Land in the New York Metropolitan Area," by Andrew Haughwout, James Orr, and David Bedoll, in Current Issues in Economics and Finance, Federal Reserve Bank of New York, Volume 14, No. 3 (April/May, 2008).

Portraying Land Use Efficiency and Configurations

Beyond the ability of land value maps to show how well land is assessed is the capacity to show how well it is used relative to its value. The relationship between land value, in the form of capitalized rent, and transportation costs is a close one, as von Thunen was able to show. The greater the expenditure on site rent, the more accessible a location is – as site rent is the price of accessibility. The more remote a site, the lower its cost (either in the form of site rent or in its capitalized market price). But the greater its transportation expenditure, regardless whether it is shouldered by the titleholder or tenant directly or is assumed – as is often the case – by society.

From the standpoint of society, however, the costs expended on transportation (in time, energy and in other resources) means less wealth available for other purposes. It is this factor which is prompting America to consider the liabilities of sprawl land use configurations. These are the criteria that need to be taken into account in evaluating the performance efficiencies of our settlement patterns. That we have, for all practical purposes, created a double set of infrastructure investments in the U.S. -- one set for commerce and service, and another set for residential living – has meant that our total capital investments are far larger, but so also is the cost of their maintenance. If competitive advantages cross nationally are taken into account, land use patterns are a major consideration. One 1993 study calculated that the total costs of motor vehicle transportation to our society equal approximately a fourth of our gross domestic product. Japan, by way of contrast, spends about ten percent.[32]

The relationship between transportation costs and land values can be made even clearer by empirical study of how land values increase as one moves toward the center of the city. In an investigation for the Urban Land Institute, the author concluded that, for Portland, Oregon, each additional mile [traveled] translated into slightly more than $5,000 in housing costs; closer-in locations command a premium, those farther out save money. A ten-mile difference, all other things being equal, would amount to about $56,000 in new home value. For a household in which one worker drives downtown (or at least to a more central location) to work, that ten-mile difference may amount to 4,600 miles annually, assuming 230 days of commuting and a round-trip of 20 miles each day. Moreover, if non-work trips to the central area and elsewhere doubled that amount, the tradeoff would be about 9,000 miles annually, which could mean a higher/lower driving cost of $3,000 annually, not counting the time saved/spent.[33]

The increased dependency upon motor vehicle transportation has certainly made peripheral regions and localities more accessible than was earlier true. Whether that has changed urban land value gradients remains a question – one could argue the case both ways. Evidence rests on assessment data, which, in addition to its random errors and systemic shifts, has been demonstrated to have a general bias favoring high value areas.[34] Lent Upson's study of Cincinnati in 1924 showed the same bias:

> The low valued property is assessed for more nearly its full value than is the high valued property, though the lowest assessment ratio does not appear to be the highest valued property, but an intermediate group.
>
> The old parts of the city are assessed at a higher ratio than any other section, while

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32 For a further discussion of this, see the author's "Stemming Sprawl: The Fiscal Approach," Chapter 10 in Matthew Lindstrom and Hugh Bartling (ed.), *Suburban Sprawl: Culture, Theory, and Politics*, Rowman and Littlefield, Inc., 2003. Online at www.wealthandwant.com/docs/Batt_SSFA.htm.

33 Robert T. Dunphy, "The Cost of Being Close: Land Values and Housing Prices in Portland's High Tech Corridor," ULI Working Paper No. 660, October 1998, accessed December 2000, at www.uli.org.

34 See the author's testimony before the New York State Assembly Committee on Real Property, "Equity in Assessment Practices," February 6, 2007, at www.cooperativeindividualism.org/batt-h-william_on-equity-in-assessment-practices.html and http://www.wealthandwant.com/docs/Batt_Assessment.htm

the lowest ratio is in the outlying residential developments.[35]

Land value maps are capable of demonstrating the economic efficiency of development patterns by portraying the ratios of building to land value (or any similar ratio), as this author did for Tompkins County (Ithaca), New York. The assessment of land and improvements was reasonably good, making it possible to perform such an operation satisfactorily. As is clear in other instances, the results might not be so good.

All this makes clear that land value gradients are very important, not only in appreciating the land use configurations and efficiencies of settlement patterns, but also for purposes of transportation costs, development strategies, and general livability. Von Thunen's modeling and formulas are portrayed and validated using the land assessment data from a few others municipalities. Particularly interesting are the three-dimensional presentations for Philadelphia and Portland.

Land Value Map History3.odt
June, 2008
Word Count: 7,687

35 Upsom, Hamilton County, 1924, p 101.

Land Value Map of Downtown Albany, New York, 2008
Based on 2007 Assessments
Bob Breglio, Central Research Group, Inc.



Land Only Values Per Acre
Source: Real Property System Data

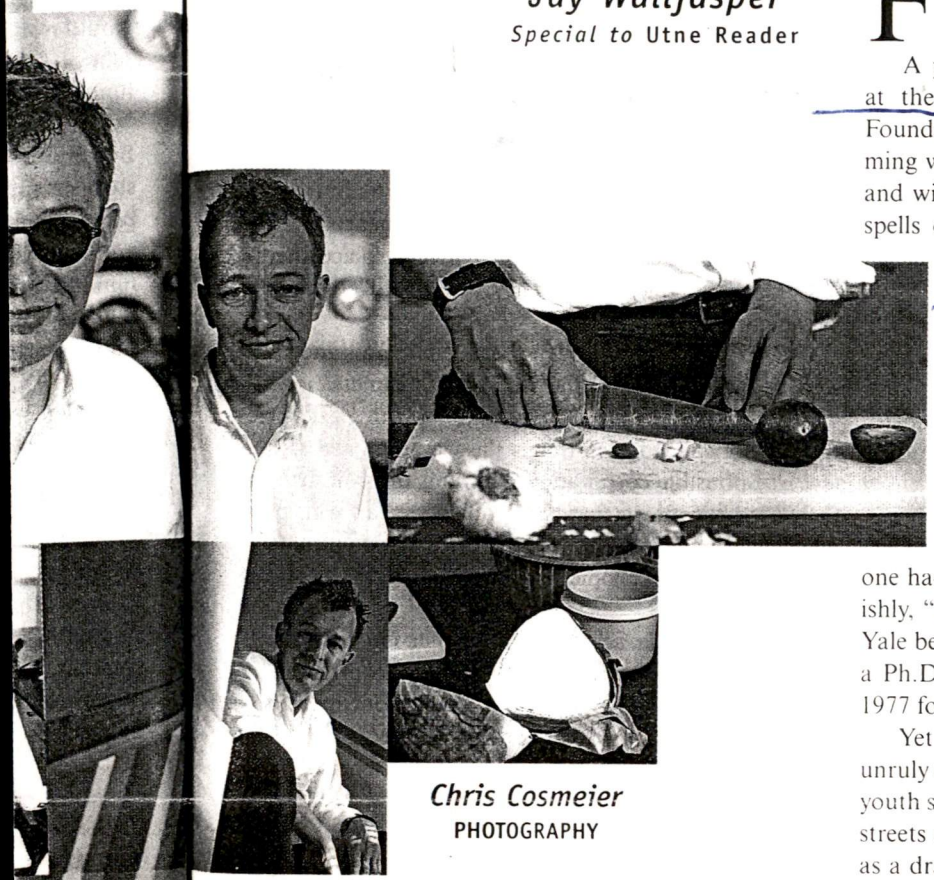
- Less Than $100,000 per Acre
- $100,000 to $200,000 per Acre
- $200,000 to $300,000 per Acre
- $300,000 to $400,000 per Acre
- More Than $400,000 per Acre

Bob – I'm sure you already know this guy, but just in case..... Sounds pretty cool.

