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A SURVEY OF ZONING AND
BUILDING ORDINANCES IN
MICHIGAN AND FLORIDA

Thesis for the Degree of B. S.
MICHIGAN STATE COLLEGE

V. A. George Lott
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A Survey of Zoning and Building
Ordinances in Michigan and Florida

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by

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Chapter I

Description of Project

The information used in this paper was obtained from forty zoning and eleven building ordinances of cities in Florida and Michigan.

Letters were written to all of the cities, having a population of 5000 or over in Michigan and Florida. These letters included a request for copies of the zoning and building ordinances of each city.

Fifty-seven percent or sixty-four of the letters were answered. As no reply whatsoever was received from the other forty-three percent, or forty-eight cities, it is not known whether they have zoning and building ordinances in effect.

Thirty-six percent of the cities sent zoning ordinances and nine percent building ordinances. The following reasons were given for not including copies of these with the reply:

No such ordinance for the city

No copies available

Ordinance being written

Ordinance being revised

Prohibitive charge

Equally as much cooperation was received from the Florida cities as from those in Michigan. In fact, the percentage of replies received from Florida(59%) was higher than those received from Michigan(56%).

The cities included in the survey and the results obtained are given in Chart I.

Chart I

<u>City</u>	<u>Population</u>	<u>Zoning Ordinance</u>	<u>Building Ord.</u>
<u>Michigan</u>			
Adrian	14230	Received	Received
Albion	8345	Received	Not mentioned in reply
Alma	7202	Received	Not mentioned
Alpena	12808	Received	Not mentioned
Ann Arbor	29815	Received	Received
Battle Creek	43453	Prohibitive Charge	Not Mentioned
Bay City	47956	No reply	No reply
Benton Harbor	16668	Copy not available	Copy not avail.
Berkley	6406	Received	Being revised
Birmingham	11196	No reply	No reply
Cadillac	9855	No reply	No reply
Charlotte	5544	No ordinance	No ordinance
Cheyboygan	5673	No reply	No reply
Coldwater	7343	Being written	Being written
Dearborn	63584	Received	Being revised
Detroit	1623452	Prohibitive charge	Prohibitive charge
Dowagiac	5007	No reply	No reply
East Detroit	8584	Received	Prohibitive charge
East Lansing	5839	Received	Received
Ecorse	13209	No reply	No reply
Escanaba	14830	No reply	No reply
Ferndale	22523	Received	Not mentioned
Flint	151543	No reply	No reply
Grand Haven	8799	No reply	No reply

<u>City</u>	<u>Population</u>	<u>Zoning Ordinance</u>	<u>Building Ord.</u>
Grand Rapids	164292	Received	Not mentioned
Greenville	5321	No reply	No reply
Grosse Pointe	6179	No Reply	No reply
Grosse Pointe Farms	7217	Received	Not mentioned
Grosse Pointe Park	12646	No reply	No reply
Hamtramck	49839	Received	No copy avail.
Hancock	5554	No reply	No reply
Hastings	5175	Being written	Being written
Highland Park	50810	Received	Copy not avail.
Hillsdale	6381	Prohibitive charge	Plan to adopt Uniform Bldg. Code
Holland	14616	Received	Received
Inkster	7044	No reply	No reply
Ionia	6392	No reply	No Reply
Iron Mt.	11080	Received	Received
Ironwood	13369	No reply	No reply
Ishpeming	9491	Received	Not mentioned
Jackson	49656	Received	Not mentioned
Kalamazoo	54097	Received8	Copy not avail.
Kingsford	5771	No reply	No Reply
Lansing	78753	Received	Received
Lapeer	5365	No Reply	No Reply
Lincoln Park	15236	No Reply	No Reply
Ludington	8701	Received	Not mentioned
Manistee	8694	No reply	No reply
Manistique	5399	No reply	No Reply

<u>City</u>	<u>Population</u>	<u>Zoning Ordinance</u>	<u>Building Ord.</u>
Marquette	15928	Being written	Being written
Marshall	5253	Received	Received
Menominee	10230	Received	Not mentioned
Midland	10239	Received	Being written
Monroe	18478	Received(proposed)	Uniform Bldg.Code
Mount Clemens	14389	No reply	No reply
Mount Pleasant	8413	Being revised	Received
Muskegon	47697	Prohibitive charge	Pro. Charge
Muskegon Hts.	16047	No Reply	No Reply
Negaunee	6813	No Reply	No Reply
Niles	11328	Received	Received
Owosso	14424	Being written	No ordinance
Petoskey	6019	No ordinance	Not mentioned
Plymouth	5360	Received	Being written
Pontiac	66626	No Reply	No Reply
Port Huron	32759	Received	Not mentioned
River Rouge	17008	No Reply	No Reply
Roseville	9023	No Reply	No Reply
Royal Oak	25087	Prohibitive charge	Revising
Saginaw	82794	Prohibitive charge	Not mentioned
St. Clair Shores	10405	No reply	No Reply
St. Joseph	8963	No Reply	No Reply
Sault Ste. Marie	15847	No Reply	No Reply
Sturgis	7214	No Reply	No Reply
Three Rivers	6716	No Reply	No Reply
Traverse City	14455	No Reply	No Reply
Trenton	5284	Received	Not mentioned

<u>City</u>	<u>Population</u>	<u>Zoning Ordinance</u>	<u>Building Ord.</u>
Wyandotte	30618	Being written	Copynot avail.
Ypsalanti	12121	No Reply	No Reply
<u>Florida</u>			
Bartow	6158	No Reply	No Reply
Bradenton	7444	No copy available	No copy avail.
Chattahooche	7110	No copy available	No copy avail.
Clearwater	10136	Received	S.Bldg.Code
Coral Gables	8294	Received	Not mentioned
Daytonna Beach	22584	No Reply	No Reply
DeLand	7041	No copy available	No copy avail.
Ft. Lauderdale	17096	Received	Not mentioned
Ft. Myers	10604	No Reply	No Reply
Ft. Pierce	8040	No copy available	S.Bldg.Code
Gainsville	13757	No ordinance	Copy not avail.
Hollywood	6239	No Reply	No Reply
Jacksonville	173065	Received	Received
Key West	12927	No Reply	No Reply
Lake City	5386	No Reply	No Reply
Lakeland	22068	No ordinance	S.Bldg.Code
Lake Wales	5024	No Reply	No Reply
Lake Worth	7408	Received	Uniform Bldg.Code
Marianna	5079	No Reply	No Reply
Miami	172172	Received	Being written
Ocala	8086	No copy available	No copy avail.
Orlando	36736	Received	Prohibitive charge
Palatka	7140	No ordinance	No copy avail.

<u>City</u>	<u>Population</u>	<u>Zoning Ordinance</u>	<u>Building Ord.</u>
Panama City	11610	No Reply	No Reply
Pensacola	37479	No Reply	No Reply
Plant City	7491	No Reply	No Reply
St. Augustine	12090	Received	Not mentioned
St. Petersburg	60812	Received	S.Bldg.Code
Sanford	10217	Received	Being written
Sarasota	11141	No Reply	No Reply
Tallahassee	16240	No Reply	No Reply
Tampa	10391	Being revised	Being revised
W.Palm Beach	33693	No Reply	No Reply
Winter Haven	6199	Received	S.Bldg.Code

These results may be summarized as follows:

Chart II

<u>Reply</u>	<u>Mich.</u>	<u>Florida</u>	<u>Total</u>
<u>Zoning</u>			
Ordinances Received	29	11	40
No zoning ordinance for the city	2	3	5
No copies available	1	5	6
Ordinance being written	5	0	5
Ordinance being revised	1	1	2
Prohibitive Charge	6	0	6
No Reply	34	14	48
<u>Building Ordinances</u>			
Ordinances Received	9	1	10
No building ordinance for the city	2	0	2
No copies available	5	6	11
Ordinance being written	5	2	7
Ordinance being revised	3	1	4
Prohibitive Charge	3	1	4
Building Ord. Not Mentioned in Reply	15	3	18
Uniform Building Code Used	2	1	3
Southern Standards Building Code Used	0	5	5
No Reply	34	14	48

Chapter II

History and General Discussion

The first zoning in the United States occurred in New York City when a study was made by the Commission on Heights of Buildings. This commission was appointed by the Board of Estimate and Apportionment to find what effect skyscrapers had on the safety and health of the community and to suggest regulations, which could be adopted legally to correct the faults found.

