

Projects

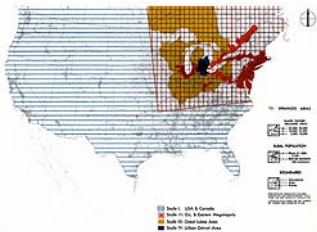
THE DEVELOPING URBAN DETROIT AREA

Presented by Emmanuel Caparis



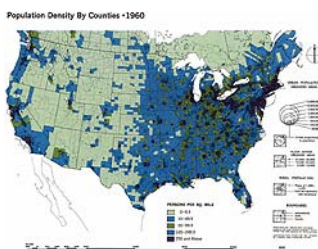
In January 1965, The Detroit Edison Company began a five-year comprehensive study of Detroit and the adjacent area under its direct influence for the purpose of analyzing, understanding and exploring its growth patterns, potentialities and future requirements.

Detroit Edison wished to contribute to the improvement and well-being of people and industry. It also wanted to know how to meet best the increasing requirements for electric energy.



Research into the ekistic phenomena of the Urban Detroit Area required examination of conditions and developments in all of North America, an emerging Great Lakes Megalopolis, and the entire Great Lakes Area

Research into the economic, social, cultural and physical problems facing man in the Urban Detroit Area was first proposed by Walker L. Cisler, Chairman of the Board, The Detroit Edison Company. Mr. Cisler was keenly aware that there is only one way for man to cope with these problems and this is by opening his eyes to them, understanding them, and exploring all possible solutions. He was determined that the study would not be a superficial one. As a result, Mr. Cisler asked Doxiadis Associates of Athens, Greece, international consultants on urban planning, to undertake a thorough study of the Urban Detroit Area. Wayne State University also was asked to participate because it would provide the opportunity to deploy the resources of students and faculties in the solution of urgent problems facing Detroit and other cities.

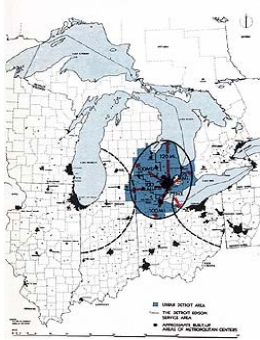


Areas of greatest population density occur primarily on the Atlantic seaboard, along the southern shores of the Great Lakes and on the Pacific coast. A secondary pattern of high density has developed on both sides of the Appalachians. There are also some high densities along the Gulf coast and in Florida.

Thus Detroit Edison created the "Developing Urban Detroit Area Research Project," a study on a scale never before attempted for an entire urban region.

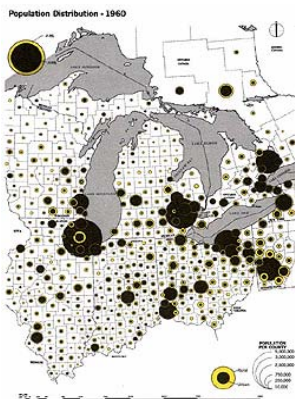
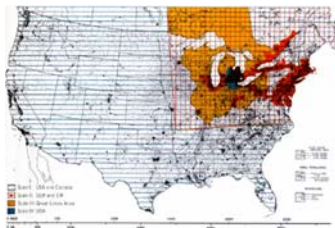
The study was planned in three phases: The first consisted of an inventory and analysis of existing conditions. The findings of this phase of the study were presented in Volume 1, Analysis. The second phase deals with future evolutions and forecasts. The report on this phase of the study is titled Future Alternatives. The third phase, elaborates on the findings of the preceding two phases and provides concept plans and proposals for the future development of UDA (Urban Detroit Area) the Central Region, the Detroit Central City and the Central Business District of Detroit. The report on this last phase of the study is titled A Concept for Future Development.

Although this study is primarily concerned with the Urban Detroit Area, its patterns and problems of ekistic development (ekistic meaning the science of human



To define the Urban Detroit Area, it was necessary to consider present and future growth trends in urbanization throughout the Great Lakes Area. It was also necessary to determine spheres of influence of neighboring urban centers (Chicago, Cleveland, Pittsburgh and Toronto) similar in scale to Detroit.