MR. ROGERS' REVOLUTION

Re-inventing America with the most important political thinker you've never heard of

Jay Walljasper
Special to Utne Reader



Chris Cosmeier
PHOTOGRAPHY

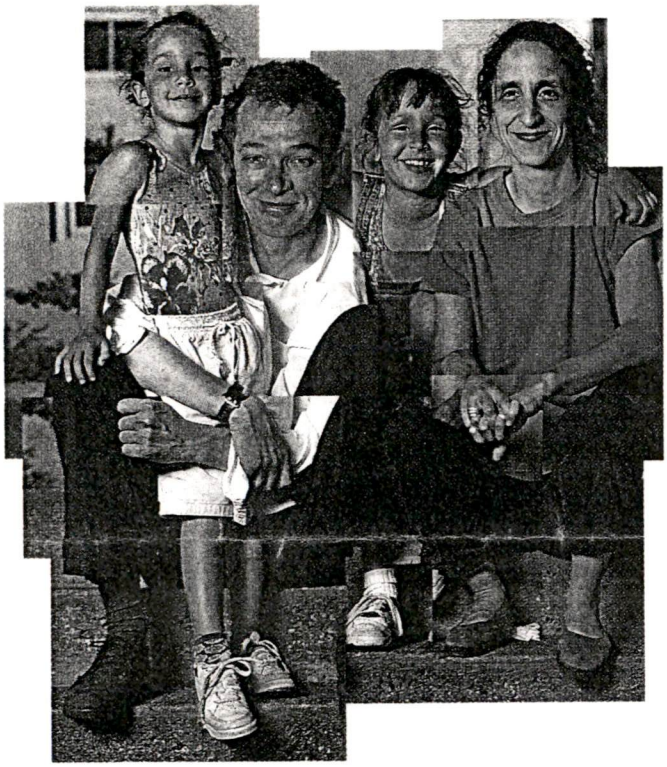
For years, people have been saying that the left lacks imagination. Anyone who makes that claim today hasn't heard from Joel Rogers.

A professor of law, political science, and sociology at the University of Wisconsin and a MacArthur Foundation "genius" grant recipient, Rogers is brimming with new ideas on how to reinvigorate democracy and win back voters to the progressive cause, which he spells out in a steady round of speeches, books, and alternative press articles. He is also a founder and national chair of the New Party, which has gained impressive ground in local elections in Wisconsin, Arkansas, Maryland, and Montana.

The MacArthur people weren't the first to tag Rogers with the "genius" label. After an Irish Catholic boyhood in Middletown, New Jersey, he sprinted through Yale in two years, graduating with a triple major in philosophy, political science, and economics. (Asked if anyone had ever done that before, he replies, a little sheepishly, "I don't think so.") He also took a law degree at Yale before moving on to Princeton for two years to get a Ph.D. in political science and then to Heidelberg in 1977 for further study of philosophy. !!

Yet Rogers, a remarkably young-looking 44 with unruly reddish hair and a sly grin, didn't spend his entire youth sitting in seminar rooms. He marched through the streets of New Haven in anti-war protests, volunteered as a draft counselor, and was a rock-concert promoter. In his spacious old house in Madison, Wisconsin, where he lives with his wife, Sarah Siskind, a public interest lawyer, and their daughters, Sophia, 6, and Helen, 8, you'll find nearly as many books about rock 'n' roll and soul music as about political philosophy.

In a way, as an academic whiz kid from modest origins who was shaped by the political tides of the '60s, he resembles Bill Clinton. (A friend from college said everyone who knew him half expected Rogers to wind up in the White House.) So what does Rogers think of



Rogers at home in Madison with daughters Sophia (left) and Helen, and wife Sarah.

the current resident of 1600 Pennsylvania Avenue? "I think Clinton is the most talented politician of his generation," he says, "but he's without a clear and confident moral center. He is, I guess, basically a good guy in many ways but he is not prepared to stand up to the unbridled corporate power now stomping this country."

Rogers' own political vision holds onto an important ideal from the 1960s that Clinton and most other Democratic Party leaders have dropped: the simple notion that everyday people must have a major role in shaping the decisions that affect their lives. "While liberals often have reasonable views about political outcomes (some equality, some decent living standards, some personal freedom), they are elitists as to means," he writes with MIT political scientist Joshua Cohen in the *Boston Review* (April/May 1995). "They don't believe that people of ordinary ability and intelligence are capable of running the society themselves. . . .The difference between liberals and progressives is that progressives actually believe in democracy. They think that the people, if [they are] properly organized and equipped, can govern themselves, and that if they do the results will be better than if they do not."

Rogers points out that liberals' squeamishness about challenging corporate power restricts them to mopping up environmental and economic problems after the fact, sometimes quite expensively, rather than controlling damage in the first place. That's why Republicans so effectively smear Democrats as "tax and spenders," with few people standing up to defend embattled liberal leaders.

These troubles notwithstanding, Rogers is optimistic. "America remains blessed with abundance, free of external military threat, and populated by a spirited and resourceful people no more stupid or corrupt than any other," he writes in the British journal *New Left Review* (March/April 1995). "Our problems are political and admit political solution." What follows are some of Rogers' solutions drawn from interviews and articles.

Why it's imperative to bring fresh thinking to American politics: "Public opinion in the United States is conventionally mapped on a liberal-conservative axis understood to run from government do-gooders without values on one end to free marketeering rich people without hearts at the other end. Most people in America place themselves in the middle. They don't find either end particularly attractive.

"Today the fight isn't really between liberals and conservatives but between the workers/consumers/citizens who actually want the economy to reflect our values and those who want to keep things the way they are with a few irresponsible corporations running the country for their own benefit. In that fight, which we can win, progressives should speak for the majority. It's our country. Let's run it for the people."

Why we need to launch a new campaign for democracy: "Some 75 percent of Americans think government is 'run by a few interests that don't care about me.' Progressives have always claimed that people really don't 'own' their government. Why not put the absence of such ownership, the absence of democracy, on the table as a political issue?"

A Rogers campaign for democracy would include a Citizens' Bill of Rights, which would eradicate the influence of big money in politics and make voting easier and more widespread by allowing same-day registration at the polls and making election day a holiday; a Workers' Bill of Rights, which would make it easier to organize unions and other groups to represent the interests of employees in the workplace; a Taxpayers' Bill of Rights, which would give people more say in how their money is spent by government and how public assets like national forests and broadcasting airwaves are managed; and a

Shareholders' Bill of Rights, which would give citizens more say in how financial institutions invest money in pensions and mutual funds.

