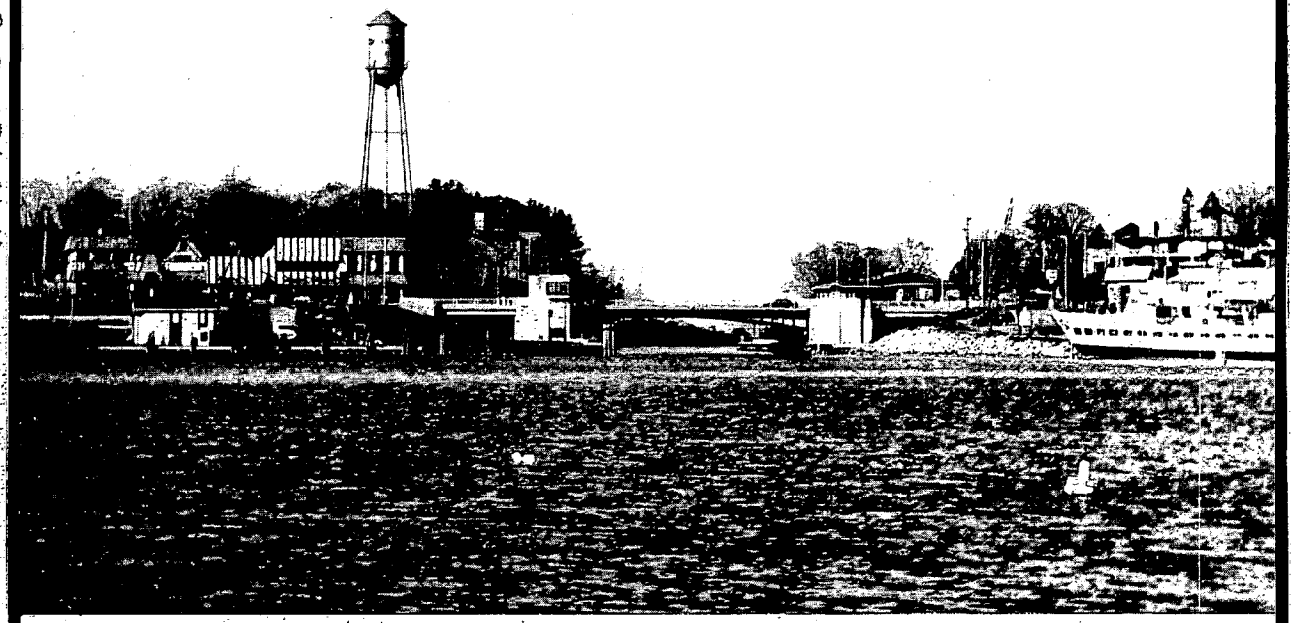
CITY OF CHARLEVOIX



WATERFRONT AREAS MANAGEMENT AND CITY MASTER PLAN

NOVEMBER 1982

RONALD F. NINO & ASSOCIATES
BURTON, MICHIGAN
M. C. SMITH & ASSOCIATES, INC.
EAST GRAND RAPIDS, MICHIGAN

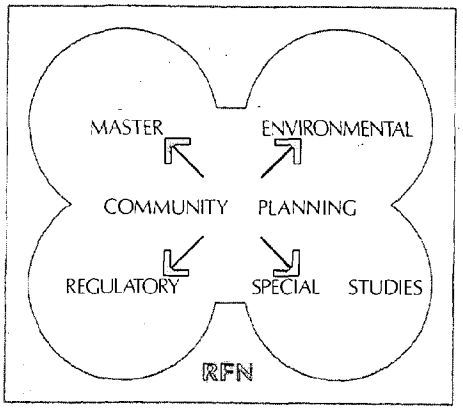
CITY OF CHARLEVOIX
WATERFRONT AREAS MANAGEMENT AND
CITY MASTER PLAN

RONALD F. NINO & ASSOCIATES
COMMUNITY PLANNING & DEVELOPMENT
BURTON, MICHIGAN

AND

M. C. SMITH & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE & URBAN DESIGN
EAST GRAND RAPIDS, MICHIGAN

PLAN PREPARED WITH THE ASSISTANCE OF
THE MICHIGAN COASTAL MANAGEMENT PROGRAM
ADMINISTERED BY THE
MICHIGAN DEPARTMENT OF NATURAL RESOURCES
LAND RESOURCES PROGRAM DIVISION
IN COOPERATION WITH
THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION



RONALD F. NINO & ASSOCIATES
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Mr. Robert Hunt, City Manager,
Mayor and Members of the City
of Charlevoix City Council
210 State Street
Charlevoix, Michigan

Dear Manager, Mayor and Council Members:

This document represents the culmination of an extended effort by the City's administrative staff, elected officials, the Planning Commission, the Consultant team, and finally, a considerable number of the citizens of Charlevoix in the preparation of the City's Comprehensive Development and Waterfront Management Master Plan.

It is important to identify that the recommendations reflected by this planning document as to the use of the City's physical and natural resources, followed an extensive citizen participation program. This program flowed from the results of a series of workshops, and from an attitude survey published in the Charlevoix Courier. Respondents to the survey showed geographic relationships which led the researchers to conclude that the sample was representative of all of the residents of the City of Charlevoix.

This Comprehensive Development guide suggests a very positive way for present and future decision makers to guide the forces of development in the City to achieve the optimum environmental product. If those guidelines are thoughtfully pursued, those responsible should be successful in perpetually establishing the claim that, indeed, Charlevoix is "Charlevoix the Beautiful."

THE PROFESSIONAL BUILDING ∘ 2ND FLOOR ∘ 11643 S. SAGINAW STREET ∘ GRAND BLANC ∘ MICHIGAN ∘ 48439 ∘ 694-0170

For our part, the Consultant team is most appreciative of the cooperation it received from the members of the City's official body and from the citizens at large.

Sincerely,

Ronald F. Nino
RFN:jlr

ACKNOWLEDGEMENTS

Charlevoix City Council Members

Kenneth Staley - Mayor
Clem Olach - Coucilman
Timms - Councilman
Wood - Councilman
Shirley Roloff - Councilwoman
Dr. Jeffrey Porter - Councilman

Robert Hunt - City Manager

All of the City staff whom the Consultants called on from time to time for assistance, especially the City Assessment Department.

Charlevoix Planning Commission Members

Walter Hufford - Chairman
Barbara Fels - Secretary
William Bellows - Member
June Cross - Member
Dave Novotny - Member
Bob Miles - Member
John Friedly - Member

Previous Charlevoix Planning Commission Members

Dr. David Strawbridge - Past Chairman
James Brinker - Former City Manager
Clem Olach - Former Member
Joseph Morris - Former Member
Thomas Duke - Former Member

We thank the Citizens of the City of Charlevoix for their excellent response to the survey questionnaire and for their workshop participation.

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PLAN SUMMARY

The City of Charlevoix Waterfront Areas Management and City Master Plan is hereby summarized as follows. The Plan Summary is placed in the order in which it a-pears in the body of the main text.

PART I: BACKGROUND INFORMATION AND SUPPORTING STUDIES

REGIONAL PERSPECTIVE AND LOCATION

1. The City of Charlevoix is situated in northwest lower Michigan. It generally occupies a land area located between Lake Michigan and the top end of Lake Charlevoix.

2. Michigan highway route 31 runs through the City providing the principal route between Traverse City and Petoskey. Michigan route 66 enters Charlevoix near the south end and joins Michigan highway route 31. Route 66 to route 31, through Gaylord, provides a line to Interstate Highway 75.

3. A general utility airport owned by the City of Charlevoix also provides a transportation link.

4. A substantial number of visitors travel to Charlevoix by boat. Round Lake, situated between Lake Michigan and Lake Charlevoix, provides a natural harbor of refuge. A public marina on Round Lake is available to boating visitors as well as marine facilities on Lake Charlevoix.

SUPPORTING MATERIAL FOR PLANNING DECISIONS

Decisions on how to use the land in the City of Charlevoix are based on a number of factors. These include: natural and physical resource relationships, population characteristics and growth potential, economic base conditions, public utilities, housing composition and housing objectives, and the goals, objectives and policies which ought to guide development decisions as adopted by local decision makers. These were then summarized as follows.

NATURAL AND PHYSICAL RESOURCE RELATIONSHIPS

An analysis of natural and physical resource relationships was conducted to determine the extent to which they act as negative or positive constraints to growth and development of all of the City's land resources. They also serve to identify environmental features worthy of preservation and environmental features which affect the spatial configuration of land uses.

Soils

1. Generalized soils information for the City of Charlevoix advises that soils generally consist of sandy loam. These soils present slight limitations to urban development, particularly when development is not reliant on private sewer systems as is the case in Charlevoix.

2. On the steep slopes, particularly on Lake Michigan north of the Pine River Channel where sand dune conditions exist, development should not encroach nearer the water than the dune crest and the exposed bluff should be well stabilized with vegetation.

3. Soil erosion protection measures should be practiced whenever development occurs near the water's edge on the Round Lake and Lake Charlevoix slopes.

Agricultural Productivity of Soils

1. The soils in Charlevoix have no unique agricultural values. Because of the limited land area within the City, no consideration was given to preserving land for agricultural uses.

Climate

1. In general, the climate of Charlevoix, like all of northwest Michigan, does not directly affect the ability to use the land for urban purposes.

2. Atmospheric conditions in the general Charlevoix area are excellent for maintaining a high level of air quality. These atmospheric conditions tend to carry potential pollutants immediately out of that part of the atmosphere which is likely to come in contact with a population. Similarly, atmospheric conditions are unlikely to trap air pollutants in the lower stratosphere (know as the inversionary effect).

3. Charlevoix's location and year round climate conditions are positive factors in its tourist resort base and are particularly appropriate for a recreation based economy.

Geology

1. Principal mineral deposits include sand, gravel and limestone, however, because of Charlevoix's urbanized nature and limited space, exploiting natural resource deposits will not be encouraged. In any event, they are in great supply outside the City.

2. Glacial overburden (i.e. rock formation at surface) is not a problem in the City of Charlevoix.

Ground Water

1. In terms of quantity, ground water potential is not a problem, because of the surcharge afforded by an ubiquitous surface water condition. There are, however, some water quality problems that can be corrected with an appropriate capital investment.

2. The City operates a water distribution system whose source is from ground water near Lake Michigan.

3. The provision of municipal water supplies to any part of the City is not a physical or natural constraint to development. However, before some areas can be developed, it will be necessary for the City to extend and improve the distribution system.

Drainage

1. The relatively small geographic space which comprises the City and its relationship to surface bodies of water suggests that drainage is not a problem.

Topotraphy

1. There are no topographical conditions which pose a constraint to urban development. In a few cases, there are some slope conditions where soil erosion practices need to be followed during construction. In all cases, this land is now developed with single family homes and no further development is expected. The slope conditions on areas where development is expected to occur is not significant enough to constrain the intensity of the site's development. This is not to suggest that other factors such as the maintenance of view corridors, will not constrain the amount of surface area that should be built upon.

Woodlands

1. Since most of the land available for development is now developed, the preservation of woodlands is not a matter of serious concern. Vacant or underutilized building sites do not contain areas of significant woodlands.

2. Existing residential areas have a high level of mature hardwood trees which contribute to the City's environmental quality.

Water Bodies, Wetlands, Floodplains and Streams

1. The most unique environmental asset of the City of Charlevoix is its relationship to bodies of water. Nothing should be done to destroy the City's exposure to these water bodies.

2. There are no floodplains or wetland areas as such in the City of Charlevoix. The only stream is the Pine River which physically joins Lake Michigan to Round Lake and Lake Charlevoix.

POPULATION PROFILE AND FORECASTS

1. Even though the population of the City of Charlevoix declined between 1970 and 1980, nevertheless, continued expansion of the City's permanent population base is expected to occur. Population decline was attributed to a sharp reduction in family size, even though there was real growth in the number of housing units.

2. Charlevoix County ranked fifth in the ten (10) county Northwest Planning Region in terms of population growth. In all cases, the ten counties exceeded the growth rate of the State of Michigan by a sizeable amount. This condition is expected to continue in the next decade and will result in population growth in the Charlevoix area.

3. To a greater extent than the average or median condition in the State of Michigan and the urbanized southern portion of lower Michigan, Charlevoix's population consists of a population over the age of 65 and a fewer number of persons under the age of 18. The median age is 31.6 years of age.

4. Charlevoix's permanent population is expected to reach 4,830 persons by 1995. At this time all the land available for housing within the present corporate limits will be developed.

5. The population size reaches its peak each summer when seasonal residents return to Charlevoix and visitorship is at its highest. The population is estimated to be about thirty-five percent (35%) higher in the months of July and August than the permanent population.

6. Charlevoix's waterfront areas play an important role in determining the likely consequences of population change.

ECONOMIC PROFILE AND ANALYSIS

1. The economic base of Charlevoix is strongly influenced by tourist dollars which flow into the economy. This conclusion is based on the fact that there are more retail, service and office uses in Charlevoix than one would normally find in a community not so tourist impacted. Consequently, the number of jobs available are seasonally affected causing some social and economic adjustments during parts of the year.

2. The 1977 Census of Retail Trade advised that 396 persons were employed in the retail sector. Total employment in retail, service and office uses is substantially higher. Because the number of businesses today is greater than the number of businesses present in 1977, it can be assumed that this level of employment is the same or greater, however, the same seasonal problems continue to exist.

3. A survey of industrial employment in the fall of 1977 indicated that there were about 780 jobs at 17 area industrial facilities.

   Industrial enterprises are involved in a wide range of product development.

4. Wholesale establishments do not account for a substantial employment base. In 1977 there were seven (7) establishments with a total of seventeen (17) employees.

5. While the Charlevoix area is not well situated to compete for industrial development on the basis of standard industrial location criteria, nevertheless, the record of private industrial location decisions suggests that new industries will locate in the Charlevoix area because of its superior environmental qualities.

6. Suitable land can be set aside for industrial development near the airport and in the northeast corner of the City.

7. Because tourism and the ability of Charlevoix to attact short-term visitors are expected to be major components of the City's economic base, its waterfront areas are seen as inter-related and important resources affecting this condition.

8. Public sector employment lends a degree of stability to Charlevoix's economic base. Charlevoix's chances of increasing public sector employment should be as good or better than other communities, although competition from Traverse City and Petoskey, as regional employment service centers, will be a factor as they have greater possibilities.

PUBLIC UTILITY RELATIONSHIPS

The City of Charlevoix owns and operates a public wastewater collection and treatemnt system, a municipal water system, and an electrical distribution system.

Water Supply and Distribution System

The City's water system consists of wells located next to the shore of Lake Michigan in the Michigan/Park Avenue Beach area. Distribution lines are situated throughout the City.

The wells are experiencing some water quality problems due to the evidence of TCE. Investigation is under way to determine the most cost effective way of resolving this problem. Delivering sufficient quantity of water is not a problem. There are no constraints on development due to a lack of water supply capacity.

Wastewater Pollution Control Facilities

Charlevoix has a relatively new modern sewage treatment plant. The capacity of the plant is more than adequate to handle the maximum development potential of land within the City and Township. Therefore, wastewater pollution control facilities pose no constraints to development. The land in the northwest corner of the City where industrial development is proposed presently lacks sanitary sewer collection lines, while other improvements are necessary to overcome localized problems.

Storm Water Drainage

The City of Charlevoix has, in part, combined sanitary and storm water collection systems. These should be separated as soon as possible so as to remove the likelihood of sanitary wastes bypassing treatment works under prolonged heavy rainfall conditions.

In areas undergoing development, particularly with more intensive land useage, adequate provision should be made for storm drainage. Wherever possible, storm runoff should be discouraged through on-site retention or conservation of natural vegetation.

Other Utilities

Electric Distribution System -- An electrical utility system is in place. The City's power requirements are met by purchase agreements with the Consumer's Power Company. This power is redistributed through a City owned system of substations and distribution lines.

There is no indication that the City will not be able to purchase sufficient power to meet its most optimistic growth condition.

Natural Gas Service -- The Charlevoix region is served by the Michigan Consolidated Gas Company.

Natural gas supplies are abundent and there should be no problem accommodating the optimum land development condition.

EXISTING LAND USE SURVEY AND ANALYSIS

1. Approximately ninety-two percent (92%) of the City's land area is developed.

2. Nearly fifty percent (50%) of the existing development is residential. Transportation and communication uses account for nearly nineteen percent (19%), while public and semi-public uses account for another thirteen percent (13%). Commercial and industrial land uses take about seven percent (7%) of the land area.

3. About one hundred and twenty-five (125) acres of land are vacant and available for development. There are few large parcels of land. Assembly of individual contiguous vacant parcels is possible to bring about a planned development. Two areas where this is possible include an area in the northeast corner of the City and the area north of Stover Road, between Ferry Avenue and May Street.

HOUSING ANALYSIS AND DISTRIBUTION STRATEGY

1. The purpose of the Housing Plan is to estimate the number of new housing units that will be added to the total housing stock based on the population growth estimate and available land supply.

2. The Housing Plan also provides a strategy for determining what type of housing units are desirable and what is likely to be an appropriate occupancy condition(i.e. owner vs renter occupied).

3. The Housing Plan also analyzes the existing housing stock and makes an assessment of their condition to determine the possible extent of a housing assistance program and to determine the likely impact of replacement on the total housing production estimate.

4. Finally, the Housing Plan provides an estimate of the rate of new housing production for each five (5) year period; 1980 to 85, 1985 to 90, and 1990 to 95, on Table 15. The total net addition to the housing stock was estimated to be 590 dwelling units.