Up to this time, a building, in any part of the city, could be of any height, cover the entire lot and maintain the lot size for the entire height. This darkened streets and other buildings. The commission reported that different regulations should be established for height, area and use according to the various needs of the district.

From this report, a bill was prepared by the commission and presented to the state legislature. This bill was passed, amending the city charter. This resolution was then passed by the Board of Estimate and Apportionment on July 25, 1916. This subject was called "districting" for several years, but soon was called zoning.

Its use has spread rapidly throughout the United States so that a majority of the large cities in the country now use this method of controlling the types and use of buildings in their community. The importance of zoning is beginning to be more and more realized and many places that do not already have zoning laws are attempting to introduce them into their ordinances. This was evidenced in this survey by

the number of cities that said they did not have zoning laws at the present but were attempting to formulate them.

Further evidence of the fact that many cities are interested in this problem, is the meeting of the Southern Michigan Public Works Forum on March 24, 1949, at which the topic of discussion was zoning. This group is made up of City Managers, City Engineers and other city officials who meet once a month to discuss problems of municipal administration. I had the privilege of attending this meeting at which zoning was discussed and at which many of the points in the following pages of this chapter were brought up.

Zoning and city planning can hardly be considered separately. Technically they are different but proper zoning is difficult to enact without the ground work which is laid by city planning. Many cities have set up a city planning commission which takes the time to plan the future growth of the city. They must take into consideration many things which might not be considered if a zoning ordinance was put through without it.

Most zoning plans of today have one great fallacy. That of protecting the residence from the industry but not protecting the industry from the residence. The residents can and do move into industrial zones and squeeze the industry out or make it hard for them to expand. It must be remembered that the city cannot exist if the population is not able to earn a living. Therefore, there must be sufficient space allowed for industry to survive and expand. The exceptions to this case are the suburbs of a larger city.

Some of these are residential districts only and the population earns their living in the larger cities.

The place where industry is to be located should also be given careful thought. It should have easy accessibility to transportation. They should be close enough to the main trunk lines and railroads and should be located so that the heavy trucking will not go through the main part of town. It must always be remembered that the industry should be given every consideration that is reasonable because without it, the community cannot prosper.

Another thing that should be brought to mind in deciding the location for industry is what direction the wind blows. For example, does the wind generally come from the East? If so, locate your industry on the west side so that the smoke and other disagreeable disturbances do not blow over the city. The water supply and the size of the sewerage system should also be considered. It would be a great mistake to zone a district industrial which could not take care of the water demand or where the wastes could not be taken care of. Industry needs these services and the city should try to take care of them.

The residential and commercial zones should also be carefully placed, of course, to bring beauty and business enterprise to the city but these things are not emphasized as much in my discussion as they are a little more obvious and are usually the first things considered. An example of the problems which might be met along this line is "spot zoning". This is the practice of placing a small business

zone in the midst of residential zones or a small industrial area in the midst of stores. A neighborhood store may be desirable, but care must be taken in allowing these. They may produce undesirable parking problems and perhaps lessen the desirability of the surrounding property from the standpoint of beauty. Spot zoning is often brought about by special interests who wish to build a place of business in a residential area and are able to influence the writing or amending of the zoning laws.

Main streets also present a zoning problem. Some cities think that the main street should be zoned business from one end to the other. In many cases this is not advisable as it may make the street a hodge-podge affair; a store, a house, a store and so forth the whole length of the street.

These are just a few of the things which a planning commission must decide but there are many other very important things.

After the major plan has been laid out, the zoning ordinance itself must be started on. For the best ordinance, there should be city wide participation. The board set up for study and preparation of the ordinance should not be in politics so that there will not be pressure brought to bear on them. The welfare of the town and its citizens should be considered above all special interests.

The writing of the ordinance is very important but without a zoning map, it is useless. There should be two maps, one showing the use zones and another showing height, area, and setback restrictions. Very few cities have this

second map but it is very useful and desirable.

Chapter III

Definitions

At the beginning of all zoning ordinances, there is a statement of its purpose. It could be called a definition of a zoning ordinance. It has been found that this definition varies slightly between the cities of this survey, but they all follow the same general pattern. In general the ordinance includes the following:

1. The regulation and restriction of the location of trades and industries and the location of buildings designed for specific uses.
2. The regulation and limitation of the height and bulk of buildings.
3. The regulation and determination of the area of yards, courts, and other open spaces.
4. The regulation of the density of population.
5. For the above purposes, to divide the city into districts.
6. To provide a method of administration.
7. To prescribe the penalties for the violation of its provisions.

A few exceptions were noted in these statements of purpose, such as the City of Ishpeming, Michigan. They

included in theirs, the regulation of automobile parking. Iron, Michigan included the phrase "--to establish regulations for the light and ventilation of such buildings". A few smaller cities did not include all seven steps in the definition of their zoning ordinance. Adrian, Michigan is one of these. They define their ordinance as "An ordinance to provide for the comprehensive zoning of the City of Adrian and to establish districts or zones within which the use of land and structures is regulated. Whereas, the City Commission of the City of Adrian deems it necessary in the interest of the public health, safety and general welfare, to provide for the zoning or districting of the City."

One of the better definitions can be found in the zoning ordinance of East Lansing, Michigan. This definition reads, "An ordinance to promote the health, safety, and welfare of the people by regulating and restricting the location of trades and industries, and the use and location of buildings designed for specific uses, to regulate and limit the use, height and bulk of buildings hereafter erected or altered, to regulate and determine the use and areas of yards, courts, and other open spaces surrounding buildings, to regulate and limit the density of population, and for said purposes to divide the city into districts and prescribe for the violation of its provisions.

In the book "Zoning" by Edward M. Bassett, the author defines zoning as "--the regulation by districts under the police power of the height, bulk, and use of buildings,

the use of land, and the density of population".

The first article in the majority of zoning ordinances contains definitions of terms. This helps to prevent breaking down of the ordinance through loop-holes in the wording. An example of this is the fact that basement and cellar, as defined, have different meanings.

Of the zoning ordinances received in this survey from both Michigan and Florida, only one ordinance failed to have a section on definitions. This city is Ferndale, Michigan. The City of Lake Worth, Florida had the definition of a setback only. Adrian, Michigan had a very limited set of meanings. Fort Lauderdale, Florida had their definitions spread through the ordinance, but they were complete.

One very important phrase included in nearly all of these ordinances had to do with the singular and the plural of words. This phrase also took into account the possibility of double meanings. One such phrase taken from the zoning ordinance of Holland, Michigan states the following: "Words used in the present tense include the future, the singular, the plural, and the plural and singular; the word "building" includes the word "structure"; the word "lot" includes the word "plot"."

A phrase of this sort would protect the zoning from people who would like to construe the meaning to suit themselves.

The following is a fairly complete set of definitions which were contained in the different ordinances of this survey. They are a very vital part of the zoning ordinance

and they put more limitations on the ordinance than if the interpretation of the terms was left up to a dictionary.

As an example of how similar the definitions from different cities were, the meaning of "accessory buildings" is quoted. The exact wording was used in the ordinances from Albion, Alma, Alpena, Ann Arbor, East Lansing, Grand Rapids, Holland, Ishpeming, Kalamazoo and Menominee, Michigan and Clearwater, Florida. "Accessory Building--A subordinate building or portion of main building, the use of which is incidental to that of the main building".

In a very few cases, the words as defined by two different cities had different meanings. The word "alley" is an example of this.

Alley: "--shall mean any public or private way not a street as herein defined."--Midland, Michigan

Alley: "A public thoroughfare not more than twenty feet wide."---Niles, Michigan

The remainder of the definitions given here were selected at random from the various ordinances and include most of the terms used.