The Four Scales of Overall Analysis



This map illustrates the basic distribution of population in the Great Lakes Area. There are two major axes of concentration meeting in Detroit: a line between Chicago, Detroit and Toronto; the second from Chicago to Detroit, Cleveland and Pittsburgh. Already evident are extensions of the Chicago-Detroit-Toronto axis to Montreal and through Buffalo and the Mohawk Valley to New York; and of the second line through the Potomac River Valley to Washington. A third connection along the southern shore of Lake Erie is represented by the Toledo-Cleveland-Buffalo axis.

settlements) are essentially those of other cities throughout the world.

The Developing Urban Detroit Area Research Project has been carried out by teams of experts in the United States and in Greece, and has been based on the work of thousands of people who carefully followed and collected data on the phenomena of the Urban Detroit Area and the broader space around it.

PHASE 1

INVENTORY AND ANALYSIS

At the beginning, the UDA Research Project was to concentrate on the 7,600 square miles of south-eastern Michigan served by Detroit Edison. This is about one-eighth of Michigan but slightly more than half of the people in the state live and work in this area. At its center is the urban complex of Detroit.

However, it became apparent at the early stages of the study that a clear understanding of the ekistic phenomena within the Detroit Edison service area could not be achieved unless the wider area under the direct influence of Detroit was analyzed with the same degree of detail.

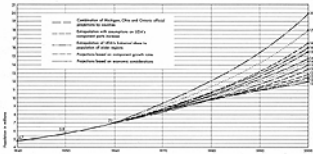
To this end, the study area was extended beyond the limits of the Company's service area and covers all such zones which are or would be ultimately influenced by the physical expansion of Detroit's urban development.

Investigation showed that Detroit's area of influence extends within Michigan and to northern Ohio as well as to Canada; its boundaries to be at distances from the center of Detroit ranging from 75 to 100 miles. The study area—referred to as the Urban Detroit Area—covers 23,059 square miles and comprises 25 of the 83 Michigan counties, 9 counties in Ohio and 3 counties in Ontario, Canada.

Obviously, what occurs in UDA is affected by conditions and developments in the entire Great Lakes Area and, indeed, in all of North America. As a result, the Urban Detroit Area was examined against the background of corresponding evolutions within four scales of descending size. Scale I: U.S.A. and Canada. Scale II: Great Lakes and Eastern Megalopolis. Scale III: The Great Lakes Area. Scale IV: The Urban Detroit Area. Each scale is shown on the map.

The Great Lakes Area represents the most important geographic division of the United States in terms of concentration of population and U.S. manufacturing. It has substantial agricultural production, a major concentration of income, and is traversed by the most important land transport axis in the United States and the most important inland waterway system of the world—the Great Lakes and

the St. Lawrence Seaway, The Canadian part of the Great Lakes (mainly the Province of Ontario) represents by far the most important concentration of all socio-economic activities in Canada. Three of the most important urban concentrations in the United States are in the Great Lakes Area. The second most important megalopolis of North America is in process of formation in the Great Lakes Area.



For the purpose of this study, it is assumed that UDA population in the year 2000 might reach a level as low as 12 million and as high as 18 million. A medium projection of 15 million is assumed.

The Urban Detroit Area lies at the crossroads of the Great Lakes water routes and the land route to Canada. In addition, UDA is at the junction of the two most important axes of urbanization within the area (Chicago-Detroit-Toronto-Montreal and Chicago-Detroit-Cleveland-Pittsburgh). UDA is one of the most dynamic urban areas of the Great Lakes Area, one of the most important and fast-growing regions of North America.

The objective of this phase of the Research Project was to provide an integrated picture of development in the Urban Detroit Area. Doing this, the study could proceed to the second phase.

PHASE 2

FUTURE ALTERNATIVES



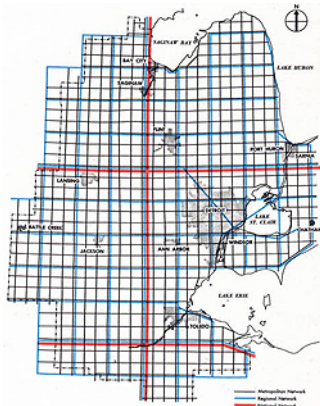
Possible locations for major UDA functions, such as industrial, research or education activities, are shown in this map. Through the elimination of alternatives, only those locations which are placed by major communication axes are considered. The nine locations shown are reduced to an even smaller number on the basis of suitability.

The present functions and structure of the urban area of Detroit do not correspond to the potentialities of the location. Because of forces inherent in the city of Detroit, there is a certain course of development that will be followed. Unless major changes take place, this course is not expected to alter and the results can be foreseen within reasonable limits of approximation.