What we can do to revive progressive politics: "The same forces that have made American politics ugly—a generation of economic decline and failed government response—have also created an enormous political market for what should be the signature issues of a new progressive movement: imposing some social and environmental values on the economy and building a democracy strong enough to enable their realization under the competitive conditions of the world economy. But progressives are blowing this opportunity with single-issue politics, holier-than-thou political correctness, and inattention to the field of activity in which most people express their political values: electoral politics.

"So what we need to do is create a values-based, electorally sophisticated organization, forge an egalitarian political program appropriate to present circumstances (taking measure of the ways in which the world has changed since the heyday of the New Deal or Great Society), focus on economic reconstruction and democracy as issues, and make the political debate between those who want these things (most of the public) and those who don't (irresponsible business and its apologists). This fight we can win. There is mass discontent with politics as usual and mass hunger for some alternative."

How to do that right now: This is where the New Party, which Rogers calls "the best-kept secret in American politics," comes in. Founded four years ago by Rogers and a group of fellow political activists, the party has fielded 139 candidates for local offices around the country and won an impressive 94 of those races. New Party members have working majorities on the city council in Missoula, Montana, and the county board in Milwaukee, and they serve as water commissioners, school board members, city council members, and state representatives in Illinois, Maryland, Arkansas, Missouri, New York, and Minnesota.

In order to keep from drawing votes away from worthy Democrats and thereby putting Republicans in office by default, the New Party runs its own candidates "only where they have a serious chance of winning," says Rogers. "Where they don't have a chance to win, we generally do nothing or informally endorse the better of the major party candidates or, where the law permits, formally endorse the major party candidate (the candidate willing, of course) on the New Party ballot line."

The latter strategy, Rogers explains, is an electoral innovation called fusion. Widely adopted in the late 19th century under pressure from populist reformers, it was later rescinded in most states. Fusion is still legal in about 10 states, most notably New York, where it has fostered lively third party politics since the 1930s. "The beauty of fusion," he says, "is that it enables people to have distinctive political views and to express those views without wasting their votes."

The most important thing to be done to make all these ideas possible: "It's important that we get together again, get beyond the politics of fragmentation that now defines progressives. We are currently weaker than the sum of our parts. It's important that we learn how to speak to people who don't identify themselves now as progressive, but who in fact share our values. And it's important that we get ourselves together in how we conduct business with one another. I think it is important that the culture of the progressive movement should be a learning culture—one that supports wide-ranging discussion and that is resolutely nondogmatic in its willingness to confront changed circumstances. And it should be more kind, forgiving, and fun. If being 'progressive' means simply going to boring meetings for another round of assignments and abuse, we'll never get anywhere with the public, and really shouldn't.

"We need to find ways of genuinely enjoying, not just respecting, each other's company again. That doesn't require that everyone do the same thing in common—a giant left sing-along. It does require that we build into our organizational plans some explicit space for quiet, for informal get-togethers, for family activities and parties (sedate and rowdy), for discussion groups, rock bands, street theater, softball teams. We should be much more inviting. 'Come on in, let's take the country back, this is going to be a kick'—that should be the message people get, along with no apologies for the extreme seriousness of what we're about. We're fighting now for the earth, for our children, for democracy, for the dignity of our own lives. And we are losing. To win, we need to get serious, come together, and get moving."



Jay Walljasper is editor-at-large of Utne Reader. *For more information on the New Party, call 800/200-1294.*

DRAFT AND NOTES: NOT FOR DISTRIBUTION OR ATTRIBUTION

Research Needs, 9:10-10:15A, Wednesday 7/21

Theme: Think big to heal America.

Our peculiar virtues: Georgists today have a virtual monopoly on thinking big, on thinking community. They are one of the few groups of people in the economic policy dialogue who think selflessly of the general good: many well-financed publicists are flacks, depending on "rainmakers" who cater to wealthy patrons, their dogmas or their interests.

How small and narcissistic are the topics that engage others:

I. What political conventions do: Trivia, diversions, equivocation, mudslinging, and special interests. (Republicans and Democrats both are beholden to a few big campaign contributors, including foreign sources.)

II. What academicians do

A. Molding thought is extremely hierarchical. Most teachers and researchers look in the direction they think is upwards, follow the leads they get from there. (Business and the market are much more democratic. New breakthroughs come from small, upstart businesses.) Most economic "thought" is dogma-driven, rationalizing trendy views that were yesterday's fallacies, and will be tomorrow's.

B. Outside interests take an active interest in any group that deals with live political issues. E.g., when I opposed peripheral canal, resource ecs. was taken from ecs. dept. Was turned over to College of Agric., to people who had written very little, but what they did write was premised on this: no groundwater conservation policy can be considered that fails to raise l.v. in Kern County. (That's where the heavy political hitters own land.)

When I was chair, pressure from ag campus not to hire IPM man who wouldn't play ball. Unsolicited.

Moral: independent sources of grad instruction get suppressed.

C. A few places set styles, these become defined as the discipline. They are self-validating, their own voucher. They guard the gates of learned journals, etc.

D. High premium on obscurity and irrelevancy. People learn it is the safe retreat. Remember the student demand for policy relevancy? The students lost. The only relevancy is re business management, and that, too, has been lost.

E. Prof. meetings, more promise. You can organize a session there, select your own speakers, develop a topic. However, the sheer weight of numbers usually keeps you from making an impact on most of the people there, who are products of the system. A sterile priesthood.

To give you an idea, list topics given at WEA meetings, SF, July, 1992. This is what academicians do when they are talking with each other. They come on as Milquetoast backroom boffins, necromancers, dreamers, careerists, and escapists. Examples follow:

1. Nothing on Calif. fiscal crisis, the most urgent, obvious, glaring economic problem facing policy makers.

2. Trendy: many sessions solely on gender issues, the current hot button.

3. Self-serving topics, e.g.
"Consulting opportunities in forensic economics."
Scandal of economists who draw fancy fees as business consultants, e.g. on baseball salaries.

4. Session on Poverty:
"Do transition benefits get single parents off welfare?"
"Are employment programs for welfare recipients effective?"
Cf. HG: "We must make land common property."

5. Session on Inequality:

"Spatial variation in minority male joblessness";
"Sectoral causes of wage inequality";
"Health insurance as a barrier to employment for female heads";
"Racial composition and wages: a longitudinal analysis";
"Earnings inequality among women";
"Wage inequality among young workers."

Wage inequality: big deal! Muhammed Ali had more insight: "I don't want blacks just to be pilots; I want blacks to own those airplanes!" Cf. HG, who had even more: "The great cause of inequality in the distribution of wealth is inequality in the ownership of land ..."

6. Session on Unemployment:
"Should 'quitters' get unemployment insurance?"
"Duration of unemployment, recall, and industrial mobility."
Cf. HG: " ... "

7. American decline? Nothing, they never heard of it.

Shall we then expend major effort on missions to the academic economists? Some, yes, but don't expect mass conversions. They are too conflicted, too timid, too bought out, etc. There are more fertile fields. For example, many practising politicians and journalists are more immersed in Georgist issues than academicians: they are the essence of politics and current economic events. George himself, after all, was both.