Alterations: "Any change, addition or modification in construction or grade of occupancy; any change in the structural members of a building, such as walls or partitions, columns, beams or girders."---Iron Mountain, Michigan

Apartment House: "A building which is used or intended to be used as a home or residence for three or more families living in separate apartments---Coral Gables, Fla.

Basement: A lower story or room located partly below the

adjacent ground surface, having its total volume fifty per cent, or more, above the average height of the ground surface adjacent to its enclosing exterior walls, and with not less than six feet, six inches average height between the floor and the ceiling or any projections below the ceiling."---East Lansing, Michigan

Bill boards: "A structure erected and/or used partly or wholly for advertising."---Clearwater, Fla.

Boarding House: "A building other than a hotel, where lodging and meals for five or more persons are served for compensation."---Grand Rapids, Mich.

Building: "A structure having a roof supported by columns or walls for shelter, support or enclosure of persons, animals or chattels; and when separated by division walls from the ground up, and without openings, each portions of such buildings shall be deemed a separate building."---Ann Arbor, Mich.

Cellar: "Is the lowest story or room located wholly or in part below the adjacent ground surface and used only for storage or the installation of utilities."---East Lansing, Mich.

Court, outer: "An unoccupied space, open from the ground to the sky, on the same lot with a building, opening on one or more sides upon a street, alley or yard."---Marshall, Mich.

Court, inner: "An open, unoccupied space surrounded on all sides by walls, or by walls and a lot line."--Jackson, Mich.

Court, length of outer: "The mean horizontal distance between the open and closed ends of the court."--Grand Rapids, Mich.

Curb level: "The mean level of the established curb in front of the building. Where no curb has been established, the city engineer shall establish such curb level for the purpose of these regulations."---Ann Arbor, Mich.

Church: "A temple or building used primarily for religious worship but the word "church" shall not mean an undertakers' chapel or funeral building."---East Lansing, Mich.

Dwelling House or single family residence: "A private residence building used or intended to be used as a home or residence in which all living rooms are accessible to each other from within the building, and in which the use and management of all sleeping quarters, all appliances for cooking, ventilating, heating or lighting are under one control, designed for the use of one family only."---Coral Gables, Fla.

Dwellings: "

a. One family: "A detached building designed for or occupied by one family.

b. Two family: "A detached or semi-detached building designed for or occupied by two families.

c. Multiple: " A building or portion thereof designed for or occupied by more than two families living independently of each other, including tenement houses, apartment houses, and apartment hotels."---Menominee, Mich.

Erected: The word "erected includes built, constructed, reconstructed, moved upon, or any physical operations on the premises required for the building. Excavations, fill, drainage, and the like, shall be considered a part of erection."---East Lansing, Mich.

Family: "Any number of individuals living together as a single housekeeping unit and doing their cooking on the premises."---Winter Haven, Fla.

First floor: "The floor of a building approximately at, or first above the mean level of the ground of the front of the building."--- Ishpeming, Mich.

Garage, private: "A garage used for storage of passenger vehicles only and having a capacity of not more than one auto per family housed in the building to which such garage is accessory, whichever is the greater."---Albion, Mich.

Garage, public: "Any building or premises used for housing or care of more than three motor driven vehicles or where any such vehicles are equipped for operation, repaired or kept for remuneration, hire, or sale."---Ann Arbor, Mich.

Home occupation: "An occupation for gain or support conducted only by members of a family residing on the premises, provided that no special space is designed or arranged for such occupation, and provided that no article is sold or offered for sale except such as may be produced by members of the immediate family residing on the premises."

East Lansing, Mich.

Hotel: "A building occupied as the more or less temporary abode of individuals who are lodged with or without meals, and in which there are more than ten sleeping rooms, usually occupied singly, and no provision is made for cooking in any individual room or apartment."---Clearwater, Fla.

Lodging house: "A building, other than a hotel, where lodging for five or more persons is provided for compensation."-Alpena

Lot: "A "lot" is any lot or plot occupied or intended to be occupied by one building or one unit group buildings and its accessory buildings and uses and including such open spaces as are provided or as are required by this chapter. Whereever the description of a lot is filed with the Supervisor of Building, as provided in Section 15, a "lot" shall be the lot so described, and in the case of a corner lot, the owner may elect to call either street line the front of the lot without reference to the building arrangement."---
Jacksonville, Fla.

Lot corner: "A parcel of land under common ownership not more than fifty feet wide at the intersection of two or more streets, intersecting at an angle not exceeding one hundred and thirty-five degrees."---Grand Rapids, Mich.

Lot(interior): "A lot other than a corner lot."--Orlando, Fla.

Lot lines: "Lines bounding a lot as herein defined."---
Marshall, Mich.

Lot(through): "An interior lot having frontage on two parallel or approximately parallel streets."---Orlando, Fla.

Nuisance: "The word "nuisance" shall be held to embrace public nuisance as shown at common law or in equity jurisprudence; and whatever is dangerous to human life or detrimental to health; and any dwelling which is overcrowded with occupants or is not provided with adequate ingress or egress to or from the same, or is not sufficiently supported, ventilated, sewerred, drained, cleaned, or lighted, in reference to its intended or actual use; and whatever renders the air or human food or drink unwholesome, are also sever-

ally, in contemplation of this ordinance, nuisances and all such nuisances are hereby declared illegal."East Lansing, Mich.

Non-conforming use: "Non-conforming use" shall mean a building, structure or premises lawfully occupied at the time of the enactment of this ordinance by a use that does not conform with the provisions of this ordinance for the district in which it is located."---Midland, Mich.

Place: "An open unoccupied space not less than thirty feet wide permanently reserved for purposes of access to abutting property."---Orlando, Fla.

Public Utility: "Any person, firm corporation, municipal department or board duly authorized to furnish and furnished, under regulation, to the public, electricity, gas, steam, telephone, telegraph, transportation, drainage or water."---Berkley, Mich.

Set-back: "The minimum horizontal distance between the street line and the front line or side line of the building including terraces or any covered projection thereof, excluding steps."---Coral Gables, Fla.

Story: "That portion of a building included between the surface of any floor and the surface of the floor next above it, or if there be no floor above, then the space between such floor and the ceiling next above it."---Iron Mountain, Mich.

Street: "A public thoroughfare not less than thirty feet wide."---Jacksonville, Fla.

Yard: "--is a portion of the same lot or building site upon which a building is situated which remains open and unoccupied except as provided in section 14 of this ordinance."-Sanford, Fla.

Yard(front): "A front yard is an open space extending the full width of a lot and of a uniform depth measured horizontally at right angles to the front lot line, and unoccupied from the ground upward except as hereinafter specified."---Village of Grosse Pointe Farms, Mich.

Yard(rear): "A yard extending across the full width of the lot between the rear lot line and the nearest line of the main building."---Highland Park, Mich.

Yard(side):"--is a yard extending from the front yard to the rear yard between the side lot line and the nearest line of the main building."---Trenton, Mich.

Chapter IV

Use Districts

The zoning regulations are usually set up by districts. There are three divisions usually considered and these are subdivided into smaller districts. The three big divisions are Residential, Business, and Industrial. The Residential district is divided into the number of families allowed per building; Business into the type and size; and the Industrial is divided into light and heavy. A general outline follows:

Residential

- One family dwellings
- Two family dwellings
- Multiple dwellings

Business

- Limited or neighborhood
- Central district

Industrial

- Light
- Heavy

Some cities break these down farther, but the majority follow the general pattern shown above. One of the outstanding additions to this form is the parking districts. The parking problem is beginning to be taken into consideration in zoning. Most zoning ordinances do require industrial districts to provide for adequate parking but few set up specific districts outside of this area.

One of the other districts, included in some ordinances, is agriculture. In this survey, the cities which included a provision for agriculture, were Albion, Mich. and St.

Petersburg, Florida.

It must be pointed out that the Residence districts do allow more than just residences built in them. Also, in the business districts, not all businesses are allowed. There are two methods used in zoning; the exclusive and the inclusive method of restriction. The exclusive method excludes the uses not wanted by naming the unwanted used. The inclusive method includes all the uses permitted. In general the inclusive method is used in the residential districts; both in the business districts and the exclusive method only, in industrial districts.