5. Table 16 describes a strategy for distributing the forecasted number of new dwelling units (i.e. 590) needed to achieve a legally defensible position as to the type of housing units to be permitted in the City of Charlevoix. The distribution also includes an assignment of owner occupied versus renter occupied units. The strategy then becomes the basis for zoning decisions which now flow from an objective, rather than a subjective basis. Finally, Table 16 reflects an acknowledgement that likely market forces cannot be totally disregarded if zoning decisions are to be made legally defensible. Specifically, the goal of the distribution formula is to achieve a distribution in 1995 of sixty percent (60%) single family structures and forty percent (40%) multiple family structures. This compares with a distribution in 1980 of about seventy percent (70%) single family structures and thirty percent (30%) multiple family structures. Even so, it should be noted that fifty-two percent (52%) of land to be set aside for housing will be used for low density housing. At optimum development, over seventy-five percent (75%) of the land used for residential purposes will contain low density, essentially one family residential structures.

COMMUNITY CONSENSUS BUILDING

Very early in the planning process it was decided that as many people as possible would be encouraged to participate in the decision making process. To accomplish this level of community consensus building, several workshops (four in all) were held. The workshops were preceeded by an attitude survey which was published in the local newspaper. Local response was very good and, based on the geographic distribution of the survey responses, was clearly representative of the City as a whole. It was apparent that the residents of the City wanted growth to take place in an economically balanced way without seriously impairing the quality of life in Charlevoix. Workshop participants generally accepted this proposition and at the fourth workshop reached a consensus on a Citywide land use plan with particular development emphasis on all of the waterfront and related areas. This level of local input was sustained throughout the program and played an important role in determining the management emphasis for all waterfront land areas. This review included the design of schematic site development plans for each waterfront segment where development options were determined to be available.

PART II: PLANNING, RESOURCE AND MANAGEMENT STRATEGIES

This section is intended to comprehensively describe the strategy for utilizing all of the land resources of the City of Charlevoix to achieve the overall goals, objectives and policies of the Comprehensive Development and Waterfront Management Master Plan.

GOALS, OBJECTIVES AND POLICIES

The purpose of the section on Goals, Objectives and Policies is to establish in a narrative manner, the criteria that will be used to determine how the land should be used, and what specific techniques will be called upon to achieve these objectives. The section allows decision makers to lay down criteria, from the general to the specific, and to define what conditions, standards and policies they expect to follow in determining how the City will change over time. The section enumerates a set of general development goals, which are then given further specification through a set of objectives. The specific day-to-day actions and legislative policies to achieve the objectives are specifically provided for through a set of policies.

In total, the Goals, Objectives and Policies section becomes the baseline conditions upon which planning and land use decisions are based. The Planning Commission and City Council are always reminded to refer to this section whenever faced with a complex land use or other major development decision.

RESIDENTIAL AREAS DEVELOPMENT STRATEGY PLAN

1. The purpose of this section is to lay out the strategy by which the housing production goal and distribution scheme identified in the Housing Plan section will be achieved. Specifically, this section identifies the amount of land that is needed in addition to providing the spatial framework within which the distribution scheme should be achieved. This section also defineds the number of housing units per acre that should be permitted when the plan designates an area for low, medium or high density housing.

2. The density descriptions are as follows:

   (a) Low Density -- means a maximum of four (4) dwelling units per acre.

   (b) Medium Density -- means a maximum of seven (7) dwelling units per acre.

   (c) High Density -- means more than seven (7) dwelling units per acre, however zoning controls will impose a maximum number of dwelling units.

3. The following Table 17 establishes a further distribution strategy and defines the amount of land area required for each of the three density categories:

TABLE 17

ANTICIPATED RESIDENTIAL LAND USE REQUIREMENTS
YEARS 1985, 1990 AND 1995

Structure Type	Density Range	Forecasted Number of Dwelling Units			Gross Acres			Total Acres	% of Total
		1980/85	1985/90	1990/95	1980/85	1985/90	1990/95		
Emphasis Single Family Detached Structures	Low Density (Max. 4 d.u.'s/ac.) (33%)	65	60	69	16	15	17	48	52%
Emphasis Low Rise Multiple Family Structures	Medium Density (Max. 7 d.u.'s/ ac.) (33.33%)	71	58	68	10	8	10	28	30%
Emphasis Multiple Family Structures- Low and High Rise	High Density (7 or more d.u.'s/ ac.) (33.33%)	72	58	69	6	5	6	17	18%
		208	176	206	32	28	33	93	100%

4. The residential areas development strategy plan establishes three management areas, namely: the North Round Lake Management Unit, the Southwest Round Lake Management Unit, and the Southeast Round Lake Management Unit. Specifically, the function of the management unit is to provide a geographic space to achieve a housing distribution strategy and to define areas of specific concern that need attention. The residential development strategy is graphically illustrated by the Housing Distribution Policies Plan and the Residential Areas Plan. The Housing Distribution Policies Plan specifically allocates the number of new residential units to be added to the existing supply for each management unit and the percentage distribution to be achieved by structure type and occupancy mode.

ECONOMIC DEVELOPMENT STRATEGY PLAN

Economic development relationships essentially flow from commercial and industrial land development. The growth management strategy is essentially one that says: In order to establish a more balanced tax base between residential and non-residential taxpayers, the City's goal is to make it possible for a certain percentage of its tax base to be comprised of non-residential assessed valuation. For this reason, discussion of an economic development strategy is invariably concerned with commercial and industrial development. The meaning of commercial should be construed to include activities that are typically of interest to tourists. This acknowledges Charlevoix's present tourist based economy.

The Plan for Commercial Development

1. The technique of estimating the potential of the City of Charlevoix to attract customers to its commercial facilities, particularly retail uses, was employed to determine how much retail space could be supported under assumptions arrived at in a market study.

2. A study of existing and future market potential for retail development showed that the City's income base could support a substantial increase in floor space. Approximately 187,500 square feet of retail floor space, under the ideal conditions described in the Plan, could become a reality over time. Retail markets which showed the greatest promise appeared to be those that would serve existing and future populations likely to reside within the Charlevoix market area. The potential or projected increase is expected to occur over a period of time, if appropriate improvements are made to make Charlevoix an attractive place to do business in. Otherwise, the major portion of local market dollars will continue to flow to the Petoskey and Traverse City markets.

3. Utilizing the application of existing ratios, it was decided that an additional 17,950 square feet and 32,000 square feet, respectively, of service and office space could be supported.

4. Hotel/motel space could increase from 183 units to 452 units. Schematic site plans show how this can be accomplished in the section on Waterfront Planning.

5. The total net additional investment from potential commercial expansion is estimated to be twenty-one million dollars. This will require the use and/or re-use of some twenty-seven (27) acres of land, which represents 1.7% of the total land area in the City. This increase will represent 11.5% of the future assessed valuation of the City.

6. The economic development and growth management strategies are structured to identify the magnitude of commercial and industrial development that must take place to achieve a planned distribution of tax base in which sixty percent (60%) is based on residential valuation while forty percent (40%) is based on commercial and industrial valuation. Out of this technique is determined the target for industrial development as represented by the following table.

PLANNED DISTRIBUTION OF ASSESSED VALUATION FOR GROWTH MANAGEMENT STRATEGY

Land Use	Existing State Equalized Valuation(1981) $	Planned State Equalized Valuation Increase(1980-2000) $	Total State Equalized Evaluation $	% Distribution
Residential	35,520,000.	17,700,000.	54,220,000.	60
Commercial	8,786,700.	10,500,000.	19,286,700.	
Industrial	1,266,100.	9,800,000.	11,066,100.	40
Personal(Commercial & Industrial)	1,948,700.	3,478,100.	5,426,800.	
TOTAL	48,521,900.	41,478,100.	89,999,800.	

7. Appropriate locations to achieve commercial development goals and the recommended development emphasis in each area are shown in the Commercial Development Policy Plan.

Downtown Development Strategy

Clearly, the most visible change is expected to occur in the downtown area. Under the Waterfront Areas Management Plan, schematic site development plans were prepared for waterfront related areas whose major development emphasis would come from the private sector. One of the plans is a plan of redevelopment for the downtown area which includes all of the land fronting on the west side of Round Lake. The Downtown Development Plan is intended to do the following:

1. To capitalize on forecasted market conditions in the Charlevoix area to support commercial growth and development in the downtown area. This will help sustain the downtown area of Charlevoix as an important central place for the transaction of businesses, services and for social interaction.

2. The importance of downtown Charlevoix is clearly sustained by its tourist economy which has even greater potential if local decision makers are prepared to make the area an exciting and attractive place to visit.

3. In response to both of the above objectives, which clearly have important economic relationships, and will help materially in achieving growth balancing goals, an urban design was developed to include an extensive supporting public improvement program.

4. The supporting public improvement program is essential to making the downtown area effectively function to serve a large trading and visitor population. It will also provide the beautification measures needed to attract this population. A key element of the beautification and environmental features include the retention, expansion and restructuring of some of the

public land on the west side of Round Lake. The goal of the Plan is to make this real estate the most aesthetically pleasing piece of real estate in the City of Charleovix, and for that matter all of Michigan.

5. Additional public improvement elements of the Plan include narrowing Bridge Street to provide more public space where beautification improvements such as brick paving, planter boxes, street trees, benches and atractive street lights, can be carried out. The Plan also graphically shows adequate off-street parking which may also require public involvement.

6. All of the above measures will require close cooperation between both prospective developers and City officials, In Michigan, provisions have specifically been made for establishing a Downtown Development Authority. The Authority would have powers to execute a plan of redevelopment. The law also provides financing techniques that avoid levying a special millage or transferring the costs in any way to the general taxpayer.

Plan for Industrial Development

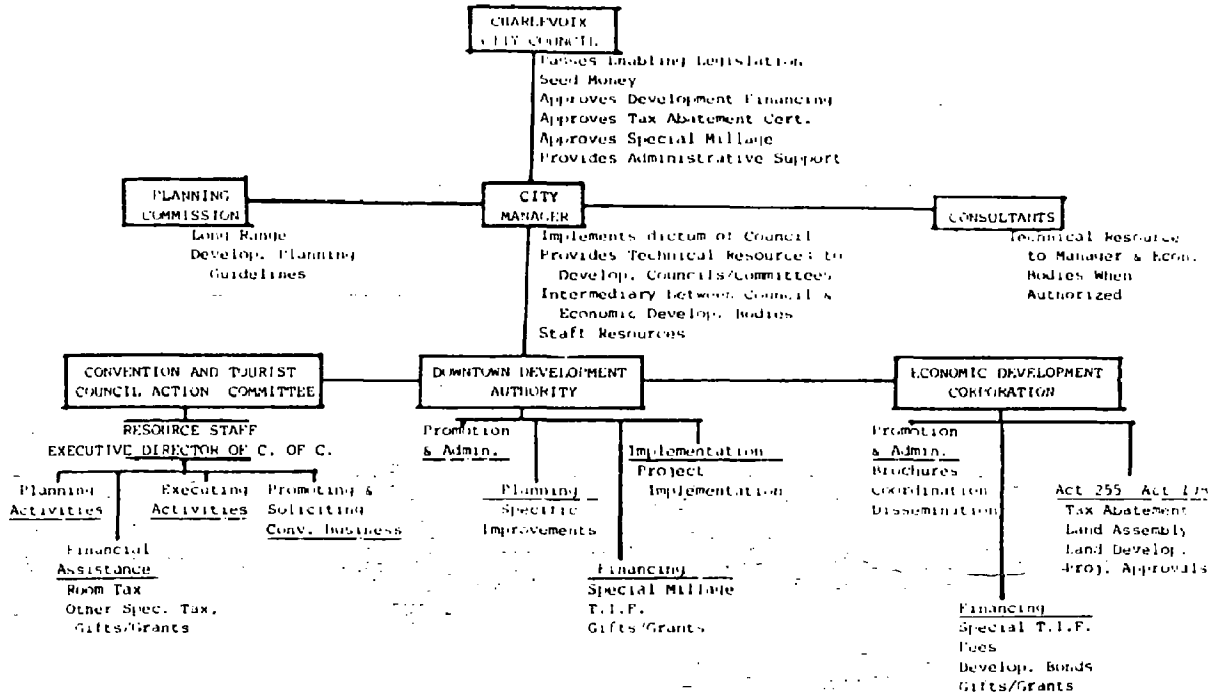
1. The decision to reserve adequate land area is without regard to the industrial development potential that the City of Charlevoix may or may not have. The stronger position is one which suggests that the Charlevoix area does not have strong prospects for attracting a significant amount of industrial development. Nevertheless, if it is to achieve the growth management goal then the City must exert special efforts and at least reserve an amount of land commensurate with achieving the growth management goal. To accomplish this, about forty-six (46) acres of land should be set aside for industrial purposes.

2. With respect to the physical criteria constituting suitable industrial land, the City does have within its boundaries land that could meet the needs of industry. Two areas appear to be suitable: (1) near the airport including airport land, and (2) the land in the northeast corner of the City which is owned by the City of Charlevoix.

Summary of Economic Strategy

The City should institute a comprehensive institutional, administrative and financial strategy to encourage the program of economic stimuli and diversification. Tax abatement should be limited to projects which prove economic necessity and define job creation.

The following flow chart illustrates the way this may be achieved:



WATERFRONT PLANNING AND MANAGEMENT STRATEGIES

The key strategy underlying waterfront planning and management concerns was the balancing of the City's economic development and environmental preservation interests. There is no question that the waterfront areas in Charlevoix, and in particular the key role played by Round Lake, add dimensions to Charlevoix's environmental quality that few other communities enjoy. It therefore became critical that the planning and management of this environmental resource had to be preserved in the process of commiting some of this land resource to an urban type of use. On the other hand, local decision makers and private property interests realize that this land is a valuable economic resource to the City and to private property holders on the waterfront as well. Certainly, the economic base of the City of Charlevoix would be better off with reasonable development of this valuable resource then would otherwise be the case if a strict conservation point of view were to prevail. The trick is to balance the two conflicting uses to achieve aesthetic and conservation goals

as well as economic goals and the rights of private property interests, to the greatest degree possible. This, therefore, is what the Waterfront Areas Management and City Master Plan is all about.

In order to identify geographic specific planning and management strategies, the waterfront was divided into the following identifiable segments:

1. South Lake Michigan Shoreline -- Pine River south to the City limits.

2. North Lake Michigan Shoreline -- Pine River north to the City limits.

   a. Dixon/Pine River Lane Section

3. Pine River Channel Shoreline -- North and south sides of the Pine River Channel from Lake Michigan to Bridge Street.

   a. Park Avenue and Channel Section

4. West Round Lake Shoreline -- Foot of hill to Belvedere Avenue.

   a. Downtown Development Section

5. South Round Lake Shoreline -- Bridge Street to Park Island.

6. North Round Lake Shoreline -- Michigan Avenue to Park Island.

7. Lake Charlevoix Shoreline -- North City limits to south City limits.

   a. North Resort Development and Residential Area
   b. Lake Charlevoix North Beach (Depot Beach)
   c. Chicago Club, Belvedere and Coast Guard Area
   d. Park Island (Round Island)
   e. South Resort Development Area
   f. Lake Charlevoix South Beach and Launch Ramp Site (Ferry Beach)

Segments identified for private development potential include the following:

1. A four block downtown area where considerable private renewal actions are expected to occur.

2. The blocks lying north and south of the Pine River Channel from Park Street to Dixon Avenue. Between Park Avenue and the channel, an executive conference center and support facility is recommended. Presently, four residences are located in this area. North of the channel to Dixon Avenue extensive renewal of the block lying west of Michigan Avenue is expected.

3. East of Michigan Avenue and north of the Channel, redevelopment of the existing lumber company and marine service facility property is encouraged. Specifically, the plan recommends development of a hotel/motel facility to be integrated with the operation of the Bay Queen cruise boat.

4. A major hotel/motel and supporting facility development is recommended for the most northerly property in the City, on Lake Charlevoix.

5. Redevelopment of the property lying south of the Belvedere resort area property from Lake Charelvoix to the foot of the hill is recommended. Mixed commercial and residential development is viewed appropriate for this area. Some expansion of the Ferry Avenue Beach will be possible as a result of the abandonment of the C and O Railway and relocation of the existing Ferry Avenue to the former railway right-of-way. This proposal is graphically illustrated in the Waterfront Areas Management section.

The removal of the C and O Railway line along Lake Charlevoix in the City is a major recommendation of the Waterfront Management Plan.

Segments identified for public use or maintaining the status quo are as follows:

1. The land between Bridge Street and Round Lake, from the Channel to Belevedere Avenue, with the exception of existing private commercial properties fronting on Bridge Street, should remain in public use. Restructuring of some of the public land in this area to make the area a more dramatic public space is recommended. This includes a recommendation to limit public automobile parking in the area. The objective is to enhance the use of this property for public community functions and for general pedestrian passive recreational uses. The proposal also includes a recommendation that more docking spaces be made available to increase visitorship to the City from waterborne vessels.

2. The two public beaches on Lake Charlevoix (i.e. Ferry and Depot Beaches) should be maintained and their size should be slightly increased as a result of abandonment of the C and O Railway and the relocation of Ferry Street.

3. Michigan Beach, also known as Park Avenue Beach, should remain as it is in terms of area. Access, parking and certain facilities should be modified.

4. A pedestrian path should be provided on both sides of the Pine River Channel making it physically possible to walk from Lake Michigan to Round Lake. At the same time the north and south

sides should be dramatically improved by an appropriate landscaping theme.

5. The shoreline lying north of the Pine River Channel on Lake Michigan should not be made available for intensive public uses. However, existing public access points should be maintained.

PART III: PUBLIC AND SEMI-PUBLIC IMPROVEMENTS GUIDELINES

COMMUNITY FACILITIES PLAN

The Community Facilities Plan section is divided into three sub-sections. These include; (1) discussion and analysis of future requirements for public utilities, (2) community services, and (3) recreation and open space.