The best of academicians know what we are saying, at least in part, it is true. Viz. the Gorbachev letter. Most of our signers, however, waited until they were retired before coming out of the woodwork.

NOTE TO ALICE INGERSON. Article III, following, is in my notes, but was not spoken at the meeting, out of courtesy to my invitee, Bob Einsweiler, who had come in good faith, not to be attacked. It is, obviously, a criticism of LILP, among others (The Urban Inst., Brookings, Resources for the Future, etc., are also on my mind). I will understand if you prefer not to publish it. On the other hand, you may want to open this kind of dialogue. I leave it to you.

III. What institutions do: the bland leading the bland.

Noncontroversial meliorism.

Repeated themes: "it's not simple, there is no simple solution."

"Need to balance community values with preferences of individual property owners." (Non-property-owners can go fish, apparently.)

"Respected scholars."

"Call upon committees of outstanding scholars for guidance and counsel." Implication: are getting direction from the best. Fallacy: the instn first decides who is "outstanding" and "respected." If they are able to make that judgment, they should also be able to bypass these committees and get on with it.

Its practioners think they are enlisting the judgment of "the best and the brightest," like LBJ in Vietnam, but the effect is like rule by committee: a consensus approach, leading to rule by the lowest common denominator. Worse than that: this approach overlooks corruption, decadence, intimidation, and arid, offputting, defensive, irrelevant scholasticism of the administrator-dominated academic establishment.

Sad history of TRED. Originally a vital, dedicated organization, spinning out a substantial Georgist literature for academics. Major error: seeking acceptance, "respectability"; undervaluing dedication, commitment to Georgist goals. We put blind faith in "academic freedom," not realizing to what extent that is a myth. Why is it a myth? Cf. the observations <u>supra</u>, on how academic opinions are molded.

What we got was too many wrongly motivated careerists. Our very success began attracting people who wanted to join us because we were successful, rather than because they shared our views and goals. When the old guard died off, they kidnapped the organization, and turned it into just another ordinary venue for ordinary, safe, "respectable" views. In this, sad to relate, they were encouraged and led by the patron, which assumed more and more control, and conspicuously recognized and rewarded our

least dedicated members. Indeed, it is worse: they didn't just become indifferent to George and John C. Lincoln, they became downright hostile, because they felt the pressure and reacted to it. Perhaps they felt guilty, but that didn't do us any good. You know the old psychological principle, when you wrong someone, it makes you dislike him even more.

IV. Thinking Big: what Georgists do, and why the world needs us.

We can do more at <u>these</u> meetings than academicians and institutions ever do. The pot of gold is right in our own back yard. <u>We are the action</u>, because others are derelict. Examples of what we can do follow:

State fiscal crisis: how to raise revenues without driving business away
Federal fiscal crisis: how to run a surplus without destroying jobs
Land reform in LDCs; curing the LDC disease; keeping it out of the U.S.A., too.
Full employment: put the land to work, and jobs will follow
Avoiding depressions: smoothing the real estate cycle
Compact settlement, infilling: let the market work
Countering concentration of wealth, and of economic and political power
Enhancing Environment via efficiency and conservation in resource use
Best use of resources: letting the market allocate land with a neutral tax system
Distributive Equity with Allocative Efficiency and Full Employment, too: we can have it all!
Prosperity without inflation

V. Thinking Positive and Practical: from toeholds to breakthroughs

Development districts, enclaves.
Enterprise zones; special improvement districts (e.g. Wendell's);
Local reforms, e.g. Penna, B.C.; exploiting demonstration effect, e.g. in N.Y.
Federal tax reform
Rents and royalties from public domain
Tapping rents after and in spite of Prop. 13.
Assessment reform (case of B.C.)
"Newspaper editors aren't interested in stories that have no 'facts' to back them up." Therefore, to get Georgist message in print, collect facts, marshal facts. E.g., how much Calif. land is owned out-of-town, out-of-state, and out-of-country?

NOTE TO ALICE INGERSON. There follows a list of topics I explored to be covered at our meetings. These are just notes; they might be incorporated in "research needs." Let me know how much you want.

Topics

Decline and fall of America?
Paul Kennedy, Otis Graham, authors of America in Ruins (Pat Choate, ...)
Rise of foreign ownership, and foreign influence on politics. Only Americans can vote here, but when politicians depend on money, money votes. (In many water districts, land votes.)

Mapping land values: powerful visual tool
M. Harris, Rawson, Gwartney, Dunkley, Gaffney,
Redlands geostatistics firm, McCarthy, Crerar,

Rewriting economic theory to unearth buried Georgist points
Bishop, Gaffney, J. Henry, Feder, Fuller, Genovese, Lissner, Helliwell, Junk, Justice, Lambert, Cobb, Arrow, Sandilands, Schmid, Shoup, Teti, Yeager, Harrison,

Air pollution offset rights: a modern enclosure movement
Jane Hall, Bower, Wadley, Winer,

Resource revenues and Federalism
McLure, Scott, Helliwell,

Assessment reform, fast track to tax reform
S. Sapiro, Chair. Kuttner, Paul, Gwartney, Behrens, Fusfeld, Clarkson, Hickman, Hodges, Rackham, Back?, Crerar,

Major sources of rent and taxable surplus
Crerar, Gaffney, Cord, ...

Fiscal Crisis, California and other states.
Is it real, or just a "squealing pig."
How to meet it.
Beaumont, Gaffney, Musgrave, Arrow, Haughey, Goldberg, Kahrl, Bill Kelly, Austerman?, Post, Doerr?, Segelhorst, Worcester,

Special Improvement Districts
Zion, Misczinski, Worcester, Goodall, Vandepol

Mineral rent as tax source
M. Bucovetsky, Paschall, Erickson, Rooney, Norgaard, Crommelin, Worcester,

Water as a source of state revenue
Gaffney, Geo. Miller, Billings, Sen. Bradley, Isenberg, Frances E. Francis, John Wilson, Brajer, Cannon, Young, Schwartz, D. Green, D. Dodson, Redmond, Engelbert, Hansen, Riesener,

Georgist Revision of income tax
Musgrave, Denton, Hamrin, Vt. gains tax, Garry Nixon, Coyne, Conroy, Sumichrast, Talbert.