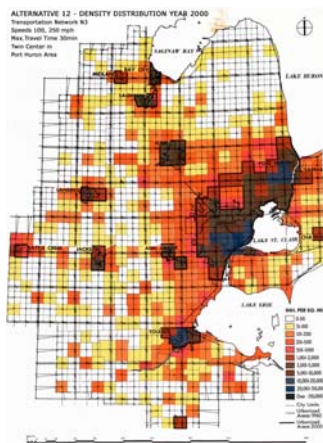
This is true of all cities. The conventional method of planning and foreseeing the future is to extrapolate present trends to try to discover where the present course is leading. In transportation, for example, new arteries are planned to take care of existing trends as they develop. This approach does not give the transportation system the latitude it requires to take change into account. This kind of planning often leads to impossible situations. Existing centers of activities, existing axes of transportation become congested and paralyzed.

The method of extrapolation of present trends into the future has to be carefully used, not to show where the city should go but where the city is going now and where such a trend will lead to. If present trends should lead to impossible situations, it is necessary to demonstrate which these situations are, which dangers are created for the city, and which problems it will have to face in the future.

On the basis of these considerations this phase of the study proceeded to the extrapolation of Detroit's growth through expansion in the future for the year 2000. Data examined and ensuing projections were based on urbanization trends, general growth trends, residential



The study of the most probable patterns of communication networks, in combination with various sets of speeds, led to the acceptance of eight systems of transportation with corresponding speeds.



UDA is expected to continue its dynamic growth. High population density is projected for the year 2000 in the areas of metropolitan Detroit, Port Huron and Toledo.

densities, population growth trends and several local factors such as transportation, service facilities and accessibility.

The results show that if present trends continue, population in the Urban Detroit Area will total approximately 15 million by the year 2000. Detroit, which had a population of about 3.5 million in its urbanized area in 1960, will have about 8 million. This 128 percent increase (about 4.5 million people) will mean an even greater percentage increase in the number of cars, and in movements of people and goods.

Analysis of the continuation of the present course leads to the conclusion that it must be changed. But how?

New Goals for UDA

Goals must be set which can lead to avoidance of the problems that make the present course unacceptable. These goals will have to be set further in the future and will define the desired conditions for a better urban area which will not have the weaknesses of the present one. As these goals will be set further in advance, in this case by the year 2000, it will be necessary to connect the point set by the future goals with the existing situation in order to estimate how we can move from one to the other. For example, a situation may be desired which is reasonable but not feasible for the target year 2000, or which may be unreasonable for any period.

Methodology

The principal objective of the second phase of the UDA Research Project is to study the existing trends and analyze the resulting problems of urban growth as well as to provide a method for the prediction of the reasonable alternatives of future development. The comparison of these alternatives can lead to the achievement of optimum conditions for the Urban Detroit Area.

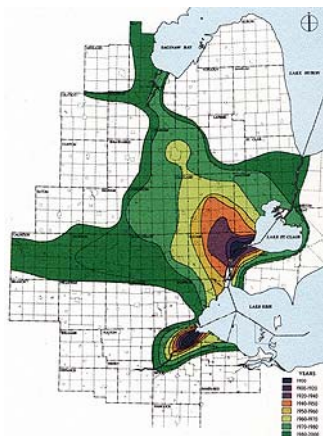
In this phase it is important to consider the future alternatives for UDA most carefully. What size and type of development can be expected? What should be done to give this development an orderly form? How can the people and their leaders avoid the all too natural mistakes that have been made here and in other parts of the world in the process of broad scale urbanization?

For a city as large as Detroit these alternatives number in the thousands. For a system of cities such as the Urban Detroit Area there are millions of alternatives.

The proper method for the selection of the best alternatives must be based on the isolation of dimensions and the elimination of alternatives. In order to evaluate, compare and eliminate alternative solutions in a systematic manner, Doxiadis Associates developed a



On the basis of the rating of alternatives and consideration of such transportation characteristics as person-trips, person-flows, person-miles and person-time traveled, the study accepts the establishment of the theoretical metropolitan and regional networks shown above as a possible solution to transportation pressure in UDA.