Public Utilities Plan

The Public Utilities Plan includes provisions for wastewater pollution control facilities (i.e. sanitary sewers and treatment plants; water supplies and distribution, storm drainage, and electrical supply).

Wastewater Pollution Control Plan -- The City of Charlevoix has a modern activated sludge treatment plant. The following characteristics and conclusions were assigned to wastewater pollution control planning:

1. The sewage treatment plant is designed to handle average flows of one million gallons per day. This design flow typically has a population equivalency of 8,000 to 10,000 persons.

2. Based on population growth assumptions for the City of Charlevoix, including peak summertime conditions, the sewage treatment plant is larger than is necessary to meet this peak condition.

3. The plant has adequate capacity to serve as a regional treatment plant. Additional expansion, if necessary, can be accomplished at the existing site.

4. Existing problems which need to be addressed are entirely within the distribution system. These include the need to separate the remaining combined storm and sanitary sewer lines. Sanitary sewer lines need to be extended to the Mercer Boulevard north area to facilitate the optimum use of the land in this area.

Water Distribution System -- The following characteristics and conclusions were assigned to water supply and distribution planning decisions:

1. The City owns and operates a public water supply system whose source is ground water which is supplied by Lake Michigan. It is located near the Lake Michigan shoreline at the Michigan Beach (also known as Park Avenue Beach).

2. The system is capable of pumping 4.32 million gallons per day from three (3) wells. This capacity is more than adequate to meet the needs of the existing population.

3. Pumping capacity will have to be increased to meet the demands of anticipated growth to the year 1995, when total demands are expected to be about five million gallons per day.

4. A portion of the City has four inch (4") distribution lines. These are inadequate by today's standards and need to be replaced.

5. The City has one operational elevated storage tank with a capacity of 300,000 gallons. Under normal circumstances the City will require additional storage capacity to satisfy recommended fire prevention standards. This may be postponed due to the availability of surface water sources to most of the City.

Storm Drainage Plan -- Storm drainage requirements in Charlevoix are relatively isolated to those pockets of inland area that require collection of surface waters and transference to surface water bodies. In those areas where surface water is now collected by the sanitary sewer system, this should be terminated and surface waters should be collected by an independent storm sewer system.

If and when federal and state non-point pollution control requirements are instituted, the City may have to construct a more extensive storm water collection system and create a method for treating the water before discharging it into the lakes. Natural solutions to storm water runoff are always preferable to capital intensive solutions. Wherever possible, on-site retention should be considered.

Electrical Distribution -- The City of Charlevoix is not a primary generator or electricity, rather it distributes electricity via its own distribution network. The electrical energy is purchased from the Consumers Power Company. Improvements in the distribution network will be required from time to time to meet demands from anticipated population increases and economic activities that will require far more electrical energy.

Community Services Plan

The Community Services Plan section includes a discussion and analysis of the impact of those community services which will either require the reservation of land or will demand a capital investment on the part of the City of Charlevoix. These include; police protection services, fire protection services, library services, educational facilities, health care facilities, cemetaries, and public administrative space needs.

Police Services --

1. The City of Charlevoix Police Department includes six (6) police officers, a chief, an assistant chief, a secretary/dispatcher, and four (4) patrol police officers.

2. The existing space and potentially available space in the City Hall is adequate to accommodate any anticipated staff increases.

3. National police manning standards suggest 1.25 police officers for each 1,000 persons in cities similar to Charlevoix as being a reasonable goal. Under this standard, and accounting for a peak summer season population, the size of the police department could justifiably be increased over its present compliment of police officers. Other factors, however, also must be considered in such a decision, not the least of which is the year round tendency for criminal activity in the community.

4. Areawide police enforcement economies for both the City and its surrounding townships could be achieved if contractual services were engaged by the townships for police protection.

Fire Services --

1. The City has both full-time and on-call fire protection personnel. There are three (3) full-time firemen, consisting of a chief, assistant chief, and one firefighter. The remaining personnel includes seventeen (17) volunteers.

2. The fire station is housed at the City Hall in the downtown area. Some ancillary space is available for future use in a building located in the same block as the main station.

3. Major fire fighting apparatus includes three trucks with storage and pumper capacity.

4. Appropriate manpower and equipment standards espoused by the Fire Underwriters Association advise that for a community with a population of 10,000 persons or less, the following is recommended; 1 fire station, 2 pumper companies, and 18 full-time (or 32 volunteer) fire personnel. Combinations of full-

time and volunteers are possible based on the ratio or one full-time fire fighter for each four volunteers. Pumper company vehicles should desirably have a large holding and pumping capacity. It is also desirable to have some ladder capacity on the truck and a combination vehicle may be preferable. Optimally, the fire station should be centrally located if only one station is required, but the most immediate response time should be to the area of the highest concentration of people.

5. At some time in the future, when a sufficiently large enough area has developed that is too far removed from surface bodies of water, an additional elevated storage tank will be necessary to maintain flow pressures for fire fighting purposes.

6. An evaluation of the cost effectiveness of a new fire station versus the future need to expand the existing facility is desirable.

Cultural Facilities

The Cultural Facilities section includes a discussion and analysis of library and educational services.

Library Services --

1. The Charlevoix Public Library is owned and operated by the Charlevoix Public School District and is located in the downtown area in a modern facility on Clinton Street.

2. The library serves an area larger than the City.

3. Based on library planning standards, the library has no deficiencies and is large enough to handle a substantial increase in book volumes.

Educational Facilities --

1. Educational services K through 12 are the responsibility of the Charelvoix Public School Board. The district includes the City of Charlevoix and all or portions of Charlevoix, Hayee, Evaline, Norwood and Marion Townships.

2. There are three schools in the district. The high school and the middle school are located in the City, while the elementary school is located in Charlevoix Township, along a boundary road with the City.

3. Analyses of future enrollment conditions do not suggest that any increase in physical facilities and land area will be necessary in the City of Charlevoix.

Health Care Facilities --

1. The primary provider of health care services is the Charlevoix Area Hospital located just outside the City limits on Park Avenue. The facility is a forty-four (44) bed acute care hospital which is administered by a non-profit private corporation.

2. According to the Northern Michigan Health Systems Agency, the Charlevoix Area Hospital will continue to serve a local general hospital function and will never develop as a regional referral center. It is unlikely that any significant expansion will be possible to this facility in the near future.

Cemeteries --

1. Both the City of Charlevoix and the Roman Catholic diocese provide cemetary facilities. Both have adequate sites to take care of long term burial requirements.

Governmental Administrative Space Facilities --

1. The present Charlevoix City Hall has adequate space to take care of the small increase in City Hall staff that is likely to occur between the present and the future when total development of all of the land in the City is completed.

2. Should additional administrative space be required, it would probably be more cost effective to extend the City Hall into the area now housing the fire station and to build a new fire station in an equally appropriate location that would afford an immediate response time to the congested business district.

3. Should expansion of the County Courthouse and general administrative space be required, it should expand into adjacent areas. It is important that county facilities be retained in a downtown location because this improves the year round market condition for retail, service and office activities.

Open Space and Recreation Plan

The purpose of the Open Space and Recreation Plan is to determine the amount of land and the type of recreation facilities that should be in place relative to a given population size. These relationships are typically based on recommended national standards. These standards are employed in this work.

1. An analysis of land area now committed or potentially committed to public recreational uses (i.e. school grounds, etc.), suggests that the City has an adequate supply of land to satisfy the standard of 10.5 acres of land per 1,000 persons in the population. This condition also holds for the projected population size of the City.

2. Because of the limited size of the permanent population, it is not required that certain capital intensive recreation uses be provided (i.e. indoor swimming pool, artificial ice skating rink, multi-purpose recreation center, etc.). This is not to imply that the City should not provide these recreation facilities if it can afford to do so.

3. The City should acquire by outright purchase, purchase of development rights, or use by easement, the pedestrian and park linkages recommended between Lake Michigan and Round Lake. It may be advisable to require an area of greater depth on both sides of the Pine River Channel than is necessary to accommodate a walkway. The U.S. Corps of Engineers now has an easement that permits a continuous walkway. A wider area of land is however recommended. This would provide land area for the kind of park amenities needed to make this a most desirable leisure time recreation experience. Landscaping in this area, however, should not require a high level of maintenance.

4. In other waterfront areas where private development is encouraged, the City should utilize zoning incentives or performance measures to encourage private property owners to preserve public easements to the waterfront area. If this technique is successfully utilized, then technically, a pedestrian easement could be maintained throughout all of the Charlevoix waterfront area.

5. A bikeway path system is seen primarily as a recreation resource and secondarily as a transportation feature. Consequently, it is discussed as part of the Open Space and Recreation Plan element of the Master Plan. A bikeway path plan map is included in the Recreation Plan. Approximately 2.5 miles of bikeway is suggested for a population of 5,000 persons.

Community Facilities Plan Map

A Community Facilities Plan Map is included in the main Plan document as a graphic summary display of all of the public and semi-public facilities that are essential to the well-being of the City of Charlevoix. The Map displays all existing and proposed recreation spaces, cultural facilities. schools and government buildings.

TRANSPORTATION PLAN

The purpose of the Transportation Plan section of the Waterfront Areas Management and City Master Plan is to provide recommendations for various

forms of transportation that will be needed to achieve the City's overall development strategy. These include streets and highways, public transportation, and other transportation features such as railways, airports and waterways.

Major Street Plan

1. A hierarchial system consistent with federal guidelines was devised to indicate the importance of streets in the City of Charlevoix.

2. The hierarchy is described as follows:

   Principal Arterials --

   a. Bridge Street, Michigan Avenue and Petoskey Avenue system from Highway 66 junction to the north City limits.

   b. Park Avenue from Bridge Street to State Street.

   c. State Street from Park Avenue to Hurlbut.

   Minor Arterials --

   a. State Street from Hurlbut to Bridge Street junction.

   b. Highway 66 from Bridge Street to City limits.

   c. Bridge Street/Highway 31 from Highway 66 to the City limits.

   d. Petoskey Avenue/Highway 31 from Mercer Boulevard to the most easterly City limits.

3. Since principal and minor arterials are the subject of federal highway financial aid, we will not concern ourselves with identification of collector streets.

4. Arterial streets may have to be widened to four (4) lanes when traffic volumes warrant this widening. In the event that this is physically impossible, then consideration should be given to designating a one-way street system to compensate for the physical inability to widen streets in response to traffic demands. This type of situation is now apparent with respect to Bridge Street between Hurlbut and the Pine River bridge. Consequently, the street plan recommends making Bridge Street a one-way (northbound) street between Antrim and Park Streets. To complete operational requirements, Park Avenue would also have to be a one-way (westbound) street from Bridge Street to State Street.

Other Transportation Plan Elements

Other Transportation Plan Elements include; railways, the Charlevoix airport, waterways, and buses. These are discussed as follows:

Railways --

1. The plan recommends acquiring the now abandoned railway line between the channel railway bridge and the south City limits and converting this land to urban uses. North of the railway bridge occasional rail service is in effect, however, it is recommended that this portion of the railway right-of-way also be completely abandoned and converted to urban uses.

2. The existing railway could remain in effect up to the north City limits as proposed in the Waterfront Management Plan. This would facilitate a railway turnaround in the event the service between Petoskey and Charlevoix is considered economically advantageous.

Charlevoix Airport --

1. Retention of the airport could be important to the long range economic goals of Charlevoix; Improvements at the airport should be made as air traffic conditions or new economic enterprise demands.

Waterways --

1. Commercial/industrial product shipping is not now important to the City's economic development goals. Waterborne transportation is primarily tourist oriented. Everything possible should be done to meet private boater demands because of economic spillovers to the City's commercial areas and to the downtown areas in particular.

2. A commercial harbor (i.e. freight terminal) in the City of Charlevoix was not determined to be in the best interest of the City's environmental goals. Commercial docking facilities in connection with the Medusa Cement Company in the township could be expanded if necessary to meet commercial shipping requirements.

3. The County Economic Development Corporation could enter into an agreement with the Medusa Cement Company to expand freight waterborne transportation possibilities for the general Charelvoix area.

Public Transit (Buses) --

1. A countywide demand response bus system is in operation at the present time. The plan recommends retaining this service because it could have important long range benefits to proposed developments, especially in the downtown area.

PART IV: IMPLEMENTATION GUIDELINES

COMPREHENSIVE GENERAL DEVELOPMENT AND WATERFRONT PLANNING AND MANAGEMENT STRATEGIES PLAN

The final chapter of the above captioned plan includes a composite plan map which constitutes the official Land Use, Community Facilities and Transportation Plan Map. This section also describes some of the ways in which the City should immediately act to help carry out the Master Plan.

The following actions should be initiated to implement this Plan:

1. A new comprehensive zoning ordinance document and map should be prepared. This document should reflect the kind of regulations required to implement land use and specific development strategies described in the Plan. A zoning ordinance should specifically set out regulations for the use of surface water near the shoreline and shoreline land to prevent erosion and reduce non-point source pollution.

2. The Charlevoix Downtown Development Authority should consider adopting the Downtown Development Plan portion of the overall Master Plan as a general guide to how the land in the downtown area should be used.

3. The Charelvoix Downtown Development Authority should also initiate refinements to the Plan. These refinements should be in sufficient detail to permit cost estimating and the taking of bids. This level or plan development is also essential to the preparation of a financing scheme.

4. The City should review all of its environmental codes to ensure that they can achieve the standards described in the Master Plan. It is important that the City should act to adopt a housing code (i.e. minimum standards of housing and housing occupancy), in addition to miscellaneous ordinances to control blighted land uses, junkyards, etc. Concurrent with these actions, the City should expand its staff resources to adequately administer these codes.

5. The City should act expeditiously to adopt both a short range and a long range capital improvements program. This would be based on facilitating the infrastructure requirements of the various areas described as having development potential. This is essential to achieving growth balancing goals. Priorities should include the extension of sewers and water lines and complimentary improvement of roads for the land between Mercer Boulevard and Martin Road, lying north of Petoskey Avenue (U.S. 31). This will facilitate qualifying the area as an Industrial Park.

6. The City Council is encouraged to use all incentive measures at its disposal to encourage environmentall sound development.

I. BACKGROUND INFORMATION AND SUPPORTING STUDIES

REGIONAL PERSPECTIVE AND LOCATION

INTPODUCTION

The City of Charlevoix is hereby directing its Planning Commission to cause to be developed a Comprehensive Development and Waterfront Management Plan. The Plan is intended to recommend strategies that will coalesce private and public decisions to achieve the following:

(i) To cause the natural, physical and financial resources of the City to be used to bring about a balanced environmental and financial structure that will meet the wishes of the citizens of Charlevoix.

(ii) To permit its land resources and financial capabilities to be used to achieve development and growth opportunities without destroying the intrinsic charm which characterizes the City of Charlevoix. In this sense, physical development should not be overpowering, but rather, consistent in scale with the perception of "small towness".

(iii) To encourage economic development that will provide for a less seasonal nature in the intensity of social and economic life of the City.

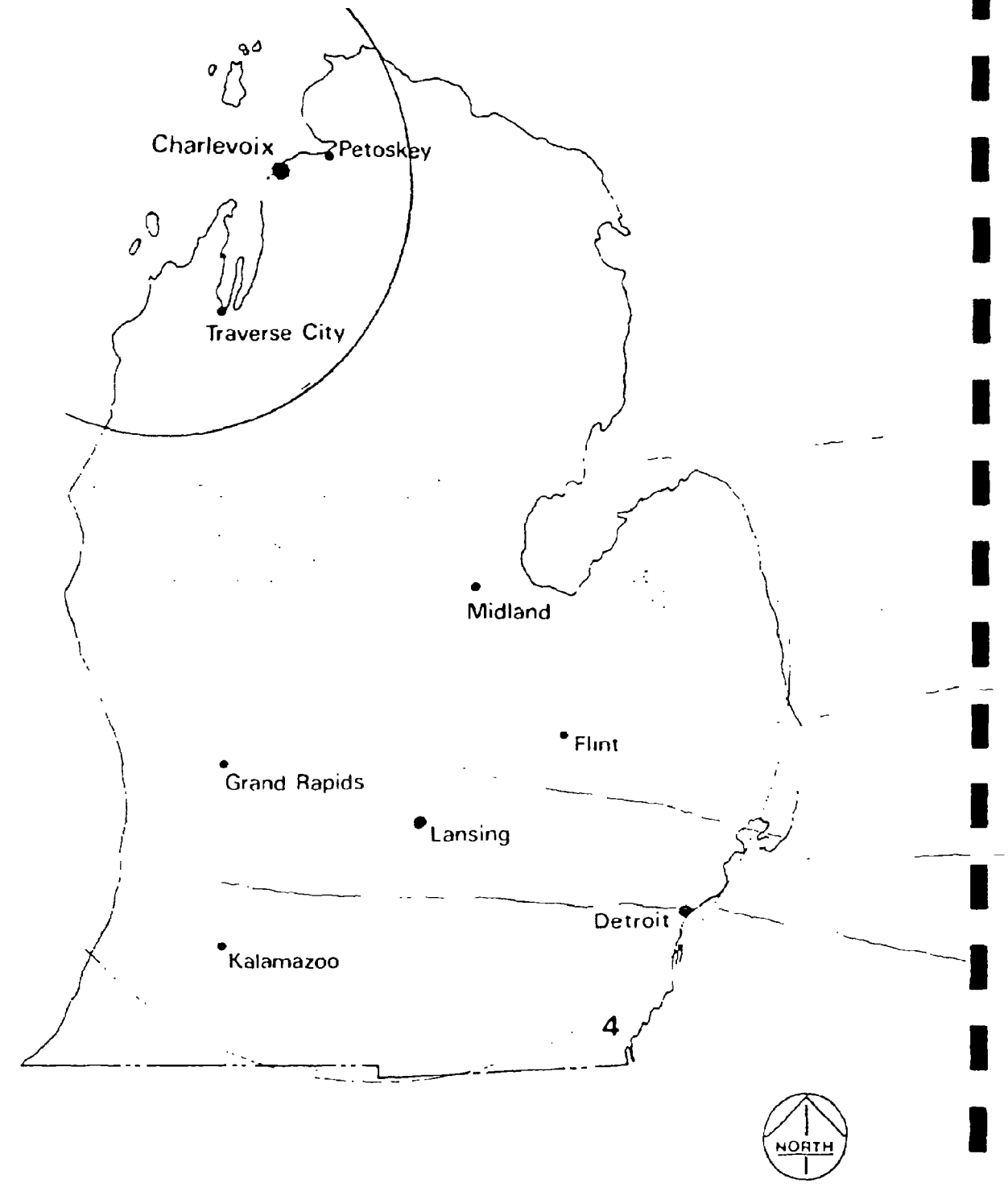
(iv) To design a strategy by geographic location and functional activity (i.e. housing, commercial and industrial sections) for assisting the private sector in achieving the City's environmental and development objectives.