The following is a check off list compiled from the zoning ordinances of this survey. This is a fairly complete list. It would be up to the individual community to include or exclude as the case might be for their own local needs.

Residence Zones

One family

- One family
- Churches
- Schools
- Libraries
- Hospitals
- Museums
- Home occupations

Two family

- Uses permitted in one family
- Two family dwellings
- Automobile storage
- Dancing, music and trade schools
- Professional office (one person)

Multiple

- Uses permitted in two family
- Multiple family dwellings
- Medical or dental offices
- Hotels, lodging houses, rooming or boarding houses.

Private clubs, lodges, fraternities
 Institutions other than correctional
 or penal
 Publicly owned buildings, public
 utility buildings
 Private garages
 Apartments

Business Zone

All buildings and premises may be used
 for purposes permitted in multiple
 dwelling district or for any other
 use, except the following :
 Animal hospital or boarding
 Auto sales or service
 Bakery (employing more than 5 persons)
 Blacksmith or horseshoeing
 Battling works
 Bowling alley
 Building material storage
 Carting, express, hauling or storage yard
 Contractor's plant or storage yard
 Coal, coke or wood yard
 Cooperage works
 Dyeing and cleaning works, etc.
 (employing more than 5 persons)
 Ice plant or storage house of more than
 8 tons capacity
 Junk business or storage yard
 Laundry (employing more than 5 persons)
 Livery stable or private stable
 Lumber yard
 Machine shop
 Milk distributing station
 Planing mill
 Poultry killing or dressing except as in-
 cidental to a retail grocery or meat
 market.
 Printing shop
 Stone yard or monumental works
 Storage warehouse
 Tourist camp or trailer camp
 Truck terminal
 Any kind of manufacture or treatment
 other than that incidental to retail
 business conducted on the premises;
 provided that the latter are not
 unsightly, noisy or odorous.
 All uses excluded in the industrial district.

Industrial Zone

Some cities use the inclusive uses method on

this part but their list is much longer. It may be pointed out that the inclusive method is much safer. This is because anything not listed is banned. Therefore, there is no chance of ~~seem~~ unforeseen thing coming up. It is impossible to stop somebody from putting an objectionable use in a district if you haven't banned it because of an oversight. However in the inclusive method you can let some use not mentioned come in by action of the zoning board. The following list includes things which are often banned.

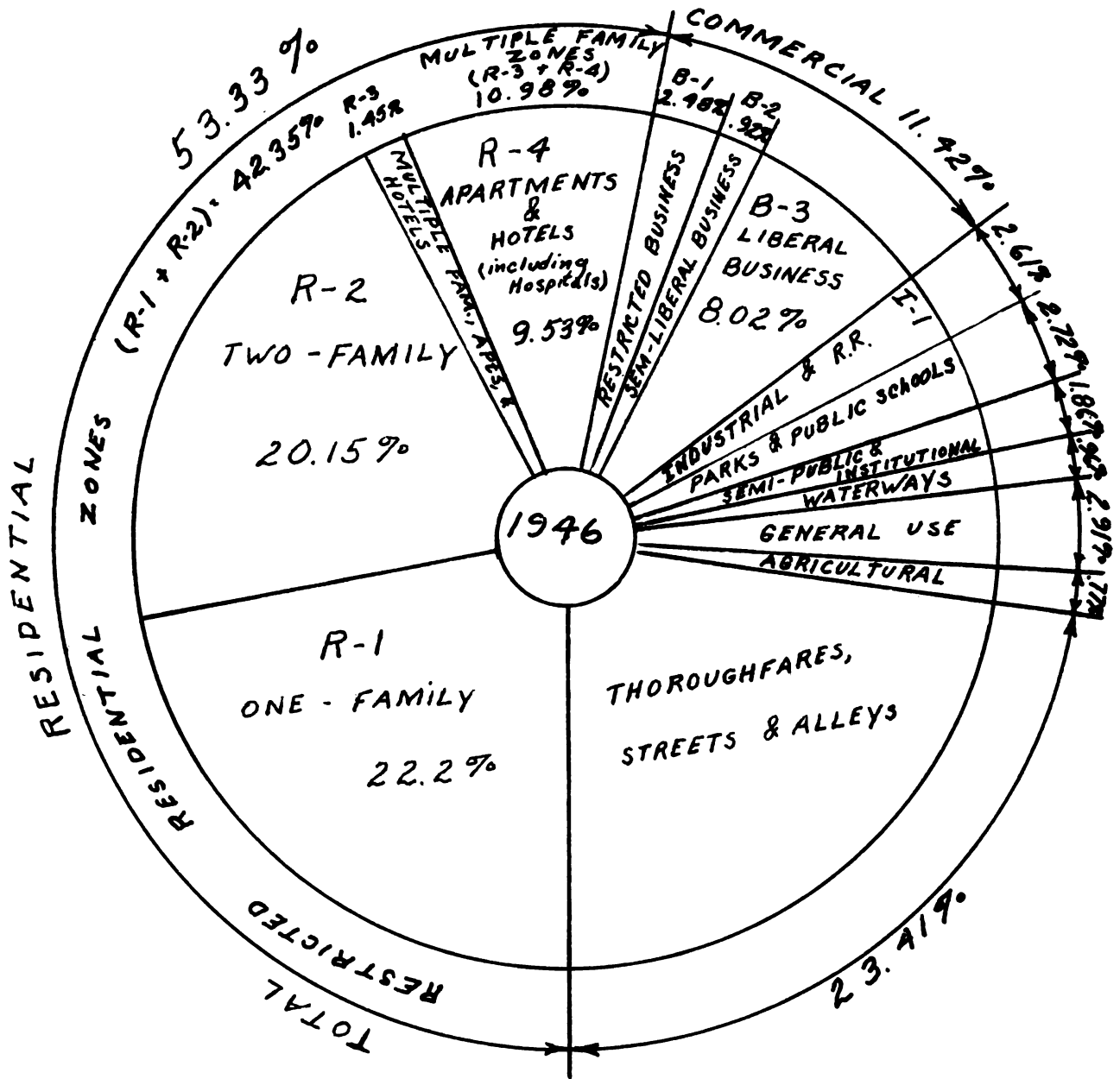
- Abattoirs
- Acetylene gas manufacture or storage
- Acid manufacturers
- Alcohol manufacture
- Ammonia, bleaching powder or chlorine manufacture
- Arsenal
- Asphalt manufacture or refining
- Auto wrecking unless enclosed by a solid fence 6 feet in height.
- Blast furnace
- Boiler works
- Brick, tile or terra cotta manufacture
- Burlap manufacture
- Bag cleaning
- Candle manufacture
- Carpet or bag cleaning by beating or blowing
- Celluloid manufacture
- Cement, lime, gypsum or plaster of paris manufacture
- Coke ovens
- Coal tar products manufacture
- Crematory
- Cotton gin
- Cotton oil manufacture
- Creosote treatment of manufacture
- Disinfectants
- Distillation of bones, coal or wood
- Dyestuff manufacture
- Exterminator and insect poison manufacture
- Emery cloth and sand paper manufacture
- Explosives and manufacture or storage
- Fat rendering
- Fertilizer manufacture and bone grinding

Fireworks or explosive manufacture or storage
 Fish smoking and curing
 Flypaper manufacture
 Foundry using coal or coal products
 Forge plant
 Garbage, offal, or dead animal reduction
 or dumping
 Gas "illuminating or heating" manufacture
 or storage
 Glass manufacture
 Glue, size or gelatine manufacture or storage
 Incineration or reduction of garbage, dead
 animals, offal or refuse
 Iron or steel fabrication
 Iron, steel, brass, or copper foundry
 Junk, iron or rags storage or baling,
 unless enclosed by a solid fence 6 ft.
 in height
 Lamp black manufacture
 Match manufacture
 Oil cloth or linoleum manufacture
 Oiled or rubber goods manufacture
 Ore reduction
 Paint, oil, shellac, turpentine, or varnish
 manufacture
 Paper and pulp manufacture
 Petroleum products. Refining or wholesale
 storage of petroleum
 Plating works
 Potash works
 Printing ink manufacture
 Pyroxlin manufacture
 Railroad yard
 Rock crusher
 Rolling mill
 Round house
 Ruober or gutta percha manufacture or
 treatment
 Salt works
 Sauer kraut manufacture
 Sausage manufacture
 Shoe blacking manufacture
 Smelters or smilting of tin, copper, zinc,
 or iron ores
 Soap manufacture
 Soda or compound manufacture
 Starch works
 Stock yard or slaughter of animals
 Stone mill or quarry
 Storage of, baling of scrap paper, except
 where connected with a paper mill,
 iron, bottle rag or junk.
 Stove polish manufacture
 Sulphuric, nitric or hydrochloric acid manufacture

Tallow, grease or lard manufacture or refining from animal fat, except in connection with the ordinary operation of a retail meat market
 Tanning, curing or storage of rawhides or skins
 Tar distillation or manufacture
 Tar roofing or water roofing manufacture
 Tobacco (chewing) manufacture or treatment
 Vinegar manufacture
 Wool pulling or scouring
 Yeast plant
 Public gasoline, oil, or motor fuel filling station unless approved by property owners.