Based on the change of land use between the years 1900 and 1960, it is possible to project urbanization trends in UDA. The extrapolation of the non-farmland trends suggests a considerable expansion of the non-farmland area by the year 2000 and indicates that a large percentage of the UDA will have a strong urban character by that time.

special methodology. This methodology is the first attempt at the study of alternative patterns of development to provide a comprehensive framework for comparisons and for selection of the optimum solution. Due to the many millions of possible alternatives, the IDEA method was developed for the isolation of dimensions, the elimination of less desirable alternatives and the selection of the best through the extensive use of computers.

PHASE 3

PLANS AND PROGRAMS

The future of the Urban Detroit Area depends on the conception of its proper role within the Great Lakes Megalopolis, the Great Lakes Area, and North America in general.

Its intrinsic natural role has been that of a major trade and transportation center. Its acquired natural role is that of a major metropolitan area with high-order service functions. Its actual role is that of the most important manufacturing center of an area which constitutes the heart of U.S. manufacturing.

There is no doubt that the future of UDA will depend on the fulfillment of all its roles and the achievement of a correct balance among them.

The objective of the third phase of the Research Project is to provide a concept for future development, plans and programs for the successful future growth of UDA.

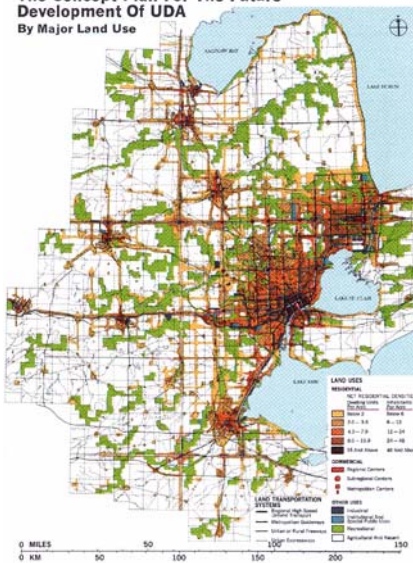
The final selection of the alternative leading to the best concept plan for the future development of UDA is based on the value of each alternative and on the future that it can create, if one takes into account what is inevitable, what is desirable and what is feasible.

In this third and last phase, the seven best alternatives previously arrived at are taken and examined in much greater detail leading to the alternative chosen as the best basis for a concept plan for future development. The aim has been to see how this alternative fits into the broader framework from the national scale to the Great Lakes Megalopolis, to elaborate on it at the scale of UDA and also to study the impact this alternative will have upon the lower scales, i.e. the Central Region of Detroit, the Detroit Central City, the Central Functions Area and the smaller units of the whole system.

THE URBAN DETROIT AREA

The study of alternative futures for UDA has shown that there are many possible alternatives which promise a much better future than that of the continuation of present trends or that resulting in the decline of economic forces. The one alternative which has been selected as the best

The Concept-Plan For The Future Development Of UDA
By Major Land Use



envisages a much more efficient organization for UDA than is presently the case and seeks to contribute toward its continuing growth in terms of people, economic forces and energy.

This alternative, which forecasts a population of 15 million for UDA in the year 2000, double the 1960 population, has these major characteristics:

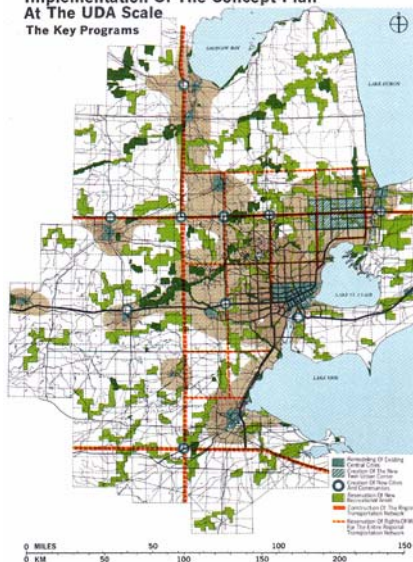
- A new twin urban center of high-order services located northeast of Detroit in St. Clair County, at the only other point in UDA where major land and water routes cross.
- A new industrial pole and industrial zones in the vicinity of the new twin urban center and a new land transportation axis of national and international importance.
- New port facilities on the southern part of the St. Clair River.
- A new major airport in the vicinity of the new twin urban center.
- Major educational and research centers to the north of Detroit.

The successful implementation of the selected alternative calls for the reorganization of the land transportation network on the basis of a new gridiron pattern, similar in concept to the old one which corresponded to the subdivision of agricultural land and the existing radial system of highways.