Latifundia and environmental degradation
Redmond, Gutierrez, D. Hall, Gene Jones, Strange, NRDC, Stern,

Land as basis of concentration
Busey, Gaffney, Boueke, Villarejo, Redmond, Wischemann, Goldschmidt, Williams (forest tenures, minerals), Carroll, Goodall, Walker, Gottlieb, Meeks, Raup, Samuels, Adams, J. Wilson, Schikele?,
Subtheme: farm depopulation and the urban housing crisis, or the enclosure movement redux.
Geisler, Wood, Raup,

Homelessness and tax policy
Farina, Pastore, Eichler, Redmond, Hendershott, Case,

Prop. 13 as a breach of the social compact
David Shulman

Revitalizing stagnant Georgist funds
Nick Lenten, Carl Shaw, Lin, Margolis (Fels Fund), Heavey, Rawson,

Land Speculation and the depression
Harrison, Foldvary, Eichler, Maisel, Dodson, Gobar, Shulman, Raup, H. Reuss, Sloniker,

NATURAL RESOURCES

nr mal
Malthusianism
Ehrlich, Simon, Pollard, Earthwatch types, Lorenz, Hardin, Andelson,

nr pl
Administering public lands
Williams, Milne, Clawson, Mead, Hyde,

nr timb
Timber: can there ever be order from chaos?
Heller, Hilpert, Craswell, Williams, V. Cook, Hyde, Clawson,

nr wtr
Water marketing: toehold for real reform
Gaffney, Kahrl, Cannon, McCleary?, Redmond, Minton, Katz, Seymour, D. Green, Moore, Hansen, Mosser (legal nature of appropriative claim), Riesener, Henley, Sax,

Influence of George and his movement (esp., pd from 1897-1920, history not written)
C. Barker, Brownlee, Henley, Collier, Wunderlich, Fuller, Dwyer, Lissner, Ryan, de Mille, Donnelly, Graham,

Effluent charges, a form of community rent collection
Bower, J. Hall, D. Green, Gaskins, Williams,

reg rs
Radio Spectrum
Harvey Levin, Lynn Milne, Tolentino, Van Deerlin,

<u>SUCCESS STORIES</u>

ss
Enclaves of economic rent
Arden
Mike Curtis,
Fairhope
Gaston,

ss gen
Success Stories
(The 4 Tigers
Treated separately under progress abroad)
Tennessee, Highland School

?
Chile
Strasma, Guillermo Giesse, Magdalena,
Johannesburg
Dunkley, Meintjes, Jacques, Lamont, K. Cook, Gaffney, Ahene, Collins,
B.C.
Rawson, Gwartney, Crerar, Williams, Crommelin, Helliwell, Nemetz, Nixon, O'Gorman, Crerar,
California Irrigation Districts
Henley, Gaffney, Ruttan?, Clawson?, R. Tideman, Goodall,
Anzac mineral revenues, urban rates
Crommelin, Pitt, Hart, Keall, Lusht, Bird, McAlpine,
Alberta oil revenues
Shaw, Freeland,
S. African gold revenues
Loots, Franzsen, Lamont,
Alaska oil revenues
Erickson, J. Love, Bob Atwood?, Malone,
Pennsylvania cities
Sullivan, Cord, Coyne, Rybeck, Oates, Simon, Reveal, Wachter, Stone,
Wisconsin farming and the property tax
Strasma, Stoner, Wunderlich, Gaffney

Effects of prog. tax on appreci land.

$$V = \frac{a}{i - g + t}$$

1. Valuation

$$V = \frac{a + gV}{i + t}$$

Growth expectations are capd. just like ordy. inc., $\underline{a}$.

2. $gV = \Delta V$

$gV = \Delta V$ bcs:

$$\Delta V = \frac{a(1+g)}{i-g+t} - \frac{a}{i-g+t} = \frac{ga}{i-g+t} = gV$$

This is why $(i-g)$ never $= 0$. If $g \to i$, buy land, get g from rise alone.

3. Tax accruals currently

$$T = tV = t\,\frac{a+gV}{i+t}$$

Is tax on ΔV! Haig-Simons lives!

3A. Tax depends on i.r.

$$T = tV = \frac{t}{i+t}(a + gV)$$

4. "Current" or ordy. yield goes up.

$$\frac{a}{V} = i - g + t$$

Bcs. V comes down.

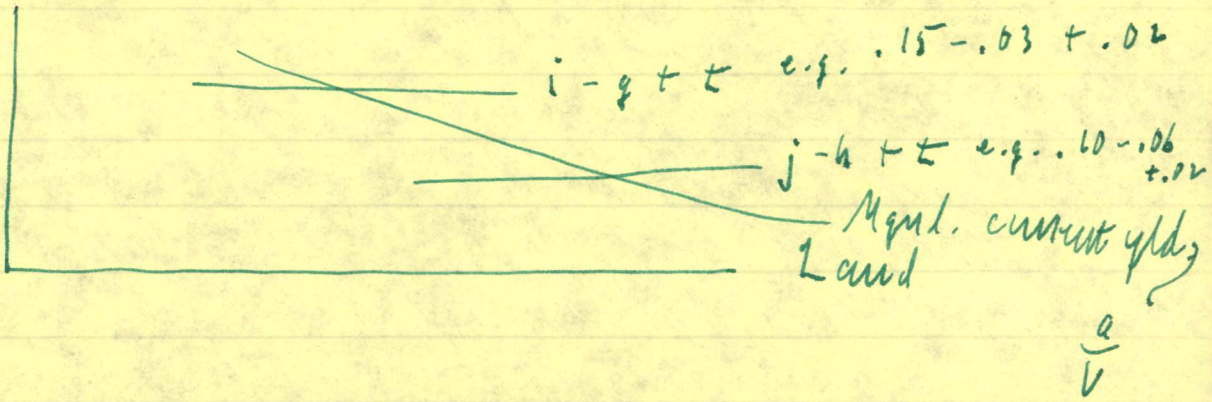
~~On redeemable bonds,~~

5. Total yield covers int. + tax $\equiv$ cc.

$$\frac{a}{V} + g = i + t \;;\; \text{or, } a + gV = (i+t)V$$

Total yield resembles YTM of redeemable bond. But this "bond" is not finite.

6. Tax dilutes effects of unequal fncl. power.



$$\frac{a}{V} = i - g + t$$

Double effect of t: 1) Raises $\frac{a}{V}$ 2) Raises $i-g+t$, and equalizes them.

7. Tax puts upper limit on V, if $i-g \to 0$

$$V = \frac{a}{t}$$

8. Tax reveals real $i, r. = i - g$

$$i - g = \frac{a}{V} - t$$

9. Better than 6, as introduction.

$$\frac{V}{a} = \frac{1}{i - g + t}$$

Ability to bid for any given c.f. (a) is equalized by t

The effect is doubly strengthened by g:

a. A given g leverages effect of any diff. of i. This is ~~cos~~ premising ~~g~~ a given g is common to all bidders.

b. High-i bidder will also likely be low-g, bcs. his hi time-pref. keeps him from valuing resale highly. This cd. look like double-counting, so careful —

Could, rather, say high-i bidder cannot borrow for long term, has same effect as lower g.

This is a simplified way of expressing a complex matter.

10. Having introduced the matter using (9), then is simple to invert it, go to (6), nail it down.

Transfer of rent from income tax to land tax

t = land tax rate

r = income tax rate

x = excess burden of income tax (Loots recognizes inc. tax avoidance)

p = price of land

T = land tax ; R = Income Tax

a = ~~Costs Flow~~ Net Flow (cash or service) of land

$$T = tp$$

$$p = \frac{a(1-xr)}{i+t-g}$$

$$T = \frac{t\,a(1-xr)}{i+t-g}$$

$$R = ar(1-x)$$

To be completed

Tax Capn. (3/92) and C.C.

$$cc = P(i+t)$$

$$P = \frac{a}{i+t-g}$$

$$cc = a\frac{i+t}{i+t-g} = \frac{a}{1-\frac{g}{i+t}}$$

(Higher t means lower cc, but higher T!)

$$T = Pt = a\frac{t}{i+t-g} = \frac{a}{1+\frac{i-g}{t}}$$

T is an Δ_g fn. of t $(i > g)$

If $g = i$, $T = a$

If $t = 0$, $cc = \frac{a}{1-\frac{g}{i}}$, a decr'g fn. of $\underline{i}$ $(g > 0)$ $(i > g)$

(higher $\underline{i}$ mean lower cc.)