The amount of property to be included in each zone is something which must be decided by the individual city. If the city is primarily residential, as is the case in many suburban communities, a large part of the land will of course be zoned residential. However, if industry plays a leading role in the city's welfare, the industrial zone will be large. The same principle may also be applied to business zones.

The accompanying graph is an example of how this problem, of the percentage of city land to be included in each zone, may be presented diagrammatically.



Use Districts
City of Miami, Fla.

Chapter V

Height and Area Regulations

Zoning is used to keep the city beautiful and one thing that adds to the beauty of a residential district is the large front lawns. To accomplish this, a setback regulation is entered into zoning. Many cities have old sections with old homes which have extremely large front yards. These districts are usually very beautiful. The main reason they are is because of the large setback they have and the opportunity to do some beautiful landscaping. One such city is Saginaw. The setback should be uniform to get the maximum effect. It always seems to be the worst house that has the least setback.

The side yard requirements are also very important for beauty, but the outstanding reason for sideyards is to obtain light and ventilation. The tendency now is to make the frontage requirements larger and at the same time increase the side yard. Many of the larger cities, such as Detroit, have the lots broken down so that the width of the lot is only forty feet. Where the value of land is high in price, this is the practice, but it makes the sideyards small. Another great disadvantage of having buildings built so close is that the occupants do not have enough privacy. It is not uncommon to have the windows of two houses line up so that the shades must be pulled shut most of the time.

The back yard requirements are also important for the occupants. It gives them a place to build **their** garages

and a place to perform household duties. It also keeps the buildings from being backed one against the other. Many communities have alleys which give the people a place to put their garbage and trash cans. By having backyard requirements, it also keeps the buildings in a more uniform position.

The height requirements are necessary to keep the different districts well lighted. In the residential district if a four story building was built next to a nice residence, it would cut off light, ventilation and the view. If there weren't a height regulation, there would be someone who would want to build a building twice as high as the neighboring buildings. This would break the beautiful lines of the district.

Nearly every city of this survey has these restrictions, and they are all very similar. Only two cities did not have these regulations. It can be seen from the requirements just what type of district it is. For example, in a high type, residential district, the setback and side yard requirements are greater than usual.

The following chart shows the requirements of the cities of this survey.

District	Height Stories Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq. Ft.
<u>Adrian</u>					
<u>Residence</u>					
Commercial		No restrictions			
<u>Industrial</u>					
<u>Albion</u>					
R-1 Residence	2½ 35	30	10	20	5500
B-1 Business		Same as r-1 if zoned business in residential area. No restrictions if in main business district.			
L-m Light industrial		No restrictions			
H-m Heavy industrial		No restrictions			
<u>Alma</u>					
Residence	-----	-----	-----	25	---
Commercial		No restrictions			
<u>Industrial</u>					
<u>Alpena</u>					
One & two family	2½ 35	25	5	20	5000/fam
Multiple "	4 45	25	5	20	5000 min 1250/fam
Commercial	-- 50	10	---	---	----
Light industry	50	10	None	----	----
Heavy industry	---- 10	---	---	---	----

District	Height Stories Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq. Ft.
<u>Ann Arbor</u>					
AA-One family	2½	25	5	25	5000/family
A-Two family	35	25	5	25	1000/family
B-Multiple Dwelling	3	25	5	25	1000/family
B-1--Transitional Residence	3	25	5	--	1000/family
C-Local Business	4	25	None unless a residence	---	1000/family
C-1--Transitional Business	4	25	None unless a residence	-----	1000/family
D--Commercial	10	25	None unless a residence	-----	625/family
E--Commercial & Industrial	6	75	---	---	---
<u>Berkley</u>					
AA-AA-1 Single Family	2½	35	5	25	---
A-1-Res.	2	--	5	25	---
A--B-1-Res.	2	25	5	25	---
B-C-D -Res.	2	25	5	20	---
Business & Industry	No restrictions.				

District	Height Stories Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq. Ft.
<u>Dearborn</u>					
Residence A	30 2	16 lf 1 story 18 lf 2 story	Total 12	25	4100
Residence B	30 2	16 lf 1 story 18 lf 2 story	Total 10	25	8000
Residence C	40 3	20	Total 8	15	1000/occupant
Residence D	50 4	24	Total 8	10	---
Business A	-- 2	1 story-5 ft. 2 stories-6 ft.	---	40' from street center line	---
Business B & C	-----	1 and 2 stories same as above 3 stories-7 ft. Each additional--2 ft.	---	40' from street center line	---
Industrial		-- No restrictions	--		-----
<u>East Detroit</u>					
R-1 1 family	2 $\frac{3}{4}$ 35	30	3', Total 10'6	20	4000
R-2 2 family	2 $\frac{1}{2}$ 35	30	3', Total 10'6	20	4800
R-M Multiple	2 $\frac{3}{4}$ 35	25	3', Total 10'6	20	---
R-M4 Multiple	2- 50	25	3', Total 10'6	20	---
B Business	-- 50	25	3', Total 10'6	---	---
BL BC, Business Width of street			No restrictions		

District	Height Stories Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq. Ft.
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East Detroit(cont.)

ML Light Mfg.	--	40	--	No restrictions--
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East Lansing				
A--1 family	2 $\frac{1}{2}$	35	16	5
			20	15 secondary
				5000
B--2 family	2 $\frac{1}{2}$	35	16	5
			20	5000-1 family
			15	5000-2 family
C--Multiple	6	60	16	5
			20	5000-1 family
			15	3000-each additional

D--Retail If residence, same regulations as nearest residential zone

Commercial	No restrictions
Industrial	No restrictions

Ferndale

Single Residence	No restrictions
Two-Family Residence	No restrictions
Residential	No restrictions
business	No restrictions
Industrial	No restrictions

Grand Rapids

Res.A	35	2 $\frac{1}{2}$	25	5	25	5000-1 family
1 & 2 family						7500-1 family
Res. B Multiple	45	3	25	5	25	1250/family
C--Local Business	75	6	25	5	25	1250/family
						(if res.)
D--Commercial & Industrial	90	8	--	--	--	----

District	Height Stories	Height Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq.Ft.
<u>Grand Rapids(cont.)</u>						
Industrial	150	12	---	---	---	---
<u>Grosse Pointe Farms</u>						
Residence	2½	35	16	4	25	50000
Local Bus.	2	30	--	--	--	--
Commercial	2	30	--	--	--	--
<u>Hamtramck</u>						
R-1,1 family	2½	35	30	3',Total 10'6	15	4000
R-2,2 family	2½	35	30	3',Total 10'6	15	4800
R-M,Multiple Variable			25	5	15	4800
B-1, Business	50-if bus. 35-if res.		--	--	None unless facing residential district	---
B-2,Business	80		--	--	--	--
C--Commercial	80		--	--	--	--
ML-Light mfg.	80		--	--	--	--
MHTHeavy Mfg.	80		--	--	--	--
<u>Highland Park</u>						
R-1,1 family	2½	35	30	3',Total 10'6	20	4000
R-2,2 family	2½	35	30	3',Total 10'6	20	4800
R-M,Multiple	Varies with size of lot		25	5	20	4800
B-2,Business	--	35	--	--	--	---