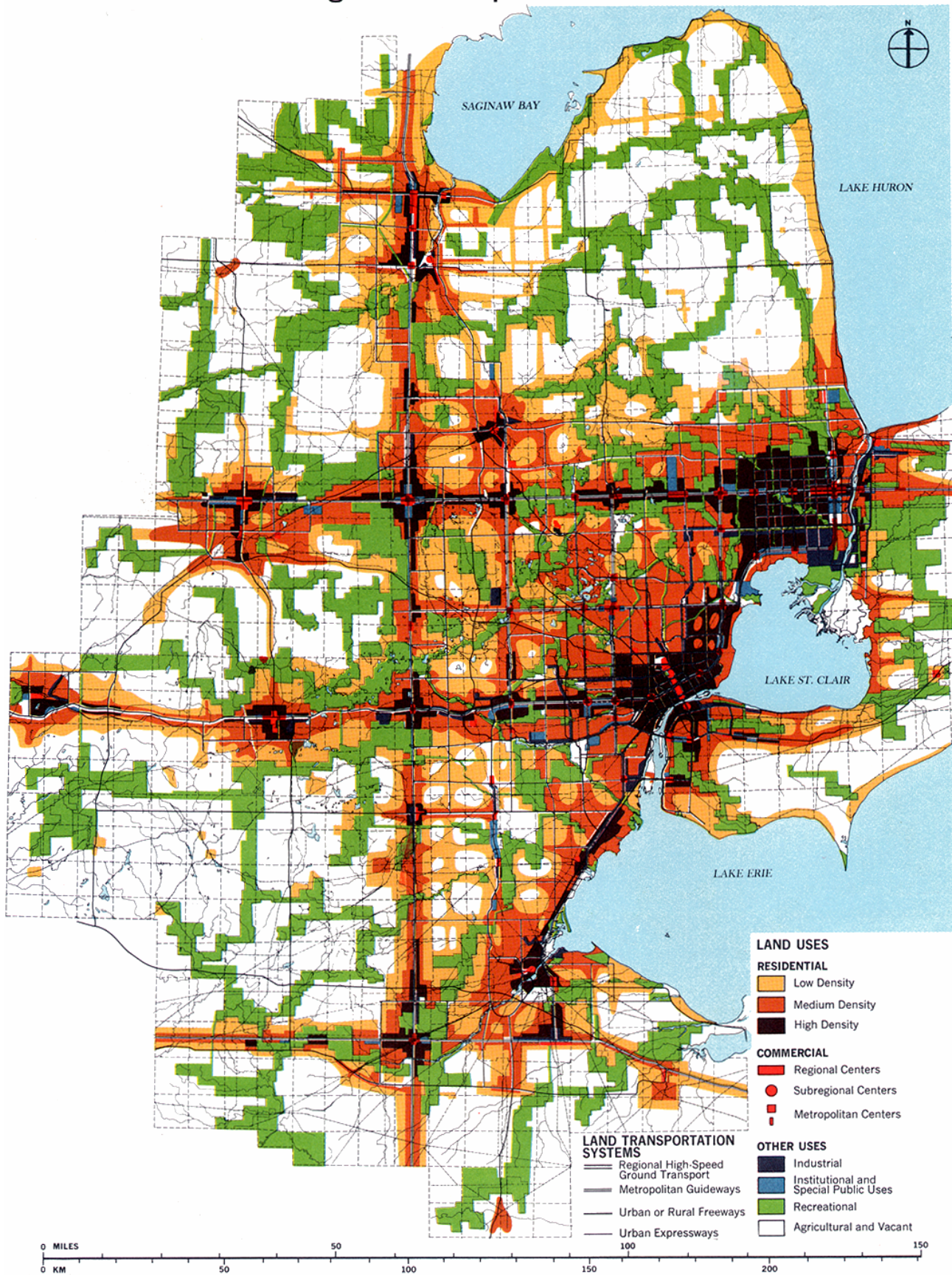
The implementation of the selected alternative aims at achieving three goals:

- Revitalization and remodeling of the suffering and declining central areas, such as the Detroit Central City, through their relief from high pressures, their reorganization into self-sufficient communities, and by making them functional components of the whole system once again.
- Much more rational and attractive development of the new urban areas to be created, which will house about half the population of UDA by the end of the century.
- Increase in the growth potential of the whole UDA, through better and much more functional connections with the wider region and the megalopolitan developments emerging there, so that UDA can take full advantage of its privileged central position in the region and thus assume a leading role in the megalopolis in the future.