Lawn. Katz, FHA, Reg. Chg. Hse, 3-6-64

1. Urban Renewal in midwest in deep trouble. Only 2 projects are making money - Sandburg & Prairie Shores, both in Chi.

2. His apt. vacancy survey, 1-63, cut off flow of eastern mortgage money, as intended. No new starts. As result, are fewer vacancies now.

3. 87-88% occupancy is necy. to "break even" - or come out all right (w. int. & profit? - not clear). 93% occup. is the one. So it wd. seem we are in good shape now, but he takes some feelings as signal to brake economy. Nice for sellers, hard on renters.

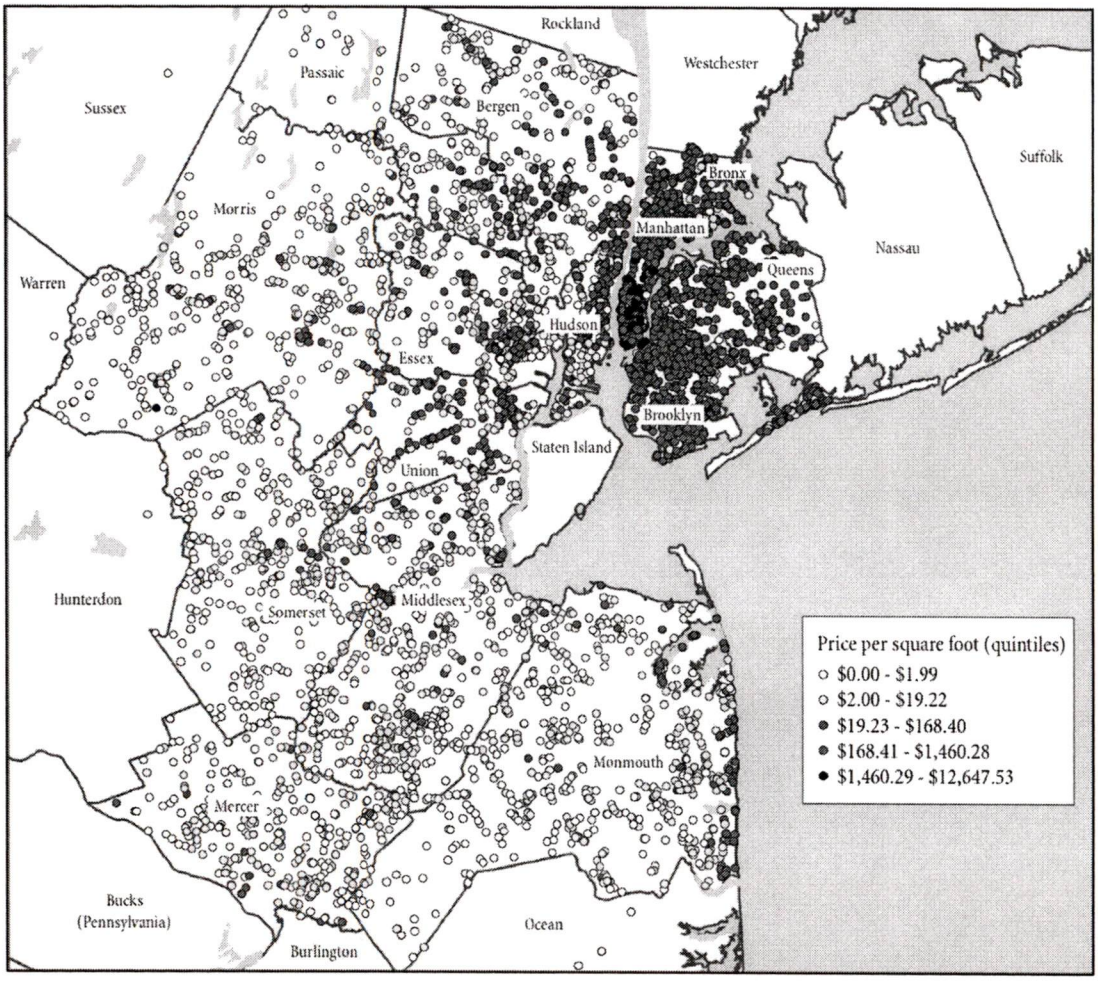
4. He takes viewpoint of seller, strictly. Wants a tight mket., no vacant rooms.