District	Height Stories	Height Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq.Ft.
<u>Highland Park (cont.)</u>						
BU Business	--	100	--	--	--	--
C Commercial		80	--	--	--	--
ML-Light Ind.	--	80	--	--	--	--
MH-Heavy Ind.	--	80	--	--	--	--
<u>Holland</u>						
A-Res. Single	2½	35	25	5	25	5000
B-Res. Multiple	3	45	25	5	25	2500/family
C-Commercial	6½	80	25	--	--	1250/family
D-Industrial	6½	80	10	--	--	625/family
<u>Iron Mountain</u>						
Res. A 1 & 2 family	2½	35	20	6	20	5000
Res. B Multiple	4	45	18-2 stories 20-3 stories 4-each additional	6	20	5000 first family 800 each additional
Commercial	--	50	None if alley 10 if no alley	--	--	"
Industrial	--	45	--	--	--	"
<u>Ishoeming</u>						
Res. A, 1 & 2 family	2½	35	25	10½	25	7500

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District	Height Stories	Height Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq. Ft.
<u>Ishoeming (cont.)</u>						
Res.B	2½	35	25	10%	20	7500 1 fam. 3750 2 fam. 1875/each addit.
Multiple						
Commercial	6	75	--	--	--	"
Industrial	8	100	5	5	--	"
<u>Jackson</u>						
A Residence	2½	35	18	6	20	4300
B Residence	3	45	18	5	20	1250
C Residence	6	75	18	5	10	800
D Residence	--	200	24	5	--	--
<u>Lansing</u>						
A&B, 1 family	2½	35	A-30 B-25	10% Not less than 5	25	A-5000 B-4000
C, 2 family	3½	35	25	10% Not less than 4	20	2000/family 650/family
D-Apartments	2½	99	25	10%	20	1000/family
DM Multiple	3	45	25	10%	20	1000/family
E Apt. & Shop	4	60	20	--	20	1000/family
F Commercial	2½	35	25	--	20	2000/family
G Business	--	120	--	--	--	--
H&I, Indust.H	3	45	15	--	--	2000/family
I	5	75				

District	Height Stories	Height Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq.Ft.
<u>Ludington</u>						
R-1 Shore front 1 family	2½	35	35	15	35	1 acre
R-1B One family	2½	35	30	10	25	6000
R-2A, 1 family	2½	35	25	10	25	7000
R-2B, Two fam.	2½	35	30	10	25	6000
R-3A, Multiple	2½	35	25	10	25	6000 2500/family
R-3B, Trailer Cabin	2½	35	25	10	25 temp. 50 perm.	6000 2500/family
C-1, Business	2½	35	25	--	25	---
C-2, Business	3	50	10% of depth	--	--	--
C-3, Wholesale	3	50	--	--	--	--
M-1, Industrial	4	60	--	--	--	--
<u>Marshall</u>						
A	2½	35	25	5	25	5000 2500/family
B	3	45	25	5	25	1250/family
C	6	75	25	5	25	--
D	8	90	--	--	--	--
Menominee Residence	--	--	20% of lot 6'	Total 14	25	7200

District	Height Stories	Ft.	Rear Yard Ft. 8	Side Yard Ft.	Front Yard Ft.	Lot Area sq. Ft.
<u>Menominee (cont.)</u>						
Commercial	--	--	--	--	4	--
Heavy Industrial	--	--	--	--	--	--
<u>Midland</u>						
Res. A, 1 family 2½	35	40	1-1½ stor. 8', T. 20'	30	9000	
Res. B	2½	35	2½ stor. 10', T. 25'	25	6000-1 fam.	
			1-1½ stor. 7', T. 16'		10000-2 fam.	
			2-2½ stor. 8', T. 20'		3000-each addit.	
Res. C, Multiple 3	40	35	1-1½ stor. 5', T. 14'	25	5000-1 fam.	
			2-2½ stor. 7', T. 16'		2200-each addit.	
Bus. A	2	25	--	25	"	
Bus. B	6	75	--	--	"	
Bus. C	6	75	--	--	"	
Industrial A	6	75	--	--	--	
Industrial B	--	--	20 1, 2 st. 30 3, 4 st. 40 5, 6 st.	10	--	
<u>Monroe (proposed)</u>						
Res. A, 1 family 2	30	25	5', Total 15'	25	6000	
Res. B, 2 family 2	30	25	"	25	5000-1 fam.	
Res. C, Multiple --	--	20	3', Total 10'	15	7000-2 fam.	
					4500 1 fam.	
					6500-2 fam.	
					1000-each addit.	
B-1, Bus., B-2 --	--	10	--	40' from center of street	--	
I-1, I-2, Ind. --	--	10	--		--	

District	Height Stories	Height Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq.Ft.
<u>Niles</u>						
Res.A, 1&2 fam.	2½	35	10% of depth or 25'	Each 10% of width	20	6000-1 fam. 7500-2 fam.
Res.B, Multiple	3	40	10% if corner 15% if int.	10% of width	20	4000-minimum 1000/family
Business	3	50	1' for 2' of rise above 50'	If desired 3' rise above 50'	1' for 2' of rise above 50'	600/family
Industrial A, B	3	50	"	----	"	---
<u>Pontiac</u>						
Res. 1, 1 fam.	2½	35	30	5	25	6250
Res. 2, 2-3-4 fam.	2½ 4	35-Res. 50-Hosp. & Church School	30	5', T. 12'	25	5000-1 fam. 7500-2 fam. 9000-3 fam. 10000-4 fam. 5000-1 fam. 600-ea. addit.
Res., Multiple	5	60	30	Varies with height Minimum 5'	20	
Commercial 1	2½ 4	35-Res. 50-Church & Hosp.	18	5	Varies	---
Commercial 2	5	75	Varies	5' if residence	Varies	Same as Res. 3
Manufacturing	5	75	Varies	5' if residence	Varies	Same as Res. 3
<u>Port Huron</u>						
Res. 1, 2, 3	2½	35	25	20%	25	5000 2500/fam. --- --
C-1A, Outlying Comm.	Width of st. ---		Same as nearby residence			
C-1, C-2, Comm.	Width of street --		--			

District	Height Stories	Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq.Ft.
<u>Michigan Housing Law</u>						
Dwellings 1½ times widest street which it abuts. Effective only if no zoning regulations in effect.	16-1 story	18-2 stories	20-3 stories	24-4 stories	4-each additional story	None if masonry 8" thick without openings.

Multiple Dwellings	"	Same as above.	-----
		If this doesn't apply: ---	
		1 story--4 ft.	
		1' additional for each story above second.	
		And 3" for every 10' or fraction of length over 50'.	
One and Two Family Dwellings	"	One ft. less than those required for multiple dwellings.	-----

The regulations of the Michigan Housing Law of 1939 are shown in the above chart. These regulations must apply to every city in Michigan having a population of 100,000 or more or outlying districts of same. If the city is less than 100,000, the multiple dwelling provisions must apply, but the 1 and 2 family dwelling regulations are optional and left up to the city.