Implementation Of The Concept-Plan At The UDA Scale
The Key Programs



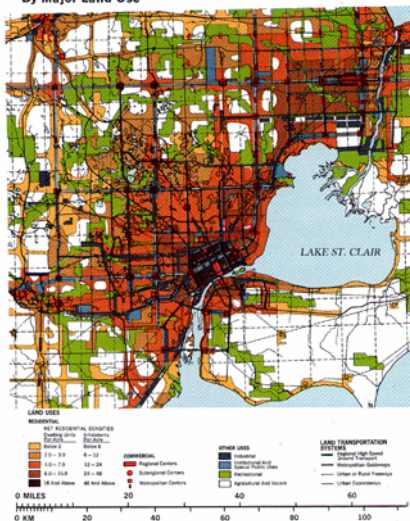
The Continuous And Long-Term Concept-Plan • UDA • Year 2100



THE CENTRAL REGION

The means used by the selected alternative to achieve the above goals find their most characteristic expression in the Central Region and the Detroit Central City. The creation of the new twin urban center to the northeast of the Central Region and the concentration of major functions in its vicinity will attract a significant part of the future growth, which would otherwise be spread around the periphery of the Central Region. This pattern of growth will make possible and will facilitate planning for the area since a big part of the potential growth of the Central Region will be channeled in a particular direction.

The Concept-Plan For The Future Development
Of The Central Region
By Major Land Use



In this new urban area a strong center of services, commerce and transportation will be created to form, together with a revitalized CBD in Detroit, a two-pole system of high-order services capable of becoming the major regional center in UDA and the leading center in the Great Lakes Megalopolis. This role cannot be undertaken by the CBD of Detroit alone because of the present conditions of disease and decline in the CBD and its surrounding area, which result in a disorganized sprawl of services and functions into many smaller centers. If this continues and if no new strong center is created, it is expected that some high-order functions will even abandon UDA altogether because such services by nature and tradition require physical proximity and concentration to develop and grow.

Therefore, to keep high-order services in UDA and to attract new ones in the future, the only solution envisaged by this study is to strengthen the CBD of Detroit with a new center of equal importance. Consequently, the implementation of the selected alternative will result in greater economic growth and the development of many positive forces conducive to a much better future for UDA and its Central Region in particular.

The new urban center will be physically connected with the Central Region and thus a twin metropolitan area will be created, to be served by the system of the twin major centers of services. This twin metropolitan area will have a major connecting axis along the lakeshore. Two other major land corridors will connect the twin centers with the west and with Canada. These axes will become the main spine for the development of UDA and its Central Region and the carriers of major functions of regional and metropolitan importance.

The Central Region of Detroit, relieved of part of the additional pressures which would otherwise be exercised all around its periphery, will acquire the preconditions for revitalization. Such revitalization will create the necessary foundations for the gradual elimination of the gap existing between the Detroit Central City and the outlying

areas and will enable the Central Region to become the most important center in UDA and the wider region.

THE DETROIT CENTRAL CITY

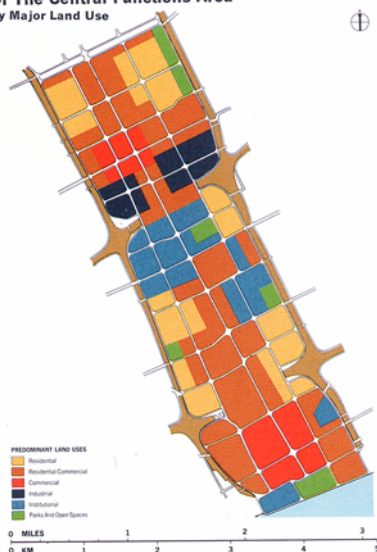
Realization of the selected alternative will create preconditions for the revitalization of the Detroit Central City and the improvement of its Critical Area. Of course, the creation of the new twin urban center cannot alone guarantee the complete improvement of this suffering area. Implementation of the selected alternative should be combined with a well-conceived program of revitalization. Such a program should aim at improving the physical environment of the Detroit Central City's Critical Area and at reorganizing its structure on the basis of well-balanced and self-contained communities so that it can again become the real heart of the whole system for the benefit of both its inhabitants and UDA as a whole.