(v) To utilize federal and state resources and programs, wherever these are available to the City of Charlevoix, to bring about the overall development strategy.

The Plan will specifically include a comprehensive way of dealing with the City's waterfront areas. The public participation process clearly established the objective of utilizing the waterfront area as an economic resource without destroying its intrinsic value.

The above is a departure from a more traditional Master Plan, nevertheless, the product of this planning activity will include the traditional pre-requisites of the so-called Master Plan. The Plan as herein defined will include a future land use, community facilities and transportation plan, however, these will be structured to achieve environmental and economic development goals as described above, with particular emphasis on managing the City's waterfront resources.

LOCATION MAP 1
macro



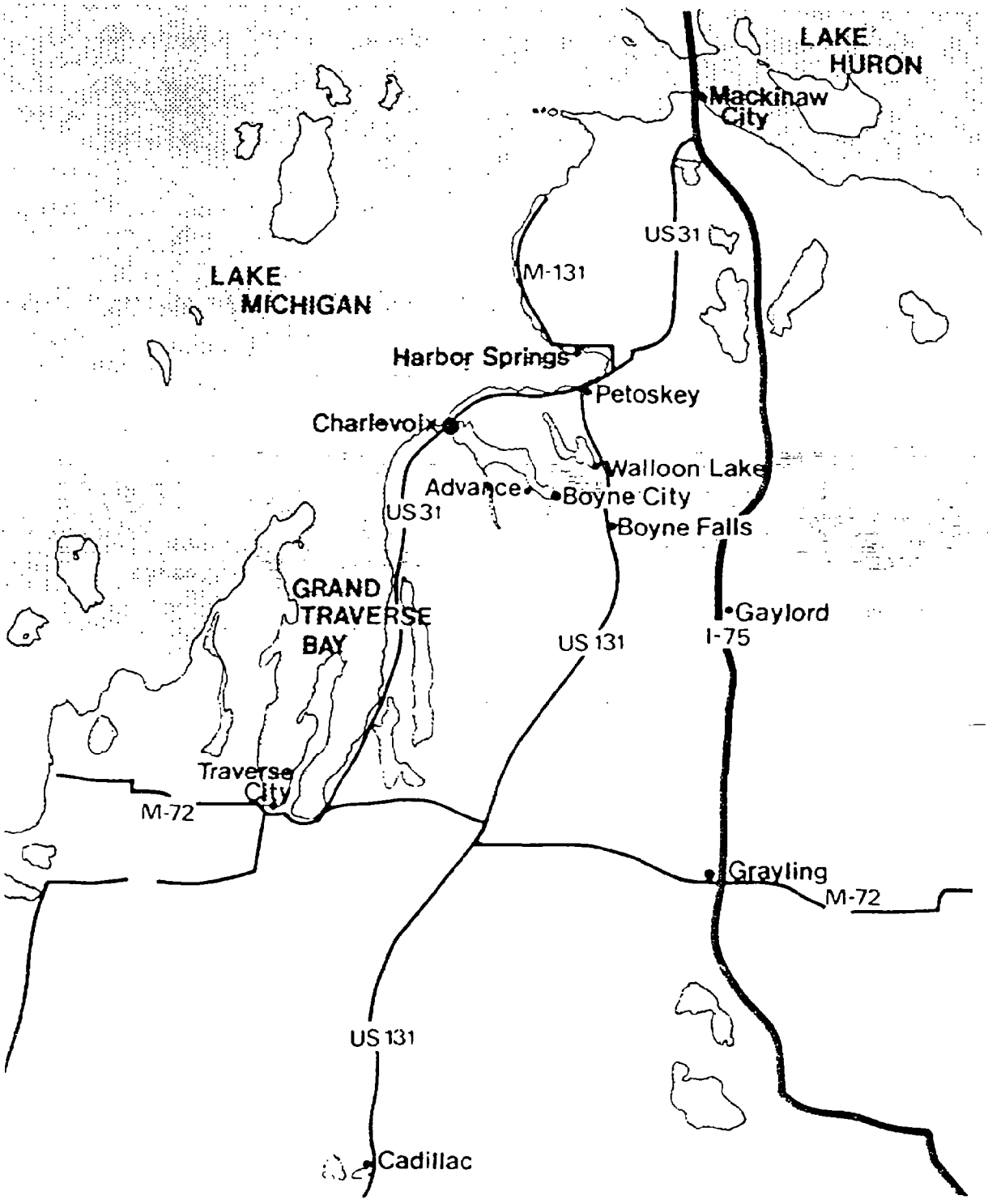
REGIONAL PERSPECTIVE AND LOCATION

The City of Charlevoix is located in northwest lower Michigan on Lake Michigan (see Map #1). The City enjoys a unique waterfront orientation because of its relationship with respect to Lake Michigan, Round Lake, and Lake Charlevoix. The City of Charlevoix is not directly accessible from the Interstate Highway system. Interstate 75 lies some forty (40) miles east of the City. In addition to Interstate 75, U.S. Highways 31 and 131, and State Highway Routes 32 and 66 provide major highway access to the City of Charlevoix. Highways 31 and 131 are major links with Grand Rapids and western Michigan urbanized areas, while I-75 provides access for the southeast Michigan area (see Maps #2 and #3).

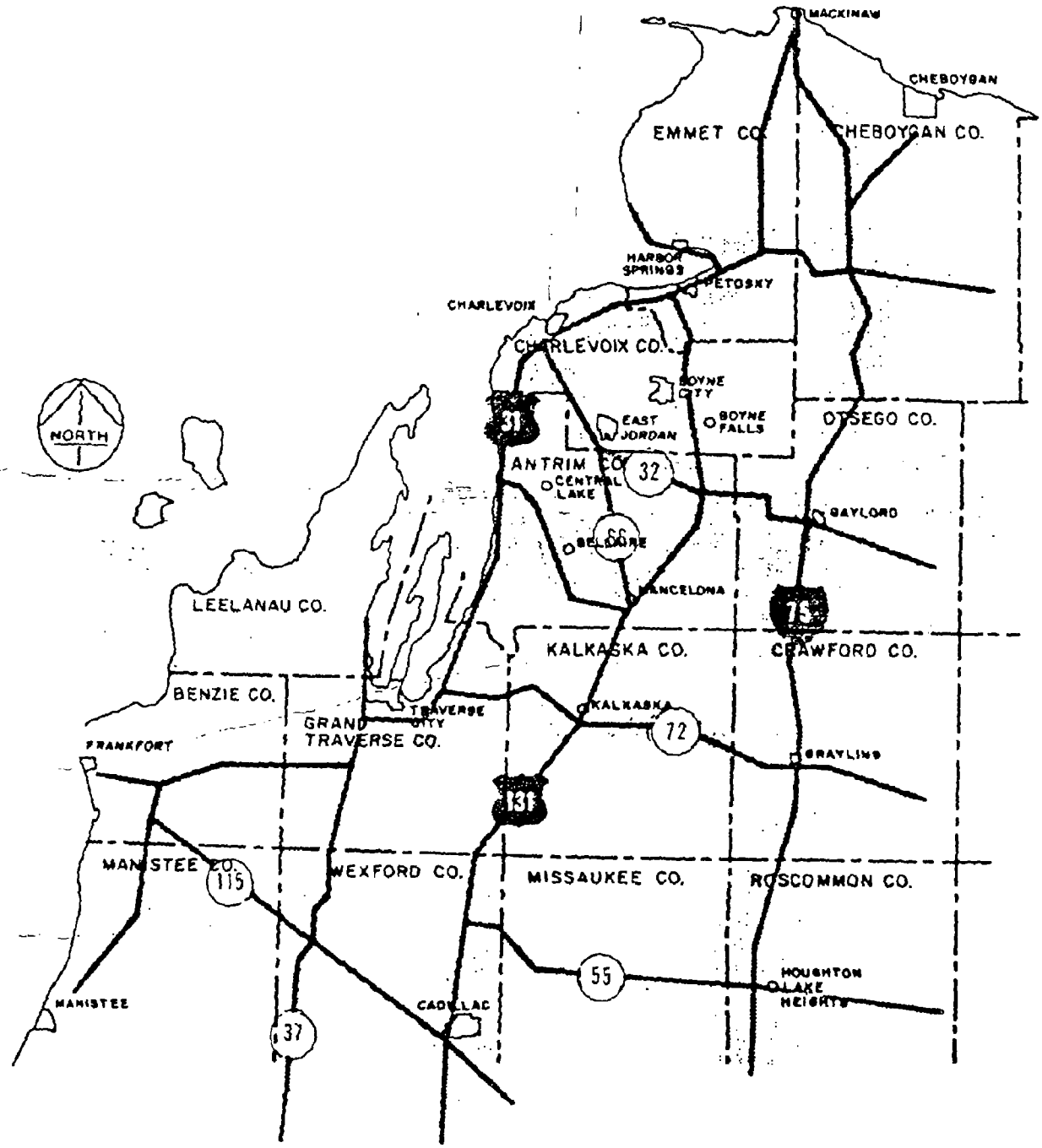
Other transportation elements which relate the City to regional and national markets include Lake Michigan, the Chesapeake and Ohio (C & O) Railroad, and a general aviation airport. Air transportation is enhanced by proximity to major statewide airports at Pellston (35 miles to the north) and Traverse City (50 miles to the south).

While the City is not as well situated relative to major transportation services as many other communities in the upper portion of Michigan's lower peninsula, nevertheless, this may be offset by the aesthetic quality of its location. This can be an important factor in attracting certain economic activities that can be supportive of the City's development goals.

Regional Context



STATE HIGHWAY RELATIONSHIP



NATURAL AND PHYSICAL RESOURCE RELATIONSHIPS

INTRODUCTION

Natural and physical resource relationships to community and economic development planning will be based on prior studies engaged by the Charlevoix County Planning Commission.[1]

History provides many examples of situations which support the theory that urbanized communities should not be allowed to occur in total disregard of environmental conditions particularly those having to do with natural and physical phenomena acting upon the area. An urbanized community can never be planned and designed in total disregard of its environment upon which it cannot be just imposed. It must fit at least with the topographic limitations of its territorial area. The natural resources and physical features if totally respected can reduce the need for man-made modifications necessary to respond to any failure to account for natural conditions. Such examples include man-made modifications as storm drainage works, dams, and similar public works facilities. Fundamentally, an urban community should incorporate the landscape of its site as an integral part of its plan. The plan must take account of geographical and foundation conditions, respect the agricultural importance of some soils and protect the original character of the landscape to the extent that is possible.

Scope

The purpose of the study of natural and physical featuers and resources as they exist in the City of Charlevoix is to condition the way the land will be used. They also help determine non-use areas attributable to preservation or conservation concerns, or due to other conditions that may affect the intensity of surface use. It is also necessary to determine if there are any mineral resources that will affect the use of land, and consequently economic activity.

For the purposes of this work, natural resources and physical features have been grouped. Natural resources include soil type and quality and related agricultural potential, mineral deposits indicative of subsurface and surface geological conditions, water quality and availability, and climate and related characteristics. Physical features include topographical conditions, water bodies, rivers, wetlands, floor plains, scenic areas and woodlands. While existing land uses and related highways

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[1] Charlevoix County Environmental Features Survey and Charlevoix Region Comprehensive Plan, Report One. The nautral and physical features of the City of Charlevoix could not be mapped because variations in the natural features at the scale of the City showed such uniformity as to make mapping inappropriate.

and utilities are appropriate for discussion under physical features, nonetheless their special significance suggests separate discussion. It is also recognized that the above grouping may be argumentative. One might argue that woodlands, for example are natural resources and not physical features. These arguments are irrelevant in that the objective of the discussion is primarily to assist us in determining land suitability for urban development and the grouping is aimed at providing guidance for optimum urban spatial form.

NATURAL RESOURCES

Soils

The importance of soils is greatest in areas where development is expected to take place in the absence of a public sanitary sewer system. Because of the availability of sanitary sewers in the City of Charlevoix, soil conditions become less of an impediment to urban development. Soil conditions relative to slopes over 12% do pose a problem regardless of sanitary sewer availability. Therefore, combinations of certain soil types and steep slopes are generally considered areas of "severe limitation" to urban development.

The referenced work advises that soil conditions in the City of Charlevoix have slight limitations for urban development.[2] The exception to this categorization would be those areas of the City where slopes exceed 12%. However, even in these areas, special building techniques can be utilized to overcome potential erosion problems caused by excessive amounts of impervious cover on steep slopes during construction.

Agricultural Productivity of Soils

Because the land supply in the City of Charlevoix is, with minor exception, used for urban purposes, any consideration of preserving land because of its agricultural potential cannot be supported. Clearly the vacant land is needed to meet the demand for new urban growth.

Climate

Prevailing winds and atmospheric conditions should have some influence on the way the land ought to be used. The climate of a region increasingly plays a role in determining new economic activity, either of a permanent or a seasonal nature.

The following information provides an overview of climate conditions which prevail in Charlevoix County.

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[2] Ibid and Soil Survey of Charlevoix County, Michigan, USDA and SCS, May, 1974.

TABLE 1
SUMMARY OF RELEVANT CLIMATE CONDITIONS

Climate Variables	Average Condition	Extreme Condition
Coldest Months(January-February)	21.9° F - 21.1° F	-39° F
Hottest Month (July)	69.1° F	+103° F
Annual Average Temperature	45.0° F	
Average Rainfall	32.2 inches	-
Average Growing Season	130 days	-
Average Annual Snowfall	79.2 inches	-
Elevation Above Sealevel	590 feet	-
Prevailing Winds	Westerly	-

Atmospheric conditions are generally good for avoidance of air pollution given reasonable attention at the source. The wind speed and potential air mixing height throughout Michigan generally moves the air masses out of the state quite quickly. The potential for occurence of inversionary conditions is quite limited.

One of the more direct results of climate upon Charlevoix is its relationship to tourism and recreation which comprise the major portion of the area's economic base. The amounts of snow for ski resorts and the duration of the navigation season are but two of the basics dependent upon the climate and weather of the region. The popularity of winter sports has been a continuing asset to the economy of the Charlevoix region. Heavy snowfalls coupled with rolling and rugged topography have resulted in the region and areas east of it becoming the major winter sports paradise of Michigan.

In summary, climatic factors which prevail in the Charlevoix area should not pose any constraints upon the potential of the City to experience urban growth. Indeed, they tend to be more positive than negative, without regard to economic conditions which prevail in Michigan. National population statistics support the premise that there is a movement of population to small towns with above average environmental qualities, hence the larger than average statewide growth in northwestern Michigan communities.

Geology

Several previous studies chronical the geologic history of the Charlevoix area. In keeping with the central thrust of this Plan, the issues are always: What are their implications for community and economic growth? For the purposes of the Plan, we will want to know if there is any commercial value in exploiting these geological features.

While published data from the Michigan Geological Survey Division advises that the principal mineral deposits include sand, gravel and limestone, nevertheless, the limited geographic space of the City would indicate that mineral resource deposits are unlikely to have any effect on the City's development decisions.

Of particular importance to land use planning decisions is the relationship of bedrock to the surface of the ground. Geological data advises that the bedrock generally throughout all of Charlevoix County is buried beneath a substantial glacial overburden. Therefore, there are no limitations to normal excavating and construction procedures resulting from the presence of bedrock or outcroppings at or near the ground surface. However, the nature of the glacial overburden is quite stony in the northwestern part of Charlevoix Township and the close surface proximity of rock provides poor ground drainage conditions.

Ground Water

Ground water supplies for domestic consumption or other urban purposes are not a major consideration, given the availability of unlimited sources of surface water supplies. The City of Charlevoix has a municipal water supply system emanating from Lake Michigan. Therefore, ground water is never expected to become a resource which adversely affects development decisions.

The circumstance is fortunate because ground water sources are of such a nature that they do not support high yield wells. Generally, wells will yield less than ten (10) gallons per minute.

Drainage

The relatively small geographic space occupied by the City and its relationship to surface bodies of water, suggest that surface drainage is not a major city-wide problem. There could be small pockets of land where adequate surface drainage is dependent upon a storm drainage system.

The quality of the surface waters is essential to the City's economic stability goals (i.e. tourism) and to preserve the aesthetic endowment it brings to the City of Charlevoix. Therefore, it behooves the City to insure that surface water runoff is clear of contaminents and that no sewage is allowed to get into the storm sewer system.

PHYSICAL FEATURES

The physical features of the City of Charlevoix and their relationship to community and economic development are described as follows.