District	Height Stories	Height Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq.Ft.
<u>Clearwater, Florida</u>						
Residence						
Multiple Residence						
Business	Regulated					
Manufacturing	by					
Unzoned	Building codes					
Coral Gables						
Residence	2½	--	--	20%	Varies	Varies
Apts.&Hotels	3	--	5	10	15	Varies
Commercial	3	--	--	--	10	--
Industrial	3	--	--	--	--	--

<u>Fort Lauderdale</u>						
R-1A, 1 family	2½	35	15	10	25	10,000
R-1, 1 family	2½	35	15	5	25	6000
R-2, 2 family	2½	35	15	5	25	6000
R-3, Multiple	3	45	15	10-Hotels 8-Apts. 5-Res.	20	Varies
B-1, High Class	--	60	--	--	--	--
Business						
B-2, Commercial	--	100	--	--	--	--
B-3, Light Ind.	--	100	--	--	--	--
M-1, Manuf.	--	100	--	--	--	--

District	Height Stories	Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq.Ft.
<u>Jacksonville</u>						
Res.A,1 family	3	45	30	1/6 of least lot dimension	25	5000
Res.B,2,3,4,family	50 4	50	30	"	20	3500/family
Res.C,Multiple	4	60	25	1/10 of least lot dimension	15	2500/family
Bus.A	Information unavailable		20	--	--	--
Bus.B	"		Varies with height	--	--	--
Industrial A	"		"	--	--	--
Industrial B	"		"	--	--	--
<u>Lake Worth</u>						
Res.A,1 family	2	--	5	10%	20	--
Res.& Apt.-B	2	--	5	10%	20	--
Hotel&Apt.-C	--	40	5	10%	15	--
Restricted Bus.C-1	--	--	5	--	Varies	--
Retail Bus.-D	Varies		Varies	Varies	Varies	--
Wholesale Ind.	--	--	5	--	10	--
<u>Miami</u>						
R-1,1 family	--	40	10%	10%	20	6000
R-2	--	40	10%	10%	20	6000/family
R-3,Hotels&Apts.	--	40	12½	12½	20	300/family
R-4,Multiple	--	40	12½	12½	20	300/family

District	Height Stories	Height Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq.Ft.
<u>Miami(cont.)</u>						
B-1,Business		Information unavailable	--	--	--	--
B-2,B-3,Bus.		"	--	--	--	--
I-1,Industrial		"	--	--	--	--
<u>Orlando</u>						
Res.A	2 $\frac{1}{2}$	35	25	5	25	--
Res.B-Multiple	2 $\frac{1}{2}$	35	25	5	25	--
Res.C "	4	55	25-int. 15-cor.	5 and 1 ft./story	25	--
Res.D "	6	75	"	"	25	--
Commercial E	3	45	10-int. 8-cor.	--	--	--
Commercial F	6	75	10-int. 6-cor.	--	--	--
Commercial G	10	125	"	--	--	--
Industrial H	6	75	"	--	--	--
Industrial I	10	125	--	--	--	--
Unrestricted J	6	75	10-int. 6-cor.	--	--	--
<u>Sanford</u>						
R-1A,1 family	2 $\frac{1}{2}$	35	25	10	25	7500
R-1,1 family	2 $\frac{1}{2}$	35	25	10%	20	5000
R-2,Multiple	3	45	20	10	10	5000-1 fam. 8000-2 fam. 1200-ea.addit.

District	Height Stories	Height Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq.Ft.
Sanford(cont.)						
R-3, family	2½	35	25	10%	20	5000
R-4, R-5, Multiple	3	45	20	10	10	5000-1 family 8000-2 family 1200-ea. addit.
C-1, Commercial	--	75	20	--	--	--
C-2, Commercial	--	50	--	--	--	--

St. Augustine						
A-1, Res.	--	35		No restrictions		
A-2, Res.	--		No restrictions			
A-3, Res.	--	35		No restrictions		
A-4, Res.	--	35		No restrictions		

St. Petersburg						
A, Farming & Country Home	--	50	50	50	50	2½ acres
B, Outlying Res.	2½	35	35	10%	35	15,900
C, Single Fam.	2½	35	35	10%	35	10,000
C-1, C-2, D	2½	35	35	10%	30	10,000
E-2 family	2½	35	35	10%	30	5000
F, Multiple	3	45	35	10%	18	5000 500-each addit.
	If yard increased can build to 10 stories or 125 stories or 125					
G, G-1, Comm.	2½	35	25	6	30	"

District	Stories	Height Ft.	Rear Yard Ft.	Side Yard Ft.	Front Yard Ft.	Lot Area Sq.Ft.
<u>St. Petersburg(cont.)</u>						
<u>H,H-1, Commer. H-10</u>						
<u>H-1--15</u>						
I, Business	6	75	15	--	--	5000-1 family 500-each addit.
J, Industrial	6	75	10	--	--	"
<u>Winter Haven</u>						
<u>R-1A,R-1,L fam. 2½</u>						
		35	30%	7	25	R-1A--10,000 R-1--6000
R-2,2 family	2½	35	30%	7	25	3000/family
R-3,Multiple	3	45	25	7	20	1500-4 family 1000-6 family 750-8 family 650-10 family
C-1,Commercial	6	85	20	--	--	625/family
C-2,Commercial	6	85	20	--	--	625/family
M-I,Industrial	6	85	20	--	--	625/family



Examples of Small and Large Set Back



Examples of Small Side Yards



Example of Business Zoning
in Residential District

Chapter VI

Non-Conforming Uses

At the time of the enacting of the zoning ordinance, there are buildings, businesses, and industries in zones which outlaw them, under the new ordinance. As they were there before the ordinance was put into effect, it would be illegal to force them out of the zone. This is recognized by the people setting up the zoning laws; therefore, there is a section on non-conforming uses.

The non-conforming use clauses do not allow a building which doesn't come up to the zoning regulations to enlarge or physically change except for necessary maintenance or repair. In the event the building is damaged by fire, explosion or acts of God, it can be repaired if the damage is not over a certain percentage of the assessed valuation. This is usually around fifty or sixty percent.

In the case of a building being worn out by wear and tear, deterioration or depreciation, it may be repaired if the repairs are not over a certain percentage. (Usually this is less than fifty percent.)

Another limitation put on non-conforming buildings is that they are prohibited from changing from one non-conforming use to another one which is just as objectionable or more so. If a change is made, it has to be one that comes closer to the requirements of the ordinance.

The purpose of these regulations is to eventually squeeze the non-conforming uses out of the zones which they are in.

It would be against the law and could be declared illegal if the attempt was made to force them out. In fact, any building under construction or for which a permit has been issued before the zoning ordinance was put into effect, can be built. There was a case in East Lansing where a building was to be built in a zone in which it was allowed by the zoning ordinance in effect. A new zoning ordinance was about to be enacted. By the time the building permit was issued, the new zoning ordinance was in effect. The zone affecting this proposed building was changed outlawing it; therefore the permit was not issued. The case was taken into court and the court ordered the building permit issued because it was shown that the lot was purchased and the intent to build such a building was declared before the zoning ordinance was effective.

Non-conforming uses are included, therefore to attempt to eventually bring all the buildings under the control of the new zoning law. It would of course be unreasonable to demand immediate change of the existing buildings to conform with the newly enacted law. However, by including such non-conforming clauses, the buildings of a particular zone should eventually all conform to the regulations.

Chapter VII

Administration

Without administration or a penalty clause in the ordinance, the zoning regulations would be worthless. Such a situation would be comparable to criminal laws with no police. Therefore, all zoning laws have a method set up by which they can be administered.

The right in Michigan to establish zoning is given to the municipalities by The Zoning Enabling Act of Michigan, Act 207 of the Public Acts of 1921 as amended by Act 306, Public Acts of 1941. These acts set up the method in which the cities may administer the zoning laws.

The act states that the cities can set up a Board of Appeals, which acts upon all questions arising under a zoning ordinance. The board may consist of the five members appointed by the legislative body of the village or city, each member being appointed for a three year term. It shall take four members of the board to reverse any order, requirement, decision or determination of any administrative official.

The zoning ordinances state that it shall be enforced by the Building Inspector or some official appointed by a City Planning Commission and that he shall not issue any building permits unless the terms of the ordinance are complied with. When the building is completed, he shall check to see again if the building meets the requirements of the zoning law and if not, he shall not issue a certifi-

cate of occupancy.

If a person feels ne is aggrieved by the ordinance, he may take the matter up with the Board of Appeals. A meeting may be called with a proper notice of a public hearing. The board will decide the application or appeal it within a reasonable time.

Any violation of the ordinances will make the violator guilty of a misdemeanor and if convicted by a court he shall be liable to a fine or shall be punished by imprisonment.

Chapter VIII

Comparison of Michigan and Florida Zoning Ordinances

The zoning ordinances of Michigan and Florida were found to be surprisingly similar. Even though the states are far removed geographically and have different modes of living and different business enterprises, the zoning regulations seemed to follow the same general pattern.