5. Had vast mtrl. he didn't present - asks to see it.

Greenwich, CT
2005 Revaluation
Land $/Sq Ft and Zoning
11/28/05

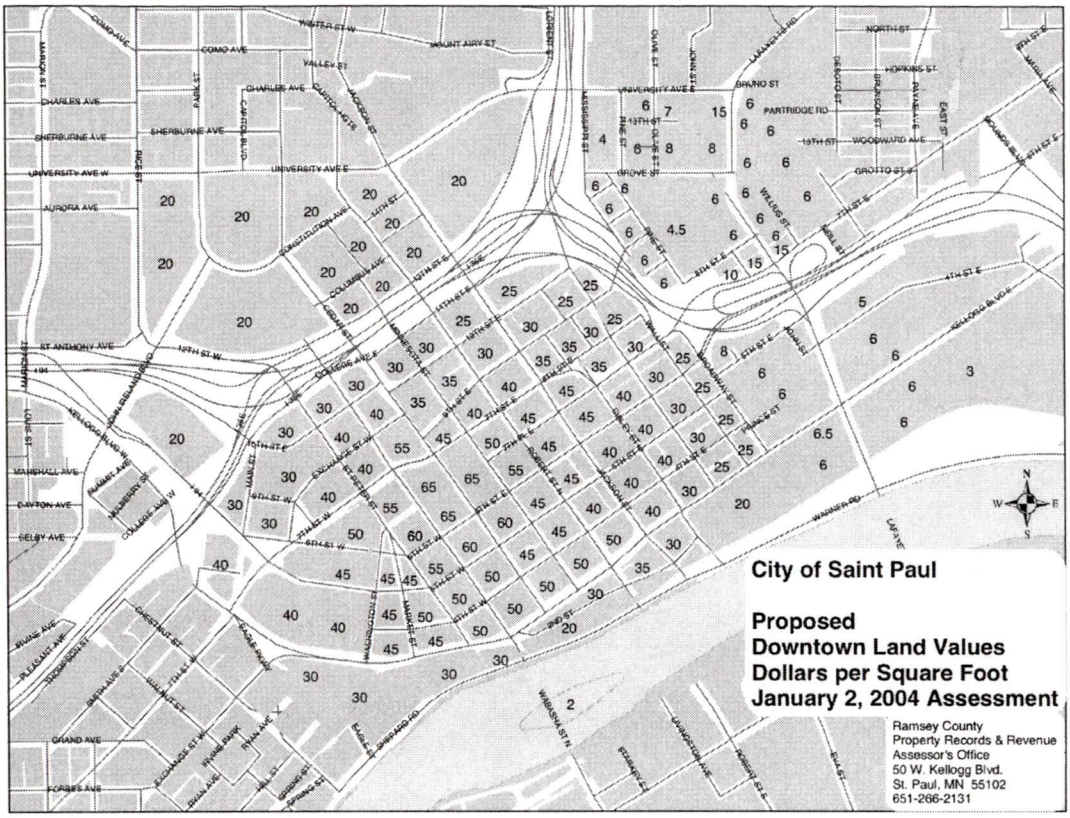


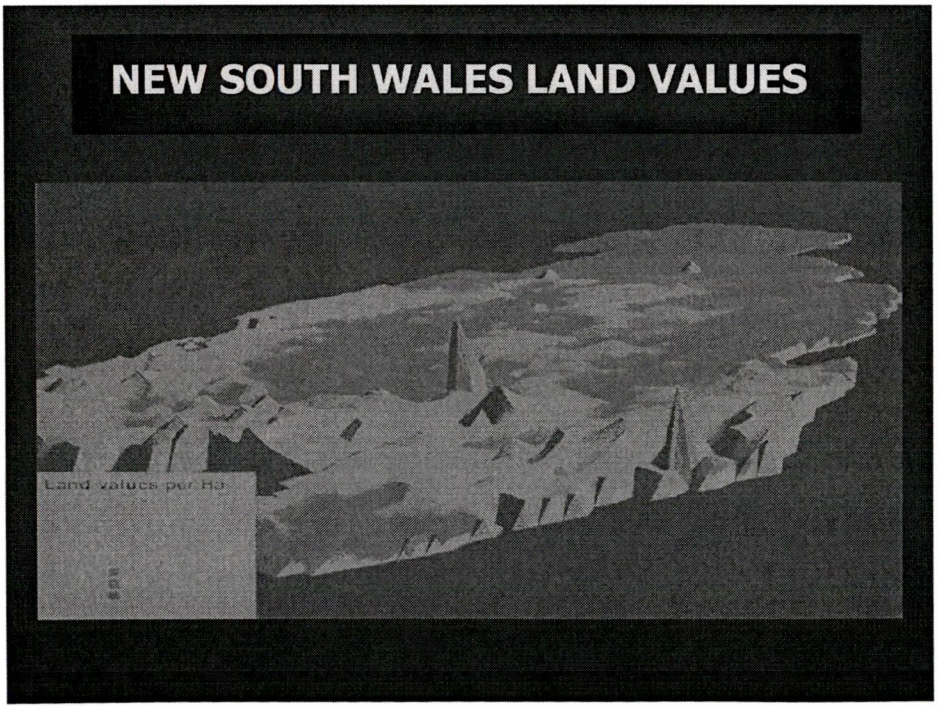
Location and Price of Land Transactions in the New York Metro Area, 1999 through Mid-2006



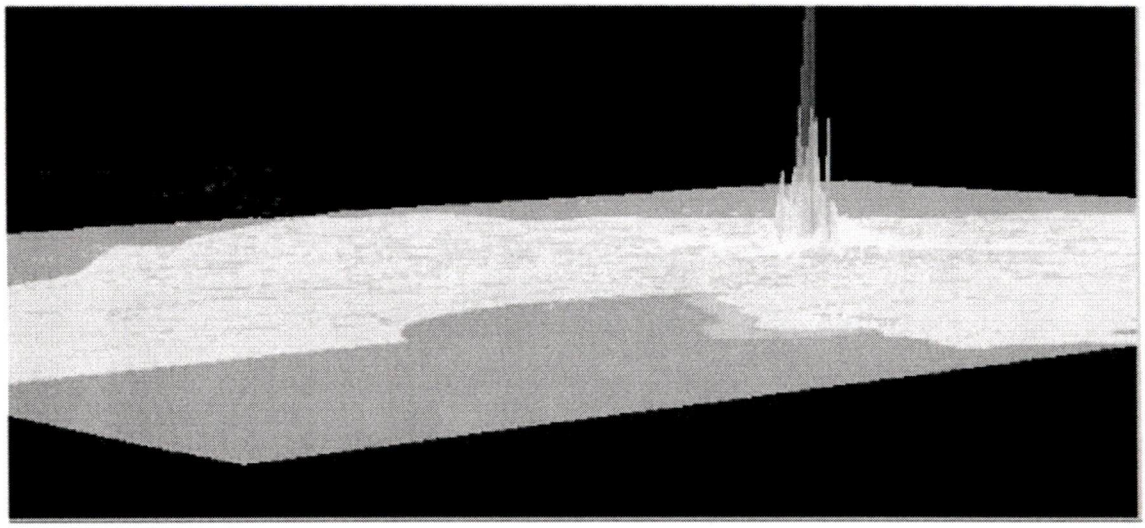
Source: Federal Reserve Bank of New York, based on an analysis of CoStar Group data, April 2008.

Note: The New York metro area considered is four boroughs of New York City—the Bronx, Brooklyn, Manhattan, and Queens—and ten counties in northern and central New Jersey. Staten Island, the fifth New York City borough, is excluded because transaction data are unavailable.

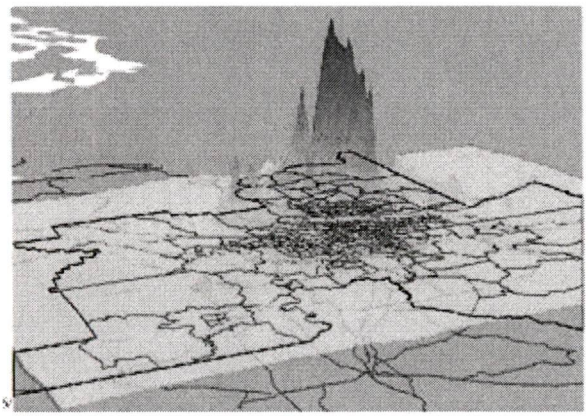

City of Saint Paul
Proposed
Downtown Land Values
Dollars per Square Foot
January 2, 2004 Assessment
Ramsey County
Property Records & Revenue
Assessor's Office
50 W. Kellogg Blvd.
St. Paul, MN 55102
651-266-2131