Topography

Local topography can be described by measures of relative relief and slope. Relative relief is the difference in elevation between the highest and lowest points in a given area. The slopes created by these differences become most significant for their scenic and recreational values and are consequently the most important reason for studying the topography of a local community. The study of slopes also has importance for urban development and intensities of land use. Generally, slopes in excess of seven percent (7%) should not be intensively developed, while slopes of twelve percent (12%) or greater should not be developed.

Much of the Charlevoix area consists of a level-to-undulating plain. The City of Charlevoix and Charlevoix Township both fall generally within this classification with the major exceptions being found immediately adjacent to the lakes, in the dune area north of the City, and also in the southern extremity of the Township.

Within these areas there is a total difference in elevation of approximately one hundred and sixty (160) feet from Lake Michigan to the tops of the hills south of the City. The highest dunes are about twenty (20) feet lower than these hilly areas.

Topographical conditions in the City of Charlevoix do not present any serious impediments to development. The areas of appreciable slope should not be intensively developed unless mitigating measures are taken to limit the amount of exposed ground cover, particularly during construction.

Woodlands

Throughout the residential neighborhoods in the City there is a high level of mature hardwood trees. The few vacant areas that potentially are available for development are not extensively wooded. Areas of potential renewal such as the few opportunities that exist around Round Lake and the navigation channel have good tree growth. Redevelopment plans should preserve the existing tree growth to whatever extent is possible.

Since we are not dealing with extensive new development in areas presently vacant, the role of wooded areas as shapers of urban growth is not as significant. However, new development and redevelopment is a continuing possibility requiring local site plan approval. This administrative process could be very helpful in preserving existing wooded areas or individual stands of trees. These are situated generally throughout the City and add immeasurably to the beauty of the City.

Water Bodies, Wetlands, Floodplains and Streams

The City of Charlevoix is well endowed relative to its location to water bodies. Essentially, the majority of its corporate boundary is contiguous to either Lake Michigan or Lake Charlevoix, while through the middle lies Round Lake and the navigation channel to Lake Michigan and Lake Charlevoix. The land areas adjacent and near these bodies of water have a slope relationship that, if properly utilized, could provide a water view to a substantial amount of land in the City.

Development near these areas must not be concerned so much with a flooding condition as opposed to the cycle of highs and lows associated with the Great Lakes system. Of course, land development adjacent to Lake Michigan must recognize the potential for storm damage.

SUMMARY RELATIONSHIPS OF NATURAL AND PHYSICAL FEATURES TO URBAN DEVELOPMENT

A review of the natural and physical features and resources as they are known to exist in the City of Charlevoix are not considered to have potential negative impacts on the appropriateness of urban development. Indeed, some of these features that have a direct impact on the quality of the urban environment have contributed to the intrinsic beauty and charm which characterizes the City of Charlevoix. In essence, the existing fabric of urban development has to a large extent capitalized in a sensitive manner on these resources. They include, in particular, water resources and the relationship of the land to the water resources. Topographical conditions and the use of the land, for the most part, has been carried out harmoniously.

Subsurface geological conditions and the relative absence of scarce mineral resources have been favorable for urban development. Soil conditions, while appropriate for non-sewered development, are nevertheless not a factor because of the availability of a public sanitary sewer system. Likewise, the abundant municipal water source has lessened the significance of otherwise low productive ground water supplies.

POPULATION PROFILE AND FORECASTS

INTRODUCTION

This section will be concerned with a discussion of population characteristics and the likely size of the population at some future date. This is important for land use planning considerations, inasmuch as the size of the population is directly related to the service requirements of community facilities, market relationships for commercial types of activity, and importantly, housing requirements.

Unlike the State of Michigan, which experienced its lowest post World War II growth in the 1970 and 1980 decade, the northwest 10 County Region experienced its highest rate of growth. Population change phenomena in Michigan definitely appears to be one primarily of redistribution from the central cities to the suburban and rural areas, and to the northern part of the lower peninsula. Whether this condition will continue in the next decade is difficult to assess, however, it would appear more likely to conclude that a condition of stability is taking hold in the southern half of Michigan and that henceforth population growth in Michigan generally will have to result from the creation of new jobs. The question then becomes one of competition between the lower and upper portions of Michigan.

CURRENT POPULATION SIZE AND CHARACTERISTICS

Historical Growth Characteristics and Total Size

The relative rate of past growth is an indicator of future population growth. To show the relative attractiveness of the Charlevoix area, comparisons are made with the State of Michigan and with the 10 Counties in the Planning Region. These are shown in the following Table 2:

TABLE 2

POPULATION CHANGE FOR
CITY OF CHARLEVOIX, CHARLEVOIX
AREA COMMUNITIES, 10 COUNTY REGION
P & D, AND STATE OF MICHIGAN

	1940	1930-40 % Change	1950	1940-50 % Change	1960	1950-60 % Change	1970	1960-70 % Change	1980	1970-80 % Change
City of Charlevoix	2,299	2.3	2,695	14.7	2,751	2.0	3,519	27.9	3,296	-6.3
Charlevoix Area [1]	2,989	2.5	3,382	13.1	3,557	5.1	4,933	38.7	5,249	6.4
Charlevoix County	13,031	7.7	13,475	3.3	13,421	-0.4	16,541	23.2	19,907	20.3
10 County P & D [2]	129,036	7.5	135,388	5.0	139,017	2.7	158,333	13.9	207,634	31.1
State of Michigan	5,256,106	8.5	6,371,766	21.2	7,823,194	28.8	8,881,826	13.5	9,236,981	4.0

1. Includes City and Townships of Charlevoix and Marion.

2. Includes Antrim, Benzie, Charlevoix, Emmet, Grand Traverse, Kalkaska, Leelanau, Manistee, Missaukee, and Wexford.

From 1950 to 1980, the Charlevoix area showed a constant positive growth rate, even though the City itself experienced a decline in population between 1970 and 1980. Charlevoix County experienced a rate of growth between 1960 and 1980 considerably higher than the rate of growth attained by the State of Michigan. Region 10, P and D also experienced a consistent positive growth rate from 1940 to 1980. The growth rate between 1960 and 1980 occurred at a much higher rate than the State of Michigan.

The relative attractiveness of northwestern Michigan 10 County P & D region is indicated by the following Table 3:

TABLE 3

POPULATION AND RANK ORDER COMPARISON
OF POPULATION CHANGE FOR COMMUNITIES IN 10 COUNTY P & D

	Rank Order	1970	1960-70 % Change	Rank Order	1980	1970-80 % Change
Antrim	(6)	12,612	21.6	(6)	16,166	28.2
Benzie	(8)	8,593	9.7	(8)	11,165	29.9
CHARLEVOIX	(5)	16,541	23.2	(5)	19,907	20.3
Emmet	(4)	18,331	15.3	(4)	22,820	24.5
Grand Traverse	(1)	39,175	17.0	(1)	54,698	39.6
Kalkaska	(10)	5,372	20.3	(9)	10,926	103.4
Leelanau	(7)	10,872	16.6	(7)	13,872	27.6
Manistee	(2)	20,393	5.5	(3)	22,992	12.7
Missaukee	(9)	7,126	5.0	(10)	9,997	40.3
Wexford	(3)	19,717	6.8	(2)	24,992	26.7
Region		158,222	13.9		207,634	31.1

The Charlevoix County growth rate has fallen relative to the other counties in the Region 10, P & D area. Part of the reason for this may be that Charlevoix and Emmet Counties are the furthest from the population south where family ties, and therefore travel time, remains an important factor in relocation decisions. Nevertheless, the above two tables still show that the Charlevoix area continues to experience population growth.

Population Characteristics

Of most relevance to community development decisions with respect to the characteristics of the population is age distribution,educational attainment and income. A limited amount of detailed demographic characteristics is available from the 1980 Census of Population. Charelvoix, like the nation and the state to a lesser extent, has witnessed a dramatic decline in the birth rate, family size, and consequently, the total number of persons under the age of 18 in the population. A comparison between the 1970 and 1980 Census reveals that 29% of the population is less than 18 years of age as opposed to over 39% of the

population in 1970. The median age of the population has increased from 26.5 years of age in 1970 to 31.6 years of age in 1980. The population 65 years old and older increased from 10.9% of the population in 1970 as compared to 21.4% of the population in 1980.

Clearly, the population in the City of Charlevoix is older as evidenced by the above data. Although the data is not available, nevertheless, statewide data suggests that the population is better educated and has a higher income in 1980 as opposed to 1970.

This data argues for directing community facilities and service investment priorities towards those that tend to serve a more adult population. Similaraly, it can be expected that a substantial portion of the over 65 years of age population is retired, may have moved from the populated southern part of the state, and is likely to be more fiscally conservative.

Minority Composition

The following table describes the minority relationship of the City's population in comparison to that of the County.

TABLE 4

DISTRIBUTION OF POPULATION
BY RACE: CITY AND COUNTY(1980)

	White	Black	Am. Indian, Eskimo and Aleutian	Asian and Pacific Islander	Other
City of Charlevoix	3,205	4	76	6	5
Charlevoix Area	5,105	5	91	15	9
Charlevoix County	19,511	15	325	38	18

The relationship of minorities to total population in the City of Charlevoix and its surrounding area, is similar to that of the entire county. Nearly three percent (2.76%) of the City's population is comprised of minority populations.

POPULATION FORECASTS (PERMANENT POPULATION)

Population forecasts are made with the intent of providing a general guide for future facilities planning and urban land consumption rates. It is important to note at the outset that population forecasting is not a precist science, becoming more so the longer the forecast is independent of any likelihood that the City and Charlevoix Township will be consolidated into one unit of government or that any territory will be annexed.

Population Forecast

A study of historical growth trends and new dwelling unit construction rates provides a degree of certainty that the City of Charlevoix will shortly exhaust available land supply to accommodate new growth. Therefore, the size of the future population is clearly a function of the amount of land potentially available for residential purposes. The use of all of this land is likely to occur prior to the year 1995, considering the fact that less than one hundred and twenty-five (125) acres are vacant, and of that, probably less than eighty (80) acres are suitable for residential purposes. If the rate of new housing which occurred during the past decade (i.e. 293 units) was matched between 1980 and 1990, the available land supply would be nearly exhausted. However, there are redevelopment possibilities where it may be appropriate to develop land that is now marginally used for higher density housing. This would permit the addition of several more hundred units to the total housing stock.

Given this set of conditions, little point is served by utilizing traditional population projection methods. An estimate of the number of new housing units that will be added to the City's housing stock and those that will be permanently occupied, therefore, form the basis for any forecast of population.

The most important variable related to any forecast of the absolute size by the population clearly appears to be household size. The decade of the 70's oftentimes saw a dramatic decline in household size as in the case of the City of Charlevoix, resulting in a decline in population, while at the same time experiencing a substantial increase in total housing units. Additionally, this task is made more complicated by the competition that takes place between those desiring to build for a seasonal population versus a permanent population. This variable alone makes it difficult to forecast the likely size of the City's permanent population. A review of current housing information is confusing because we cannot be sure of the extent to which seasonal housing now plays a role in the determination of household size.

If the data is taken at face value, the following condition results:

TABLE 5

ESTIMATE OF HOUSEHOLD SIZE
BASED ON TOTAL YEAR ROUND HOUSING UNITS

1970			1980		
Population	Total Dwelling Units	Number of Persons Per Housing Unit	Population	Total Dwelling Units*	Number of Persons Per Housing Unit
3,519	1,486	2.4	3,296	1,779	1.85

*Includes Permanent and Seasonal Year Round Housing Units

The above table indicates two things; (1) the national trend for smaller household size and, (2) a possibility that a substantial number of housing units do not contribute to the 1980 estimated size of the population because these units are second homes and their owners are recorded as part of the permanent population of another community. The likelihood that the household size in Charlevoix is 1.8 persons in the permanent population is highly unlikely. The actual reported median number of persons in occupied housing units in 1980 was 2.13. Census data advises that 188 dwelling units are seasonally occupied. This represents nearly eleven percent (10.6%) of the total available housing stock.

The fact that the average household size, based on total housing units, is so much below normal relationships suggests that a substantial number of seasonal dwelling units are included in the total number of housing units in relationship to permanent population. For example, in the case of Traverse City, the average household size is 2.55 persons per household. No doubt even in the case of Traverse City, household size is affected by the inclusion of seasonal housing units whose households are counted as residing in another political jurisdiction.

If we were to assume that an additional five hundred and ninety (590) new dwelling units (not including the houses that have been substantially rehabilitated) could be added to the City's present housing stock, the total number of dwelling units would be about two thousand three hundred (2,300) dwelling units. This number comes from the companion Housing Strategy. Based on the expectation of an average household size of 2.0 to 2.5 persons per household, the population of the City could be between 4,600 and 5,875 persons at maximum development, based on today's boundaries.

There is no certain way of determining to what extent the number of new housing units to be built in the City in the future will be purchased by second home buyers (i.e. seasonal residents) who, therefore, will not contribute to the size of the permanent population. The City's economic development strategy, if successful, will reduce this possibility, because it will create competition from potential permanent households, resulting from job producing activities.

Comparison With Regional Planning Projections

Population projections prepared by the Northwest Michigan Regional Planning and Development Commission, assumed to be based on mathematical and natural increase/net migration techniques, advise as follows:

TABLE 6

POPULATION PROJECTION
CITY OF CHARLEVOIX*

1980		1985		1990		1995		2000	
Low	High	Low	High	Low	High	Low	High	Low	High
4,260	4,771	4,686	5,240	5,155	5,900	5,666	6,347	6,220	6,965

1980 Actual = 3,296

* Source: Northwest Michigan Regional Planning and Development Commission

If this rate of growth holds true, it is estimated that the City would exhaust its land supply by 1985. Obviously, the above projections were miscalculated at the time they were prepared, given the degree of difference between the 1980 range and the actual population in 1980. Additionally, it ought to be obvious that the City does not have an adequate land supply to achieve the year 2000 population range without considerable redevelopment, utilizing high density housing and possible intensive use of Lake Charlevoix frontage for housing. A population level of 6,500 persons, based on the most likely household size estimates, would require an additional 825 to 1,475 new dwelling units. This would require approximately 165 to 200 acres of land, depending upon the number of dwelling units per acre. The City does not have this much vacant or marginally developed land available to meet these total developmental needs.

The Forecast

In view of the above, it is certain that the City's future population size will be a function of the number of new housing units that will be added to the City's total housing stock, and by the percentage of those units which are occupied by persons who claim Charlevoix as their principal place of residence. Another factor to be accounted for must include the most probably size of future households. Concurrent land use stucies and in particular, an analysis of lands that are now vacant or marginally developed, were evaluated as potential housing sites. Through this evaluation process and the application of appropriate density standards, it was decided that 590 new dwelling units could be added to the total housing stock. In some cases, schematic plans of certain waterfront areas were developed for residential purposes.

To get at the question of permanent population increases, certain assumptions had to be made. Two assumptions made were that the percentage of seasonal housing, relative to the total housing stock (i.e. 10.5% in 1980), would remain relatively stabel and possibly decline slightly. Additionally, the apparent vacancy rate in the stock of available year round housing units was determined to be unusually high in 1980 and should be reduced to approximately three percent (3%) by the year 1995. Based on these assumptions and the forecasted rate of growth for new housing, the following estimate of population was developed for the years 1985, 1990 and 1995. Table 7 describes the growth scenario.

TABLE 7

POPULATION AND HOUSEHOLD SIZE FORECASTS

	1980				1985			
		Persons Per Housing Unit				Persons Per Housing Unit		
	Population	Total Housing	Year Round Housing Units	Per Occupied Housing Unit	Population	Total Housing	Year Round Housing Units	Per Occupied Housing Unit
	3,296	1.85	2.07	2.53	3,665	1.9	2.05	2.4
Total	(1779)	1.85			(1987)	1.9		
Year Round	(1591)		2.07		(1790)		2.05	
Occupied	(1302)			2.53*	(1527)			2.4

* The 1980 Census of Housing suggests an unusually high vacancy and/or available for year round occupancy rate (i.e. 18%)

POPULATION AND HOUSEHOLD SIZE FORECASTS

	1990				1995			
		Persons Per Housing Unit				Persons Per Housing Unit		
	Population	Total Housing	Year Round Housing Units	Per Occupied Housing Unit	Population	Total Housing	Year Round Housing Units	Per Occupied Housing Unit
	4,200	2.0	2.15	2.35	4,830	2.04	2.25	2.3
Total	(2163)	2.0			(2369)	2.04		
Year Round	(1950)		2.15		(2147)		2.25	
Occupied	(1787)			2.35	(2100)			2.3

FORECASTS (SEASONAL ADJUSTMENT)

A seasonal adjustment is necessary to account for the impact of population on the City's essential services. Because the Comprehensive Development Plan will consider essential community facilities and services, it is advisable to estimate the peak summertime population because any population, either permanent or temporary, affects the amount of commercial and service development.

The estimate of peak summertime population should be accounted for in the planning process and is based upon the following assumptions:

1. All housing units capable of being used year round will likely experience a higher average household size during the months of July and August, because of visits by family and friends. Based on today's conditions, a household size of 2.5 persons per household versus 1.85 persons per household appears to be a reasonable estimate of the increased population likely to occur in the summer months. This is expected to increase over time because of the assumption that the average household size will continue to increase as the economy of the area improves in terms of a more stable job base. At the same time, seasonal and permanent housing will also increase. Therefore, the size of the future population during peak times will be greater than the effect of housing relative to the population that exists today.

2. Overnight tourist accommodations experience a high level of continuous usage and, therefore, the continuous population that they house affects the City's responsibilities and land use character. An inventory of motels, hotels, and temporary lodging facilities indicates that within the City limits there are 189 living units. Their numbers are likely to increase over time and will have a greater effect on the size of the population.