Only two things stood out as being somewhat different in the two states. The first of these was the problem of racial segregation which is more prevalent in the South. The segregation of races by districts is not legally in the field of zoning. The United States Supreme Court has uniformly declared such discrimination to be contrary to the fourteenth Amendment of the Federal Constitution. However, a method used to accomplish this is to exclude the white race from the colored district and the colored race from the white district. It is interesting to note that the City of Lake Worth, Florida has such a clause. From Article X, page 17 of the zoning ordinance of the city of Lake Worth, Florida:

Article X Negro Section---H District

"Section 1. Primary use. In this district no residence shall be occupied by white families and white persons are hereby prohibited from establishing a place of business within the territorial limits of this district. No negro shall make his residence in any other section of the city."

The zoning ordinance of Sanford, Florida also has race segregation in its provisions. In Section 10 it states:

"In R-1AA, R-1 and R-2 dwelling districts, no building or part thereof shall be occupied or used by a person or persons of the negro race:--"

Section 11 of the same ordinance states the same for R-3, R-4, and R-5 dwelling districts.

The other difference noted was the fact that Florida made more special provisions for hotels and other commercial residences and zoned more property for this use. As the tourist trade is Florida's main occupation, this might be excepted.

Chapter IX

Building Codes

The definition of a building ordinance is similar to that of zoning only in that it also regulates construction of buildings. From the Building Code Ordinance of Marshall, Michigan, we have a typical definition.

"An ordinance to promote the health, safety, and welfare of the inhabitants of the City of Marshall by regulating the light, ventilation, sanitation, fire protection, construction, maintenance, alteration, improvement, and moving of dwellings, buildings and structures; to establish the office of Building Inspector; to establish administrative requirements, and to establish remedies and fix penalties for the violation thereof."

The tendency recently has been to adopt Building Codes which have been set up by boards and conferences. Some of these are the "Uniform Building Code" set up by the West Coast Building Officials Conference; the "National Building Code", recommended by the National Board of Fire Underwriters and the "Southern Standard Building Code, used by many cities in the South. These codes have been adopted in entirety or in some case partially. For example, Lake Worth, Florida adopted the Uniform Building Code but added a supplement which makes small changes. Some small towns adopt the F.H.A. building requirements, but this does not

cover the needs of a large city.

The Uniform Building Code is used by five hundred cities in thirty-eight states. It is probably the most popular of the standard building codes put out.

One of the main failures in building codes is their non-uniformity. Through this code there has been an attempt to standardize building codes. The value of this plan can best be brought out by the preface of the Uniform Building Code.

"The Uniform Building Code is dedicated to the development of better building construction and greater safety to public, through the elimination of needless red tape, favoritism and local politics by uniformity in building laws; to the granting of full justice to all building materials on the fair basis of the true merits of each material; and to the development of a sound economic basis for the future growth of cities through unbiased and equitable dealing with structural design and fire hazards."

It is the hope of many people to standardize the building codes, thereby harmonizing code policies among adjacent communities. The main non-uniformity occurs in the small housing field.

It can be seen that Northern cities must provide for snow loads not met with in the South, and that areas subject to hurricanes, tornadoes, or earthquakes must provide for their individual hazards. Also, large cities have a much greater fire and health problem than small cities.

These things are seen as local problems, but the allow-

able working stress in concrete should not vary from five hundred to one thousand pounds per square inch or the live load for dwellings from twenty-five to eighty pounds per square foot.

This argument gives support to unified building codes. A committee is to be formed in the near future to set up a uniform building code for the middle west and it is the belief from the conclusions of this paper that this project should be given all the support possible and the adoption of this code should be wide in the middle west.

The completeness of building codes seems to correspond with the size of the cities. The larger the city, the more complete the code. In order to protect the city, the code tells how structures will be built. This excludes all new developments until they can be adopted by the city in its code. This sometimes means a lot of red tape and time before the new developments can be used.

The scope of this paper does not permit the full discussion of the engineering principles used in these codes, because they are very lengthy and complete. An attempt will be made to compare some of the engineering design of buildings used in these codes.

It is interesting to note that the majority of cities use the ACI specifications for the design of reinforced concrete. A few cities such as Iron Mountain and Adrian rely upon such statements as "present method" and "accepted good practice" for the design of reinforced concrete. This seems a bit risky, but it would probably revert back

to the ACI specifications.

East Lansing, Michigan does not state what design formulas are to be used, but does state the principles to be employed. East Lansing is a conservative city and it is hard to understand why they assume the following: "The bond between the concrete and the metal reinforcement remains unbroken through out the range of working stresses." This is not an accepted theory.

The Uniform Building Code doesn't refer to the ACI specifications, but the formulas used are the same. The National Building Code refers directly to the ACI specifications. The city of Lansing, Michigan, up until March 25, 1940 used the old elastic theory for the design of reinforced concrete. Since then they have adopted the ACI specifications.

Chart IV which follows shows what provisions are made for reinforced concrete specifications in the building codes of this survey.

Chart IV
Reinforced Concrete
Specifications

Uniform Building Code	American Concrete Institute
National Building Code	ACI
Adrian	Accepted good practice
Ann Arbor	ACI
East Lansing	Standard specifications for Portland Cement
Holland	Dwellings only
Marshall	ACI
Mt. Pleasant	ACI
Niles	ACI
Jacksonville	ACI
Lake Worth	ACI
Winter Haven	Southern Standards Building Code

The main differences between the building codes of Florida and Michigan are in the wind stress design and the minimum requirements for the weights of roofs. This is a logical difference because of the hurricanes that strike Florida every fall. The houses in Florida must take into consideration the winds that reach 80 and 90 miles per hour. The house designs require anchor bolts to hold the houses to their foundations. In the southern regions of Florida, they must also have special provisions for basements. These provisions are made because the water table is close to the surface and most of the land is flat and only a few feet above sea level.

Michigan, on the other hand, has building problems for their region. They must allow for snow loads in their design. Another problem, that isn't included in the building codes is the pitch of the roof. When ice forms on the roof it holds water and this water has a tendency to back up under the shingles and leak through.

The following table shows the horizontal wind stresses to be allowed for. Note that Florida's are much higher.

Chart V
Wind Stresses

<u>Building Code</u>	<u>Requirement</u>
Uniform Building Code (including Marshall)	15# for structures up to 60' 20# for structures 60' and over 30# for water tanks, etc.
National Building Code	20# for structures up to 50' 24# for structures 50' to 99' 28# for structures 100' to 199' 30# for structures 200' & above
<u>Michigan</u> Ann Arbor	15#
East Lansing	20#
Lansing	20#
Mt. Pleasant	20#
<u>Florida</u> Jacksonville	30# for structures of height $1\frac{1}{2}$ times the base. In no case shall overturning moment exceed 75% of the moment of stability of the structure.
Lake Worth (UBC amended to apply to Lake Worth)	30# for structures up to 60' 35# for structures 60' and over 45# for water tanks, etc.

There has been much criticism of building codes and laws. One of the main beliefs is that it is a method of increasing the costs of building. This is not entirely true but it has some truth in it. Many building codes are outmoded and they do not recognize the new developments in the building field. The construction industry has made outstanding progress in the last fifty years, but the building codes, especially those in the small house field have failed to keep up with the progress.

As an example of just how outmoded some building codes can be, there is a requirement in one of the western states that the room height in a dwelling must be 8'3". The reason is not for increased ventilation, light or any of the other logical reasons but because when the law was put into effect, two by fours came in sixteen foot lengths. The idea was that the two by fours would be cut in half and by the time a plate was put on the bottom and top, and the room was finished, the height would be the 8'3" required. This provision kept a firm from building prefabricated houses in this area. Their room height was 8'0" which did not meet the requirement. Laws like this should be repealed.

Small or large, every city should have a building code. The State Journal of Lansing Michigan printed an article on March 27, 1949 telling of fire tragedies in which twenty-eight persons died within six weeks in Michigan. The reasons were as follows:

"The Fire Marshal's division attributed the appalling loss of life to neglect, carelessness and failure

to make necessary fire inspections and enforce building codes."

This points out the real need for building codes and shows what could be expected if they are not enforced or if they were not in existence. This does not show what would happen if a building collapsed, but the loss of life could be just as great.

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