NEW SOUTH WALES LAND VALUES
Land values per ha

Land Values in Philadelphia are High in the Core, Near Transport

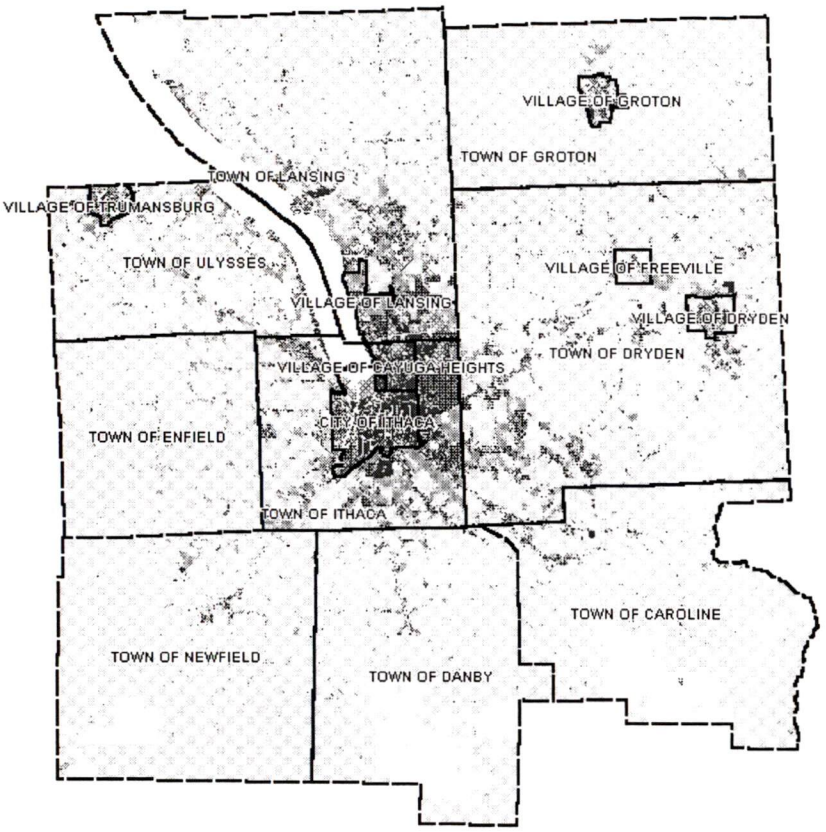


Portland Oregon LandValueScape



Assessed Land Value Per Acre

Tompkins County, New York



NORTH

Assessed Land Value per Acre

- $56,000 and Above per Acre (8284)
- $18,000 to $56,000 per Acre (6312)
- $7,000 to $18,000 per Acre (4848)
- $3,000 to $7,000 per Acre (4455)
- $0 to $3,000 per Acre (8440)

Principal Research By:
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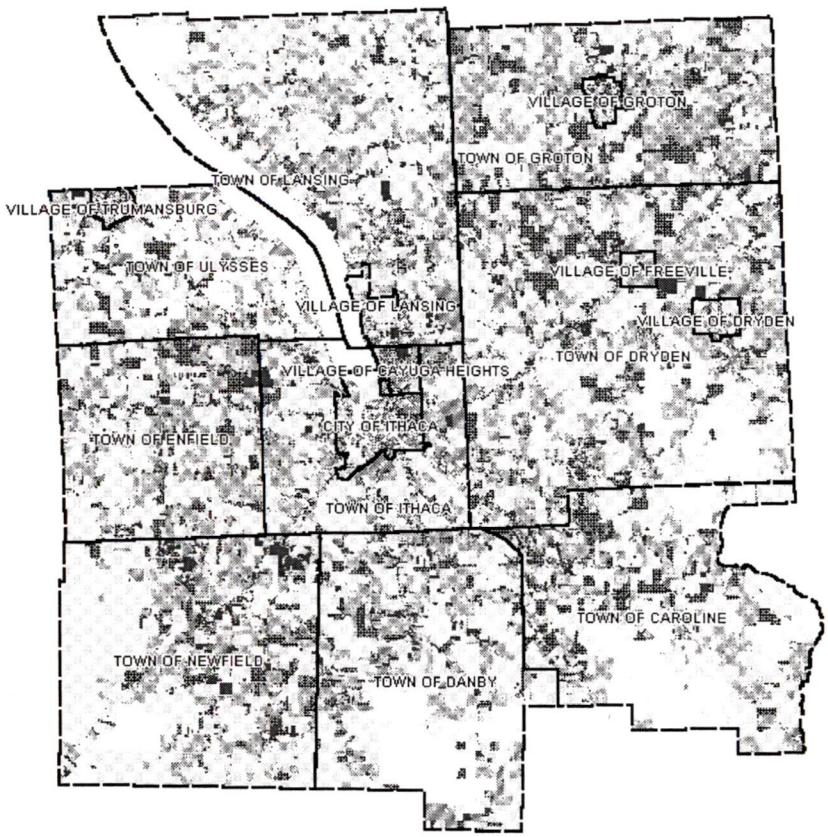
Data Source: Tompkins County Planning Department
Map Produced By: Applied GIS, Inc. 301 Nott St. Schenectady, NY 12305

June 1998

Research Supported By:
The Robert Schalkenbach Foundation
New York, New York

Ratio of Assessed Land Value to Total Value

Tompkins County, New York



Ratio of Land Value to Total Value

(Formula: Assessed Land Value / Assessed Total Value)

62% to 100% (Least Utilized)	(8518)
38% to 61%	(2633)
24% to 37%	(4989)
13% to 23%	(8649)
12% and Below (Most Utilized)	(7740)

NORTH

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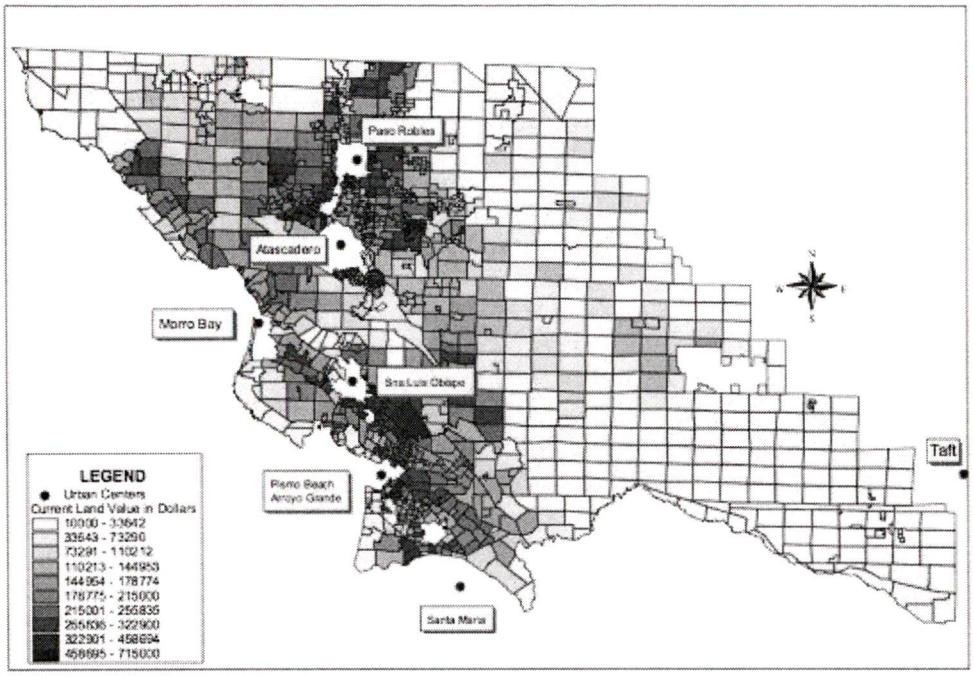
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June 1998

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New York, New York

San Luis Obispo County, California, Land Value Per Acre
(from University of California, Santa Barbara
School of Environmental Science & Management, March, 2002)



Current Land Value Map
Map M-1-B