3. Visitors who only spend a few hours in the City should not be counted in the estimate and projection of peak populations affecting community responsibilities.

Based on the above assumptions, the folloiwng estimate and forecast is made of the peak population conditions during July and August.

TABLE 8

POPULATION AND HOUSEHOLD SIZE
ADJUSTED FOR PEAK SEASON

1980			1995		
No. Of Hshds.	Average Hshd. Size Estimate	No. Of Persons	No. Of Hshds.	Average Hshd. Size Estimate	No. Of Persons
1,779	2.5	4,448	2,369	2.7	6,369
189*	2.0	378	450*	2.0	900
		4,826			7,296

*Existing and forecasted number of motel and hotel units.

The above estimates of peak population during the summer period of July and August advise that the total population residing in the City is about forty-fix percent (46%) higher. Further analysis is necessary to assess the annual and temporary impact of this characteristic on sewer and water consumption design standards. This analysis will be made in the Community Facilities section of the overall Comprehensive Plan.

ECONOMIC PROFILE AND ANALYSIS

INTRODUCTION

The purpose of this section is to identify the kinds of economic activity that contributes to the stability and growth of the Charlevoix area. The kind of skills called upon by this economic activity are important in determining the level to which property owners in the City may aspire to the provision of community services. Lastly, because economic activity leads to the creation of more jobs that will cause population growth, it is important that this growth be analyzed. Because an extensive economic base study is beyond the parameters of this work, secondary sources of data will be used to make the above assessments. Economic activity in the City of Charlevoix and the surrounding area will have an effect upon the City itself, and in particular,the waterfront areas. Therefore, our concern with economic growth conditions must transcend the City limits and, indeed, we must look to areawide attractions which will have an economic impact on the City of Charlevoix and its waterfront areas.

INVENTORY: RETAIL, SERVICE AND OFFICE USES (RSO)

The retail, service and office (RSO) inventory will give us some perspective on the nature of jobs in the City of Charlevoix and the importance of this activity relative to manufacturing jobs. The significance of the RSO uses as economic activities will also be important in determining the opportunity to achieve growth management goals. The following inventory of RSO use activities was made in April 1981, based on field inspection and local assessment office records. Additional investigation is necessary to determine the extent to which these activities contribute to employment opportunities.

TABLE 9

INVENTORY OF
RETAIL, SERVICE AND OFFICE USES (06/81)

	BUSINESS TYPE	KEY	NAME	NO. OF SQ. FT.
(i)	Food Stores	1	Edwards IGA	6,030
		2	Oleson's Food Market	11,314
		3	Wharfside Market	3,190
		4	Gebeau's	912
		5	Staley's Market	1,434
		6	Glen's Market	16,050
		7	Holiday (gas)	3,920
		8	Imperial (gas)	1,232
		9	Andy's	1,649
				46,731

	BUSINESS TYPE	KEY	NAME	NO.OF SQ. FT.
(ii)	Eating & Drinking on Map as Service)	1	Duffy's	4,840
		2	Weathervane	4,505
		3	Leutheusers	2,459
		4	Murdick's Fudge (seasonal-takeout)	1,875
		5	Kentucky Fried Chicken	1,232
		6	Townhouse	1,890
		7	Village Inn Pizza	1,974
		8	Fireside Inn	3,056
		9	Juillerets	1,560
		10	Parkside (seasonal)	1,640
		11	Topside	1,215
		12	Dapper Dick's (seasonal-Downtown)	1,200
		13	Dapper Dick's (seasonal-Northside)	1,418
		14	Mont's (seasonal)	2,447
		15	Bogg's Pastries	1,500
		16	Oscar's (vacant)	975
		17	Judy's	995
		18	Kings	400
		19	Dairy Queen (seasonal)	448
		20	Milkhouse	1,862
		21	Pizza Hut	1,860
		22	Grey Gables	2,440
		23	Dairy Barn (seasonal)	220
				42,011
(iii)	Wearing Apparel & Accessories	1	Patricia's	1,739
		2	Kaden's (vacant)	2,000
		3	Goldens & Hamiltons (vacant)	5,389
		4	Jeans, Etc.	767
		5	Burnside's (seasonal)	2,800
		6	Trading Company (seasonal)	430
		7	Mettlers	3,465
		8	Careys Boot Shop	720
		9	Trademark Clothiers	3,075
		10	Shoe Shore	1,000
		11	Captains Kids	2,000
		12	Orange Blossom Lane	1,000
		13	Clothing Company	2,688
		14	Bergeons	1,512
		15	Fays	720
				29,303

	BUSINESS TYPE	KEY	NAME	NO. OF SQ. FT.
(iv)	Furniture/Home Furnishings & Appliances	1	Hess Furniture	3,712
		2	Whitley's Floor Covering	3,960
		3	Puff's Appliances	2,000
		4	Jerry's Carpets	950
				10,622
(v)	Building Supplies & Hardware	1	Haggard Plumbing & Heating	3,618
		2	Finn Lumber	10,780
		3	Bridge Street Hardware	3,974
		4	Staley's Hardware	3,240
		5	Cass Supply	1,829
		6	Boyne Auto Supply	1,680
		7	Fotchman's Auto Supply	4,750
		8	Gas Heat Installation	2,132
		9	Haggards (storage & shop)	2,500
		10	Seeley Equipment	1,640
				36,143
(vi)	Drug Stores	1	Dockside	1,987
		2	Rexall	1,987
		3	Crown Drug	5,000
				8,974
(vii)	Automobile Sales	1	Charlevoix Oil Company (vacant)	5,652
		2	Kusina Motors	8,973
		3	Village Car Care	9,000
		4	Parsell Olds	3,323
				26,948
(viii)	General Merchandise	1	Ben Franklin	10,000
				10,000
(ix)	Gasoline Stations	1	Northside Standard	1,288
		2	Woodland Oil	462
		3	Imperial Gas	1,232
		4	Clark Oil	332
		5	Gas (Zuppin Oil)	1,211
		6	Holiday	3,920
		7	Muma's Sunoco	2,340
		8	Shell	1,226
		9	Muma's	2,931
		10	Gaskins	350
		11	Texaco	1,290
		12	Ikens (vacant)	1,440
				18,022
(x)	Miscellaneous Retail	1	State Liquor Store	3,348
		2	Pine River Turf Center	1,920

BUSINESS TYPE	KEY	NAME	NO.OF SQ. FT.
	3	Country Place (vacant-Downtown)	762
	4	Kitchen Potpourri	1,000
	5	Apple Tree	976
	6	Shop of the Gulls	1,605
	7	Hess Music Shop	1,680
	8	Art's (pottery shop)	1,584
	9	Barb's Hallmark	1,000
	10	Ceramics Fun	500
	11	Howard Optical	1,000
	12	Charlee's	2,000
	13	Bahnhof	2,000
	14	Silent Sports (summer-Bull Frog)	950
	15	Chelsea Cloth Shop	500
	16	CRE Fisheries	1,840
	17	Small Engines Unlimited	2,000
	18	Charlevoix Creations	2,016
	19	Michigan Officeways	3,372
	20	Sears (catalog center)	975
	21	Northwest Marine	4,064
	22	Landau Interior (seasonal)	1,010
	23	Wildwood	1,075
	24	Fairport Marine Electronics	2,663
	25	Literary News	1,200
			41,000
TOTAL RETAIL	106		269,754
(xi) Offices	1	Pointner & Pajtas, Attorneys	1,300
	2	Dinwiddie & McGarry, CPA's	1,362
	3	LaBlanc Insurance	500
	4	Charlevoix Agency	1,311
	5	Charles Elizinga Insurance	576
	6	Don Berlage, Attorney	613
	7	John Michaels, Attorney	613
	8	William Mosher, MD	613
	9	John Ferguson, Surveyor	613
	10	Colwell Realty	2,160
	11	State Farm Insurance	450
	12	Charlevoix Abstract	1,944
	13	Northern Abstract	960
	14	Robert Anderson, Optometrist	1,324
	15	Lyle Ance, DDS	480
	16	Robert Tollas, DDS	1,070
	17	Dr. Mansfield	1,070
	18	Roy Hayes, Attorney	1,191
	19	Secretary of State	1,191
	20	Robert Hoffman, Attorney	1,132
	21	Sam Supernaw, Public Accountant	566
	22	Michael Givvons, Attorney	566
	23	Hugh Mason, CPA	500
	24	William Bradford, Wood Realty	672
	25	Linda Mason Interiors	495

BUSINESS TYPE	KEY	NAME	NO. OF SQ. FT.
	26	Jeffrey Ricks, DO	1,344
	27	Nicholas DeYoung, Surveyor	400
	28	Dr. Green, DO	500
	29	First State Bank	3,400
	30	Charlevoix Federal Credit Union	3,460
	31	Charlevoix County Bank (main office)	4,393
	32	Charlevoix Properties	1,800
	33	H & R Block (seasonal)	900
	34	The Real Estate Place	500
	35	Ski & Shore Properties	1,250
	36	Thomas Realty	552
	37	Family Federal Savings	1,408
	38	Charlevoix County State Bank (branch office)	2,688
	39	United States Post Office	2,583
	40	David Strawbridge, DDS	1,906
	41	Michigan Bell Telephone	12,210
			62,566
(xii) Services	1	Hooker's Dry Cleaners	1,280
	2	Skip's Launderette	1,900
	3	Poly Clean	1,000
	4	Aartvark	1,000
	5	Birdie's Beauty Shop	510
	6	P.S. Added Touch	1,000
	7	Gwen's Harbor View	1,190
	8	Head Shop	507
	9	Capelli's Salon	600
	10	Bergmann's Barber Shop	550
	11	Silver Cue	2,200
	12	French Quarter	1,800
	13	Cinema III	4,478
	14	Seelye Printing	1,639
	15	Kwiki Print	1,452
	16	Charlevoix Graphics	1,540
	17	Potter's Appliance Repair	1,200
	18	Buday's Electronics	600
	19	Peters Electric	1,300
	20	Modern Upholstery	576
	21	Tuff Kote Dinal (vacant)	2,000
	22	Bellinger Marina	7.315
	23	Ward Brothers	2,880
	24	Lake Charlevoix Cable T.V.	576
	25	Sheer Happiness	576
	26	Winchester Funeral Home	2,436
	27	Charlevoix Boat Club	4,727
	28	Browe Electric	1,160
	29	Irish Marina	812

BUSINESS TYPE	KEY	NAME	NO. OF SQ. FT.
	30	Irish Boat Shop (storage)	1,000
	31	Beaver Island Boat Co. (Erber)	7,165
	32	Betty White (boat storage)	6,080
	33	Skip's Car Wash	2,100
	34	Schacford - Rowe, Inc.(warehouse)	4,560
	35	Jane Leiberman (boat storage)	1,440
	36	Cunningham Radio & T.V.	400
			71,549

The 1977 Census of Retail Trade advises that there were 100 businesses in the City of Charlevoix and that the total sales generated by these businesses was $26,424,000.00. The April 1981 survey indicated an increase of six businesses, while the number in the various categories showed considerable correlation.

Economic Relationship

The statistics described above are economically significant to the City of Charlevoix and reflect the extent to which tourism is an important ingredient in the growth and stability of retail and service uses. The foregoing statement reflects the view that the amount of retail and service uses in place is more than is typical of a community of 3,296 persons, unless that community serves a larger trade area. Market support for the existing retail space, based on the City's population alone, would require a disposable income per household of over $12,000.00 and a 100 percent capture rate. This condition seldom if ever exists, therefore, it can be concluded that the City's commercial potential is affected by tourism to a large extent and to a trade area that goes beyond the City's boundaries.

Employment Status Relationship

Generally, retail and service uses are characterized by lower paying and part-time employment. There is no reason to think that this condition is not also true for Charlevoix. Traditionally these activities also provide more employment for females and teenagers. The 1977 Census of Retail Trade advises that all businesses with payrolls (i.e. 68) generated an annual payroll of $2,799,000.00 and employed 396 persons. While manufacturing and other individual type employment is higher, nevertheless retail employment contributes significantly to the economic base of the City of Charlevoix. A review of the 1970 Census of Population, "General Social and Economic Characteristics", indicates considerable growth in employment in the retail trade occupation. The tax base of the City is more influenced by commercial than industrial property evaluation.

A market study dealing extensively with growth opportunities in retail, service, and office uses will be undertaken in the Economic Development Planning section, based in part, on the information contained in this section.

ALL INDUSTRIAL/MANUFACTURING - NON-MANUFACTURING INVENTORY

Industrially related development is important to the economic and social stability of the community because it generally has more permanent employment and higher paying jobs than are found in commercial development. Therefore, industrial development is most important to attaining growth management goals. The following, Table 10, describes the industrial activities in the City of Charlevoix, the number of employees, and land area unique to that industrial use.

TABLE 10

INVENTORY OF INDUSTRIAL
LAND USE ACTIVITIES* (12/81)

Name of Industry	City or Township	Type of Activity	No. of Employees	No. of Shifts	Land Area (acres)
American Mold Eng. Co. M-66	Twp.	Component parts for plastic and die cast mold bases	75		
Charlevoix Machine Products Rt. 1, Norwood Rd.	City	Machine components	10		
Charlevoix Mfg. Co.	City	Machined aluminum pistons	35		4.82
Charlevoix Prod.,Inc. P.O. Box 114	City	Electrical control panels & automation rollers	5		3.16
Freedman Artcraft Eng. Corp. P.O. Box 228	City	Free-standing store display fixtures	100		6.50
Great Lakes Shipwreck Co. U.S. 31, South	Twp.	Shipwreck furniture & marine salvage	2		
Hoskins Mfg. Co. S. M-66, P.O.Box 38	Twp.	Electrical residence wire	70		23.0
Hufford Industries,Inc. N.Petosky Avenue	City	Custom machines	34		.58
Impac Tool Co. 401 W. Carpenter	City	Tool, dies and fixtures	10		5.25
Lexalite Intnl. Corp. N. U.S.31,P.O.Box 498	City	Lighting, traffic signal components	134	3	.84

Name of Industry	City of Township	Type of Activity	No. of Employees	No. of Shifts	Land Area (Acres)
Lietz Industries N. U.S. 31		Tool & die pieces	8		
McCutcheon Boat Works U.S. 31, South		Boat builder and repairs	7		
Medusa Cement Co. Bells Bay Road P.O. Box 367	Twp.	Cement manufacturer	141		
Midwest International 105 Stover Road	City	Environmental equipment	45		2.0
Weather Shield Sports Equipment, Inc. Petoskey Rd., P.O. Box 227	Twp.	Cut and sew sports handling equipment	45		
The Will-Flow Corp. Rt. 3, Petoskey Rd. P.O. Box 17	Twp.	Stainless steel tanks	62		
Wojan Aluminum Prod. Corp. Box 91, Stover Rd.	City	Aluminum windows and doors	34		1.8
Michigan Scientific Corp. Ance Road	City	Research and development	4		1.7
Lake Construction Co. U.S. 31	City	Marine services	3		8.0
D & B Beverage Co. Ance Road	City	Distribution of beverages	?		
Bondeco	Twp.	Kitchen counter top laminators	2		

* Source: R.F. Nino and Associates Survey, 1981

The largest employer is the Medusa Cement Company, located in Charlevoix Township just outside the City limits. In terms of land area, only a small amount of land (i.e. less than three percent, 2.45%) is used for industrial purposes. The assessed valuation of the industrial uses relative to the total assessed valuation is not very significant, being less than three percent (3%).

Wholesale Trade

Wholesale establishments, for the purposes of the economic study, are included as a component of the industrial base. According to the 1977 Census of Wholesale Trade, there were seven (7) establishments with a payroll of $173,000.00 and seventeen (17) employees. The potential of wholesale/warehouse operations to make substantial contributions to the economic growth of Charlevoix would not appear to be very good in view of the more predominant regional service role played by Traverse City and Petoskey.

GENERAL ECONOMIC CHARACTERISTICS

The Northwest Michigan Regional Planning and Development Commission is responsible for producing an Overall Economic Development Program. Its latest survey, dated March 1978, contains a substantial amount of regional economic information for all of the counties in the region. The findings of the study are, in all likelihood, equally valid for the City of Charlevoix as they are for the region, and are therefore worth repeating. They are as follows.

Until the late 1950's the Region was largely undeveloped, with its economy based primarily in agriculture and tourism. During the last decade, dramatic changes have occurred in the Region's economic structure as a result of outside influences. A more prosperous and mobile society, with increased leisure time, has provided impetus to the growth of the tourism industry in the Region. Innovations in winter recreation and investments in winter sports facilities have been further inducements to the expanding tourism sector. Simultaneously, improved transportation links, and decentralization and diversity in industry, have prompted many manufacturing firms to seek locations in the Region.

In spite of the growth and diversification that took place in the Region in the 60's, the economy was plagued with problems. Heavy reliance on industries which were both seasonal and low wage in nature resulted in chronic unemployment and underemployment, with many of the related disadvantages: out-migration of productive-age workers, low labor force participation rates, and low income levels.

Analysis shows that the current decade in the Region has also been one characterized by growth in population, labor force, and employment, but it also indicated that Northwest Michigan has not participated in the increasing income levels being experienced statewide, and that the Region's labor force continues to be plagued by persistently high levels of unemployment and underemployment.

The analysis also provides some insights into the causes of the income differential and the high unemployment rates being experienced in Northwest Michigan.

Income levels are, in part, a reflection of the prevailing wage and salary levels in the area. The fact that an income differential exists between the Region and the State indicates that prevailing wage and salary levels are lower in the Region.

The wage and salary levels in the Region are a reflection of skill and education levels found in the work force. The Region's occupational distribution indicates that a predominance of the work force in the Region are employed in low wage jobs requiring fewer skills and less education; primarily clerical, service, laborers and operatives.