On the other hand, this program of revitalization will not be successful if development in UDA and the Central Region is left to follow its own course because none of the problems which have caused the crisis at the core will have been avoided. This program, therefore, has to be implemented in parallel with the creation of the new twin urban center. Even in such a case conditions cannot become ideal overnight. The existing gap between the Critical Area and the other parts of the Central Region is such that a long period for the completion of the normalization process will be required. The results of action in the right direction, however, can make themselves felt within a few years.

The Concept-Plan For The Future Development Of The Detroit Central City
By Major Land Use



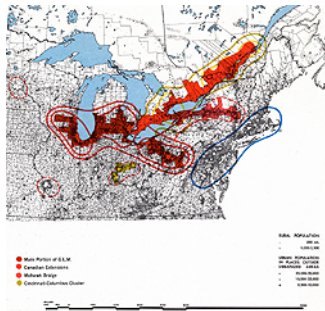
The Concept-Plan For The Future Development Of The Central Functions Area
By Major Land Use



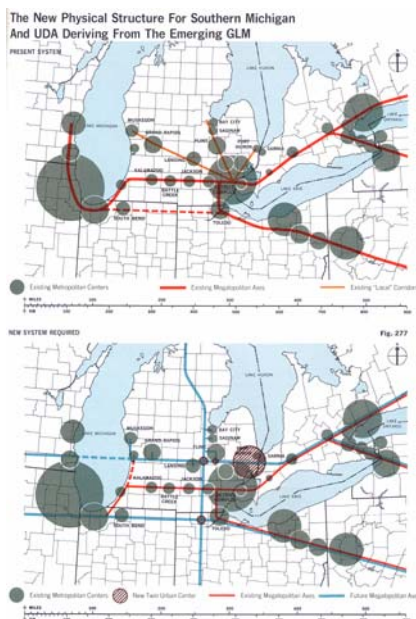
THE CENTRAL BUSINESS DISTRICT OF DETROIT

The implementation of this program together with the creation of the new twin center of services will also create the preconditions for the complete revitalization of the present CBD and its planned future expansion into the Central Functions Area. Here again the CBD will have to be combined with a program for the internal reorganization and restructuring of the Central Functions Area. This program will aim at making this whole area operate as one unit and acquire again its original unity along the lines of the original two-dimensional plan drawn up in 1807 by Governor Hull and Judge Woodward but with two important modifications:

- The surrounding transportation corridors which have already covered wide areas will be further developed on the basis of technologically new transportation means.
- The implementation of a two-level concept on the basis of which pedestrians will be moved into the upper level and will be separated from the mechanical means of transportation. Thus the human scale will be re-established and interaction between people will be



The UDA Research Project reveals the formation of a major urban complex with megalopolitan characteristics emerging in the Great Lakes Area.



strengthened, resulting in the attraction of more employment and greater economic activity to the center.

A GREAT LAKES MEGALOPOLIS

During the study of the Urban Detroit Area, it has been noted that an urban development presenting a number of similarities with the established Eastern Megalopolis appears to be in the course of formation in the Great Lakes Area. The heart of this emerging complex and its central urban cluster is the Urban Detroit Area.

As shown in the map, three major urban clusters (around Chicago, Detroit, and Cleveland/Pittsburgh) seem to be emerging. In several cases, "bridges" between these three clusters are already present, or at some rudimentary formative period. The main portion of the emerging Great Lakes Megalopolis may comprise these three clusters. In many cases, however, a Canadian extension of it, north of Lakes Erie and Ontario and along the St. Lawrence Seaway toward Montreal and Quebec, passing through the important Toronto/Hamilton/Buffalo cluster also seems to be emerging. Another, weaker, link south of Lakes Erie and Ontario and passing through the Mohawk Valley seems to point to a future bridge between the megalopolitan areas of the Great Lakes and the east coast.

The 1960 population of the Great Lakes Megalopolis was 22.5 million versus 37 million of the Eastern Megalopolis. The Eastern Megalopolis, although older than any other area of heavy population concentration, has a limited growth potential due to geographic considerations. The study predicted that by the year 2000 the Great Lakes Megalopolis would actually overtake the Eastern Megalopolis in population.

REFERENCES:

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The Developing Urban Detroit Area
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Study directed by C. A. Doxiadis and carried out by Doxiadis Associates with the participation of Wayne State University and the Detroit Edison Company. Published by The Detroit Edison Company.