The wage and salary income level is also a function of the excess labor supply in the Region. Because of its desirability as a place to live, population growth has far out-stripped employment opportunities in the Region, resulting in persistently high levels of unemployment. Employers are able to pay low wages because the competition for jobs is so great that people are willing to work for less.

The most important explanation for the income and employment situation in the Region can be found in its industrial structure.

In the 1960's the tourism, services, manufacturing and agriculture industries played major but balanced roles in the Region's economy. However, since 1970, the Regional economy has been experiencing an internal structural change. A narrowing of employment in the manufacturing sector, coupled with significant employment gains in the non-manufacturing sectors, especially retail trade, services, government and tourism, has changed the character of the Region. Today it can be characterized as a service- exporting economy.

The tourism industry has become a large, sophisticated industry in the Region. Major tourist installations are replacing the small, single owner resorts. Employment in these larger institutions is often greater than in many manufacturing concerns.

This dependence on non-manufacturing economic activities contributes significantly to the income differential experienced in the Region. Analysis indicates that the economic sectors of the economy are plagued by characteristics that cause this economic dysfunction.

The following is a summary of the characteristics of the Region's economic sectors that have a negative effect on income and employment levels in the Region.

Non-Manufacturing Sectors

(1) Have the lowest average annual return per employee levels (i.e. wage and salary levels).

(2) Jobs in these sectors generally require lower skill levels, which correlates to low wage levels.

(3) Much of the work, because it is tied to the tourism industry, is seasonal or part-time.

Manufacturing Sector in the Region

(1) Generally, these are small scale operations.

(2) They offer lower comparative returns per employee levels than those prevailing State-wide, suggesting lower wage scales.

(3) Regional manufacturing industries are tied very closely to the State economy, so they are affected by outside economic influences.

(4) The manufacturing industries that do generate higher returns per employee are generally technically oriented, so they have specialized labor needs, forcing them to recruit outside the Region labor force because of the lack of skilled labor in the Region.

Collectively, the problems of the Northwest Region are cause for concern as they have resulted in a standard of living for many inhabitants below that of the State and the Nation. The economy is not serving the Region's inhabitants. The Regional Commission must find a way to work with other public and private agencies with the aim of overcoming the Region's problems.

MAJOR RESOURCES AND POTENTIALS

In general, those manufacturing industries which offer the most potential for expansion and development fall in the following categories:

(1) Existing Regional industry interested in expanding.

(2) Industry which can provide raw materials or supportive services to other local or Regional industry.

(3) Industry that can further upgrade or add value to the product of existing Regional industry.

(4) Industry utilizing raw materials or otherwise capitalizing on the area's resources or assets.

(5) Industries involved in new product development based on the substantial timber, mineral, and oil/gas resources of the Region.

(6) U.S. or State growth industries identified as having growth potential and locational characteristics compatible with the Region.

Much of the future economic strength in the Region will continue to be in the non-manufacturing sectors; services, wholesale and retail trade, and government.

The causative factors for this growth and strength are:

(1) The expansion and broadening of the Region's recreation and tourism industry. Increasing affluence statewide, changing attitudes towards leisure time, and rising fuel costs, coupled with development of the Region's recreational facilities, particularly winter sports facilities, have resulted in the Region's tourism sector becoming a large, sophisticated industry. However, it must be appreciated that this characteristic has most greatly impacted the area's waterfront land.

(2) The dramatic population growth regionwide in the form of permanent residents, retirees, and vacation home owners, has resulted in an increased demand and opportunity for expansion of the supportive services such as banking, insurance, law, health, and the construction industry and building trades, and a broadening of the Region's retail trade structure.

The Region is rich in natural resources and its resource based industries offer significant potential for future growth through the vertical integration of similar industries. Therefore, resource based industries should be encouraged and developed.

As the energy situation in the country becomes more acute, the importance of the Region's timber and oil/gas resources, as fuel sources will also increase.

Potential Constraints to City of Charlevoix Economic Growth Strategy

Potential constraints that may present problems to the City achieving a balanced growth strategy and a more stable year round economic base, point to the following conditions:

(1) Land Area -- The City has a relatively small amount of land available for all urban expansion. If the City is to accommodate a forecast of 590 new dwelling units most of the vacant land will have to be assigned to housing. Additionally, based on location and existing land use conditions, the City only has two areas that are suitable for industrial development. This includes the vacant land near the airport at Carpenter, Westwood, and Norwood, and any excess airport land. The land area north of Petosky and east of Mercer Boulevard, unofficially considered an industrial park area, may be poorly situated vis-a-vis other land in the township that could be made available for industrial development. The problem of land availability and bringing resources to bear to promote its use for economic development purposes may argue for consolidating the City and Township governments.

(2) Economic Development Realities -- Considering all of the economic development possibilities areawide and the competitive conditions from the Traverse City urbanized area and Petosky, evidence shows that substantial economic activity is interrelated with growth in tourism and related industry. The task facing the City is not insignificant but is also in the area of the possible. While the City should not discourage continued growth in the tourist related economic development sector, nevertheless, it would be wise to encourage development activities that extend the effects of tourism throughout the total year. Convention facilities would help accomplish this goal.

(3) Economic Development Opportunities -- Increasingly, economic development opportunities are given impetus by the local government through the development of municipal industrial parks, institutional organizations, and financial incentives. Charlevoix's efforts in this regard should pay dividends because of its favorable environmental setting and the desire of some corporate executives to live in such a community. Therefore, the success of economic development efforts is in a large measure dependant upon a local commitment to have it happen.

Any attempt to optimize the City's economic growth potential must recognize that the resource base to do this is largely on the City's waterfront land area and in part, the water resource itself, in terms of greater accommodation for recreation, boating, fishing and similar water activities. For this reason, a substantial part of this planning document will focus on the management and land use strategy that must be followed to to capitalize on these resources without destroying them.

PUBLIC UTILITY RELATIONSHIPS

INTRODUCTION

The purpose of this section is to review the City's Public Utility Plan, particularly with respect to wastewater pollution control facilities and water distribution, to determine how they will affect community development decisions.

WATER SUPPLY SYSTEM

The City's water supply system has been reviewed three times within the past ten (10) years by professional engineering firms. The latest study was completed in August 1978. An analysis of this report advises that the City of Charlevoix water distribution system will have to be modified to produce greater water supplies to satisfy the population growth forecast for the year 2000, There is no physical reason why this cannot be accomplished, however increasing the pumping capacity of the system and making certain improvements to meet recommended demands will require a substantial financial investment. It is interesting to note that the population forecast used in this report is similar to the independent forecast made under the population analysis section of the most recent water needs study. The only difference between the two forecasts is that the population forecast of 4,830 persons, made as a product of this plan, is expected to be fulfilled by 1995 as opposed to the year 2000. At that time the City will be fully developed, whereas the water supply study does not address this question.

Therefore, the only issue for the provision of an adequate water supply which can be physically responded to, is the question of the City's ability to financially meet the need. There is no need to constrain urban development because of a lack of adequate supply.

WASTEWATER POLLUTION CONTROL FACILITIES

The City of Charlevoix has a new advanced sewage treatment plant that began operation in July 1973. This modern tertiary treatment plant was designed to meet the immediate and long range needs of both the City of Charlevoix and the adjacent outlying areas surrounding the City. The average daily design flow of the treatment plant is 1.0 million gallons per day (mgd) with a maximum capability of 4.0 mgd, whereas the current annual average daily flow for 1979 was only 0.287 mgd. In point of fact, the operators at the plant frequently experience difficulty with the intended plant operation because the daily flows are so small compared to the design capacity of the facility.

The current storm and sanitary flows in the City of Charlevoix are collected and conveyed by a combination of separate sanitary sewers, separate storm sewers, and by a combined sewer system. Most major interceptors although not directly connected to storm water collecting catch basins nevertheless carry combined flow due to the fact that their connected branches carry combined flow.

A wastewater pollution control planning study was completed in December 1970 for the Charlevoix area which included several adjacent townships. For our purposes we are only concerned with development constraints as a result of a lack of wastewater pollution control facilities in the City of Charlevoix.

The above paragraph on the City's wastewater system shows that the City now has in place a facility with the capacity to accommodate a future population of in excess of 10,000 to 40,000 persons under a minimum/maximum-day condition. Only a small fraction of the potential capacity is being used. The fact that there is more than adequate capacity in the treatment plant does not mean that there are no geographic constraints due to inadequate pipe sizes and the problems caused by combined storm and sanitary pipes.

The conclusion can be drawn from the wastewater pollution control facilities study is that these facilities present no development constraints, based on physical characteristics to land in the City of Charlevoix. There are however, some areas that require improvements.

STORM WATER DRAINAGE

The City of Charlevoix has in part combined sanitary and storm water collection systems. These should be separated as soon as possible so as to remove the likelihood of sanitary wastes bypassing treatment works under prolonged heavy rainfall conditions.

In areas undergoing development, particularly with more intensive land useage, adequate provision should be made for storm drainage. Wherever possible, storm runoff should be discouraged through on-site retention or conservation of natural vegetation.

OTHER UTILITIES

Other utilities which are essential to the operation of an urban community include electrical distribution systems, natural gas systems, and telephone service. The City of Charlevoix owns and operates its own electrical distribution system, however it is not a primary producer of electricity. The City purchases electricity from the Consumers Power Company, however, it is also involved in arrangements whereby it has participated in the costs of some electrical generation facilities.

Natural gas supplies and an appropriate transmission system are in place. As development demands come forward, natural gas supplies can be made available to all areas of the City of Charlevoix. Similarly, there are no constraints on the extension of telephone communication services.

EXISTING LAND USE SURVEY AND ANALYSIS

INTRODUCTION

The purpose of the Existing Land Use Survey and Analysis for the City of Charlevoix is to determine the amount of land committed to urban development and related activities which involve the use of land, its geographic distribution, and population equivalancies, in terms of commercial and industrial acreage per population. This analysis is also concerned with the density of housing.

EXISTING LAND USE DISTRIBUTION

There are a total of 1,630 acres of land in the geographic limits of the City of Charlevoix (06/81). The distribution of the existing land use is graphically illustrated on Map 4, while the amount of land in each land use category is shown on Table 11. The existing land use was recorded through the use of current assessment records. This was supplemented by a field survey. City building records were further reviewed to complete the update to the current time frame.

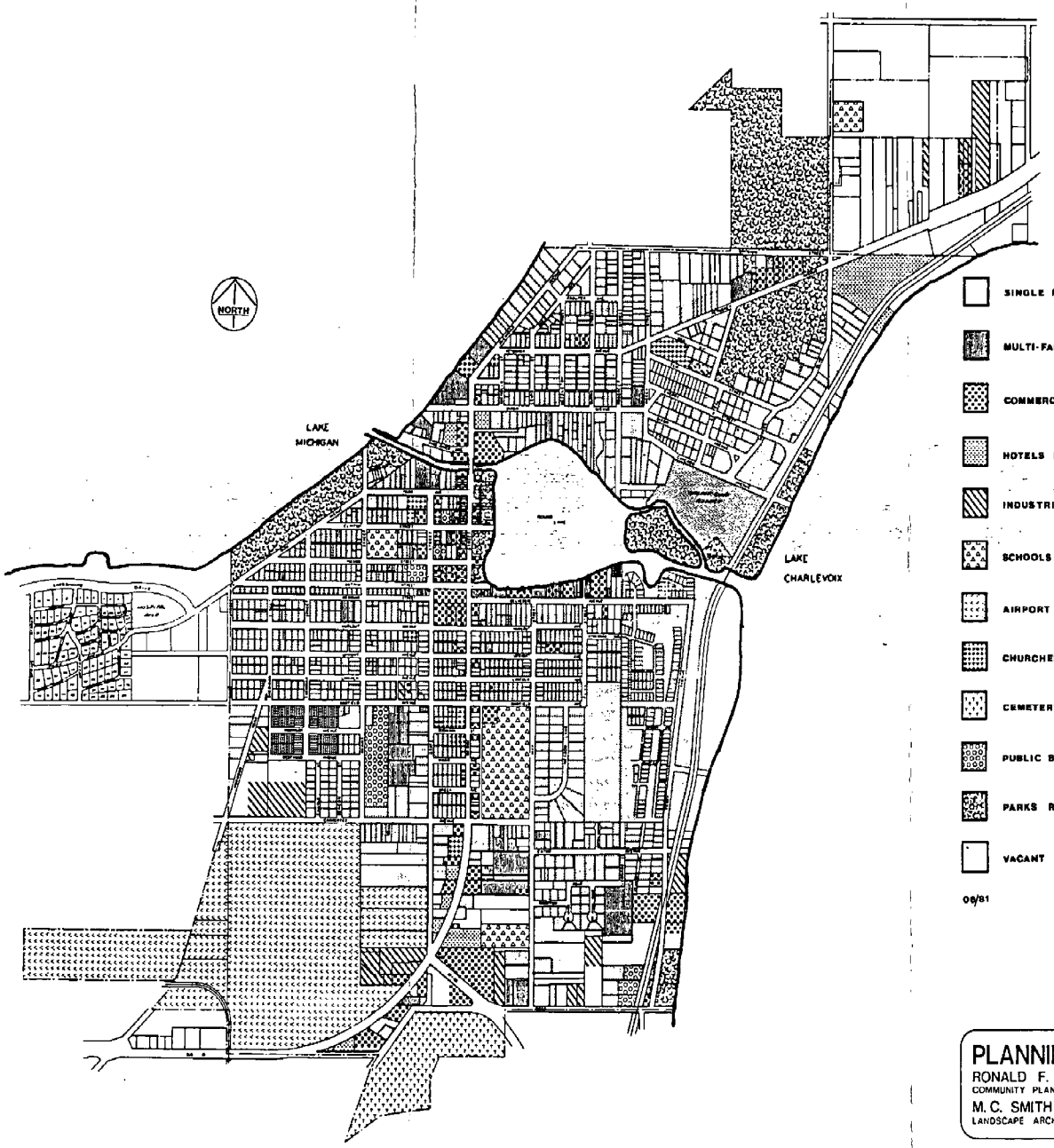
TABLE 11

EXISTING LAND USE DISTRIBUTION
(as of 06/81)

Classfication	No. of D.U.'s or Uses	No. of Structures	No. of Acres	% of Total
All Residential	1,817	1,366	811	49.9%
One Family Detached	1,268	1,268	692	
Two Family	60	30	8	
Multiple Family(3 or More)	477	56	35	
Mobile/Modular Homes	12	12	3	
Private Seasonal Estates (Belvedere/Chicago Club)	109	109	75	
Commercial	154	137	70	4.3
Retail	80	56	22	
Service	35	50	20	
Offices/Banks	39	24	9	
Hotel/Motel	129 units	17	19	
Industrial	13	13	40	2.5
Manufacturing	9	9	25	
Non-Manufacturing	4	4	15	
Public & Semi-Public			206	12.6
Churches	8	8	11	
Schools	4	4	27	
Public Buildings	3	3	9	
Cemetaries	1		65	
Parks/Golf Courses	5	5	90	
U.S. Government	2	2	4	
Transportation/Communications			306	18.8
Airport			214	
Major Roads			70	
Railroad			22	
Water			70	4.3
Vacant Land			125	7.6
All Vacant Land				
			1,630	100.0%

EXISTING LAND USE MAP

4



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LANDSCAPE ARCHITECTURE - URBAN DESIGN

A description of how the land is used and its characteristics follows,

Residential

As might be expected, the major user of land in the City of Charlevoix is housing. The use of land for residential purposes (all housing types) occupies 813 acres, or nearly fifty (49.9) percent of the land.

One Family Residences

One family residences occupy the greatest amount of land, and include 1,155 one family detached residences. In some cases, two houses are located on one platted lot. Lot sizes are smallest in Ward 2, whereas they are considerably larger in the first Ward. Ward 3 tends to have examples of both large and small lot sizes. The majority of the lots, however, are around 6,000 square feet with frontages of 50 feet or more. There is not a great deal of variation amoung lot sizes.

Two Family Residences

Approximately 60 dwelling units are noted in two family residential structures. This information was generally acquired through information on the assessment cards and through field observation. In nearly all cases, two family units were brought about by converting a single family home. It is generally impossible to be totally accurate in determining the number of two family housing structures and, therefore, this data is not considered exhaustive. For mapping purposes, one and two family housing units are noted in the same manner because the map scale makes it difficult to denote the odd two family unit. The majority of these were located in Ward 2, which as a correllary statement was the area of greatest housing deterioration.

Multiple Family Residential Units

Multiple family dwelling units include all structures in which there are located three or more dwelling units in any manner of attachment or occupancy mode (i.e. owner vs. renter). There are 518 dwelling units located in multiple family structures. This includes both seasonal and year around housing units. The extent of the seasonal or periodic use varies and this may change from year to year, particularly with the condominium units. For planning purposes, it is necessary that these be acknowledged as part of the year around housing supply. The number of multiple family housing units by occupancy status may be a part of the housing distribution goals.

Commercial

Commercial land use includes the categories of retail, services, offices, and commercial recreation. A total of approximately 70 acres of land are used for commercial purposes as defined. The overall commercial development rate tends to be exaggerated in a community heavily influenced by tourism particularly in the Hotel/Motel land use category. The ratio

of commercial development for each 100 population is a crude measure of future requirements. Even this forecast technique tends to lose credibility in a tourist dominated economy. Nevertheless, for possible application to future requirements, it should be noted that there are 2.1 acres of land in commercial development for each 100 persons in the population. This ratio is not very high as compared to a larger urban area where ratios generally tend to exceed six (6) acres per 100 population.

Retail

Retail land uses include all uses whose principal function is that of selling merchandise. Approximately 22 acres of land was used for retail purposes. The majority of this space is located at two locations; one, the downtown area and two, at the shopping center at M-66 and State Road. There were 80 retail establishments.

Services

Included in the services land use category are eating and drinking establishments, dry cleaners/laundries, and personal services (i.e. barber/beauty shops, etc.). These services provide a service as opposed to selling a finished product. Approximately 20 acres of land was recorded in this activity.

Offices

Offices include finance, insurance, real estate services, and other generally recognized professional office uses. Approximately 9 acres of land was recorded in this activity.

Hotels/Motels

These are not typically recorded separately in a less tourist oriented community. Because they make up an important segment of the land use inventory, they were separately identified. Approximately 19 acres of land was recorded in this activity.

Industrial

Industrial land uses include all manufacturing and non-manufacturing activities (i.e. warehousing, contractor's yards, etc.). Approximately 40 acres of land was recorded in this activity. Thirteen (13) separate industrial land use activities were recorded in the City,of which nine (9) were manufacturing uses and four (4) were non-manufacturing uses.

Public and Semi-Public Uses

These include all public and semi-public uses of land such as schools, churches, parks, etc. This land use activity is usually a large consumer of land, as is the case in the City of Charlevoix where over

206 acres of land was recorded in this activity. The largest single land consumer was the Charlevoix Golf Course. Map 5 further describes the location of lands owned by public bodies.

Transportation and Communications

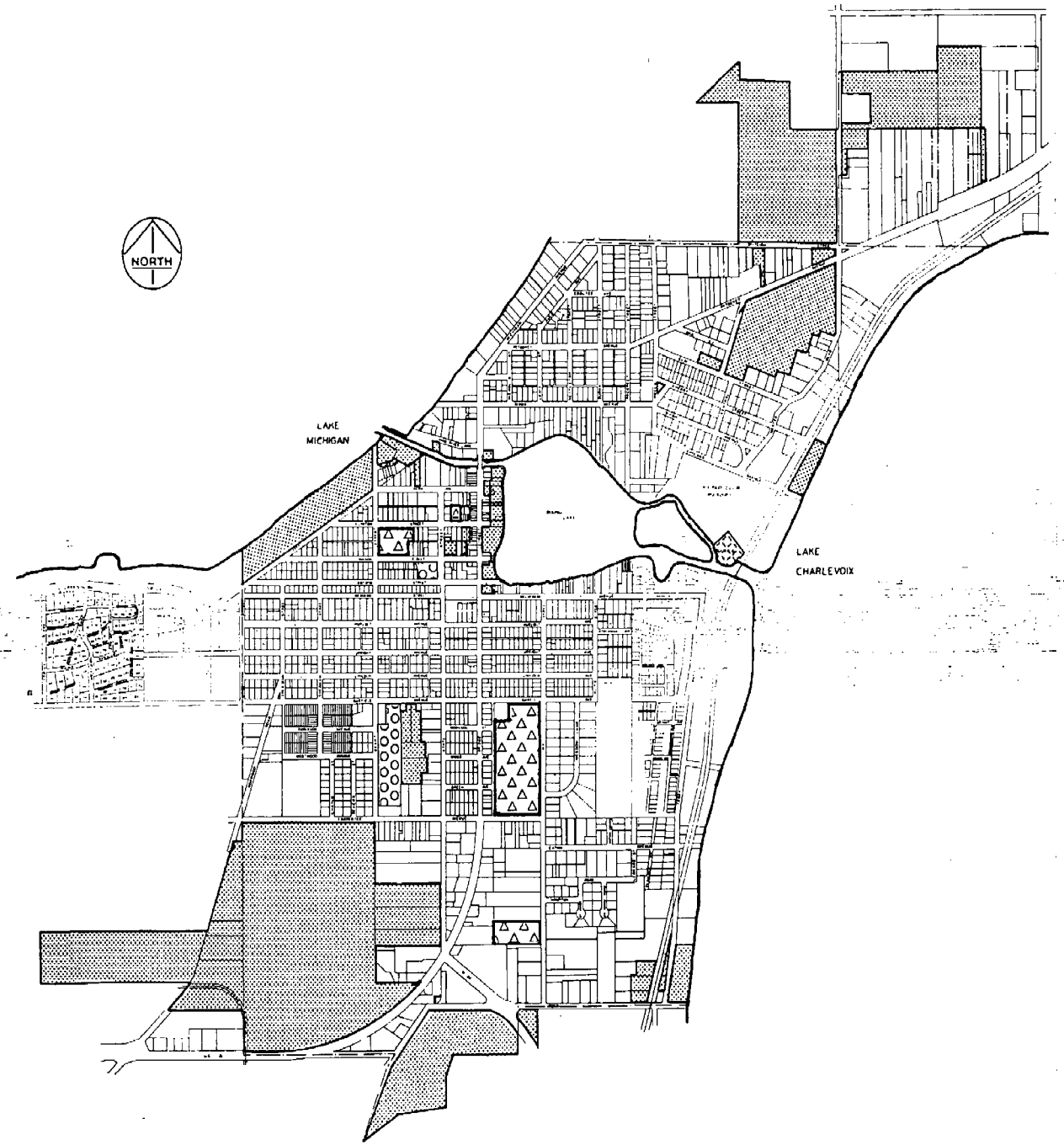
All land uses devoted to transportation and communication utilities are included in this land use category. Major public streets consume a large amount of land as does the airport, which is the largest single use consumer in the City. Approximately 306 acres of land was recorded in this activity.

Vacant Land

Vacant land is an important resource base for a city and is an indication of possible growth conditions. The vacant land should be an important factor in growth management decisions. Charlevoix does not have a substantial amount of vacant land, specifically, approximately 125 acres of vacant land is available. In some cases however, the vacant land represents that portion of a parcel which is being under utilized or not used at all. Approximately 165 lots are vacant, based on a field survey. These are scattered throughout the residential areas and the three Wards. The largest parcels of land are located in what is considered an Industrial Park (i.e. 29 acres). In the south end there are several acreage parcels (i.e. May Street area, and on the north side of Carpenter Road at Norwood Road). All of the vacant land can be developed. The use will be determined as a result of the final comprehensive development plan that will evolve from this process.

Technically, only a very small part of the waterfront area could be considered vacant land and therefore immediately available for development. This condition is attributable, in part, to the fact that the C and O Railway line runs parallel and adjacent to Lake Charlevoix as it traverses the City. Certain other lands, while technically developed, nevertheless are only marginally developed and hold out the possibility of redevelopment. This condition exists on the south side of Round Lake, and Lake Charlevoix, particularly in the event the railway line is terminated and converted to another use.

PUBLIC LANDS OWNERSHIP MAP 5



- city
- county
- federal
- school

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HOUSING ANALYSIS AND DISTRIBUTION STRATEGY

INTRODUCTION

The purpose of the Housing Plan is twofold. In the first instance, it is desirable to identify conditions of housing deterioration and obsolescence and to plan for their rehabilitation or replacement. Several federal assistance programs are available to communities who specifically lay out a strategy to correct housing deficiencies. Secondly, many communities feel threatened by housing distribution, in terms of structure type and occupancy, that is in the opinion of the community not in balance. Housing distribution goals serve to guide zoning decision making relative to achieving distribution goals. Several waterfront areas have great potential for housing and the function of the Housing Plan is therefore to determine the urgency of that land for housing and what type may be most appropriate on the waterfront.

HOUSING CHARACTERISTICS

Housing characteristics, as reported in the U.S. Census of Housing Reports, serve to identify several characteristics that have relevance for assessing the magnitude of the problem of adequacy of housing and also give us occupancy distribution information.

Number of Housing Units and Structure Type Distribution

The following table provides information on the number of housing units in the City of Charlevoix and the extent of change between 1970 and 1980.

TABLE 12

NUMBER OF YEAR ROUND HOUSING UNITS BY STRUCTURE TYPE

Structure Type	1970	1980[1]	Adjusted 1980[2]	
Total Units	1,232	1,779	1,708	(1,817)[3]
1 Family	1,023	1,119	1,159	(1,268)
2 Family	47	462	60	(60)
3 or More	52		477	(477)
Mobile Homes	-	10	12	(12)
Seasonal	N/A	188	N/A	(N/A)

1. Bureau of Census, Preliminary Housing Report
2. From local records
3. With Chicago and Belvedere Clubs

There is a discrepancy between the total housing count of the U.S. Census of Housing and that obtained through local accounting procedures. This may be attributed to the inclusion of seasonal housing as opposed to all year round housing, such as housing units in the Chicago and Belevedere Clubs. On the other hand, if these are included then the number of housing units by local accounting would exceed the census count. This area is made confusing because we cannot be sure what types of housing units are included in the census count. For our purposes, year round housing is housing designed and capable of being used year round, regardless of whether or not it is used year round. Similarly, it is our opinion that year round housing units included in condominium projects should also be included in year round housing units, inasmuch as they are capable of being used year round. It is interesting to note the significant increase in the number of housing units now contained within multiple family structures. This is in a large measure accounted for by relatively new condominium projects.

Age of Housing

The age of the housing stock is indicated as follows:

TABLE 13

AGE OF HOUSING

Years Built	No. of Units	% of Total
1939 or earlier	805	43.4
1940 to 1949	159	8.6
1950 to 1959	84	4.5
1960 to 1968	179	9.6
1969 to present (01/82)	627	33.9
Total Units Estimated	1,854	100.0%

Fifty-two (52) percent of the housing stock is at least thirty-two (32) years old today, and nearly fifty (50) percent is forty (40) or more years old. The age of the housing stock could be an indicator of housing rehabilitation and renewal requirements. A great deal would depend upon how well this housing was constructed in the first place. This will be evident in the structural quality analysis. It ought to be apparent that a considerable number of housing units, perhaps in excess of thirty-five(35) percent, are now more than fifty (50) years old. At this point,questions of economic life and functional obsolescence need to be accounted for in any estimate of the magnitude of housing rehabilitation or renewal.

Structural Quality

An assessment of the exterior structural quality of all of the housing structures in the City was made in May of 1981. Generally, the standards applied were those of the American Pulbic Health Association (APHA). These standards provide a list of deteriorating conditions (i.e. siding missing, cracks in walls, stairways broken, etc.,) which cause a building to be rated poor, fair or good. The survey is limited to an assessment of exterior conditions, however, through the use of the local assessment office records, some criteria that should account for interior conditions were also utilized in the development of the rating system of poor, fair and good.

In order to eliminate the problems of individual dwelling unit assessments of housing quality, the APHA standards for block recordation were used. This mapping technique is described on the following Structural Quality Map #6. However, in-house records are available to advise of site specific dwelling units which are in need of substantial rehabilitation or renewal. The Structural Quality Map is based on a combination of exterior rated deficiencies and equalized assessments of less than $10,000.00, for a rating of "poor". In total, some sixty (60) residential structures were rated poor as a result of the evidence of substantial required repairs and a market value estimate of less than $20,000.00. These structures were located in Ward 3, Ward 2, and Ward 1 respectively. Ward 3 had the greatest concentration followed by Ward 2 and Ward 1.

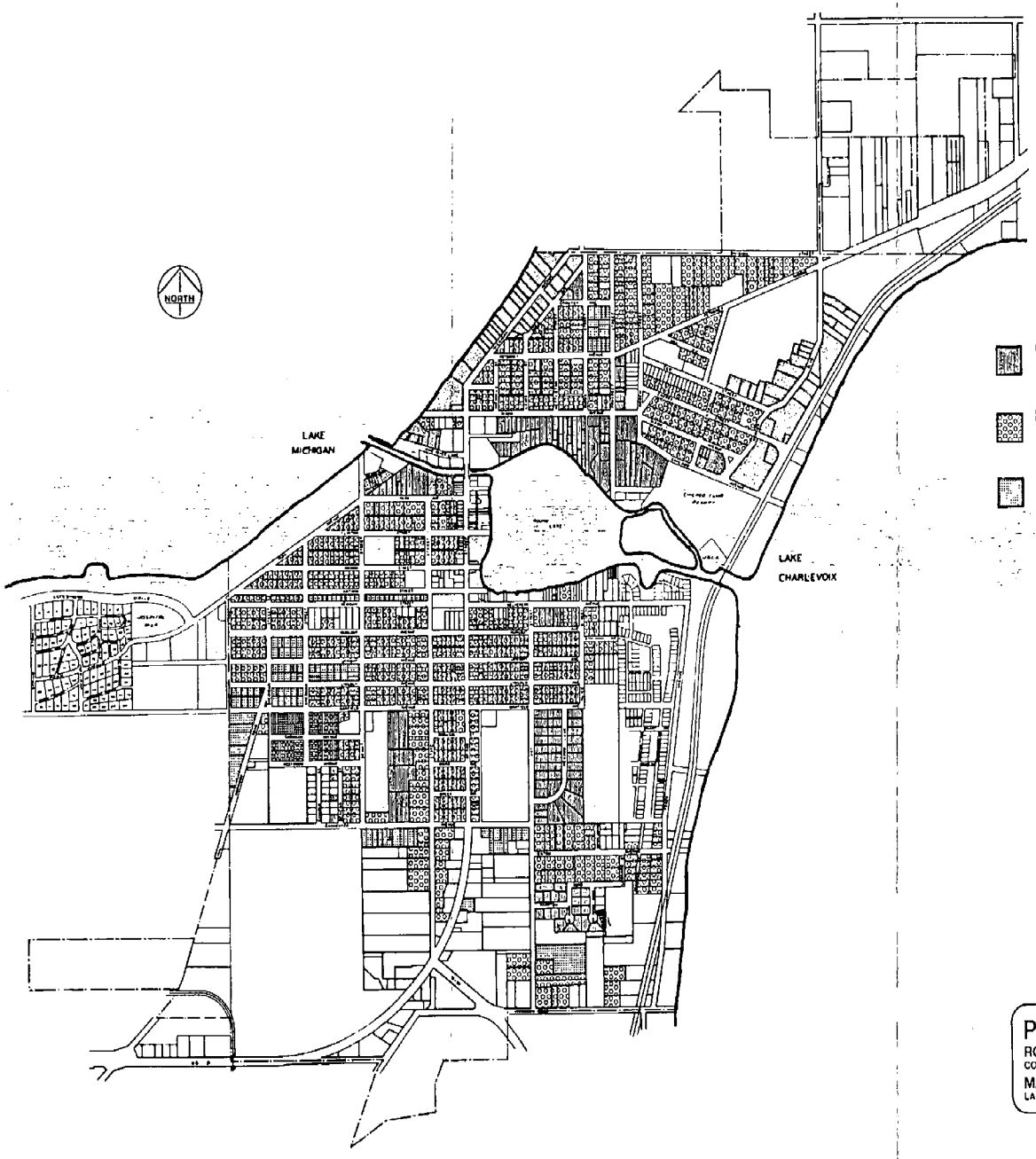
Neighborhood Strategy Area -- For the purposes of bringing about potential neighborhood improvements through the HUD Community Development Block Grant program, it was desirable to assess which area of the City would be most appropriate for a concentrated improvement program. Although a greater number of housing deficient structures were found in Ward 3 (i.e. thirty vs twenty structures), nevertheless, it would appear that Ward 2, because of its infrastructure deficiencies, is a more appropriate neighborhood for designation as a neighborhood strategy area. Ward 3 is more amenable to private marketplace improvements, while the area now enjoys a high level of infrastructure (i.e. good streets, public utilities, schools and parks, etc.). Therefore, the City should immediately begin the process of filing an application for a discretionary Community Development Block Grant in which a commitment would be made to carry out a concerted program of improvements in Ward 2, and to provide housing rehabilitation loans to qualifying home owners in Ward 2.

Housing Plan

The purpose of this section is to provide forecasts of total new housing units, their structural distribution, and occupancy characteristics. Of particular significance will be the matter of assisted and special purpose housing indicators.

HOUSING STRUCTURAL QUALITY

6



GOOD
WELL MAINTAINED

FAIR
1-20% deteriorated

POOR
over 20% deteriorated

PLANNING TEAM
RONALD F. NINO & ASSOCIATES
COMMUNITY PLANNING AND DEVELOPMENT
M.C. SMITH & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE · URBAN DESIGN

Forecasts of housing and their unique characteristics will be calculated on a decennial basis to provide more definitive planning targets and to allow for monitoring and change. The model is not value free and certain assumptions are beyond the control of predictive science such as family formation rates. The production model described in Table 15 is based upon the following assumptions.

1. The average household size is likely to increase if Charlevoix's economic development efforts to create year round jobs are successful. The average household size today is reflective of a large retirement population.

2. The average household size, for planning purposes, is expected to be as follows:

TABLE 14

AVERAGE HOUSEHOLD SIZE FORECAST BASED ON RELATIONSHIP OF TOTAL POPULATION TO TOTAL YEAR ROUND HOUSING UNITS

	1980	1985	1990	1995
Charlevoix	1.85	1.90	2.00	2.10

3. Five percent (5%) of the housing stock fifty (50) years old or older will require replacement or substantial rehabilitation tantemount to replacement and, therefore, should be added to new housing stock estimates. This also accounts for housing areas converted to a non-housing use.

4. The housing projection model should account for an optimum vacancy factor so that housing costs are not artificially constrained due to supply. A three percent (3%) vacancy allowance is considered reasonable.

Total Forecasted Housing Units

The total number of forecasted housing units is a function of population growth, times the average household size, with adjustments for housing replacement and a suitable vacancy. This is expressed as follows:

TOTAL POPULATION X AVERAGE HOUSEHOLD SIZE
PER DECENNIAL PERIOD = TOTAL HOUSING
(SUB - TOTAL) + REPLACEMENT + 3% VACANCY
FACTOR = TOTAL HOUSING UNITS

The following table describes the application of the formula:

TABLE 15

1980 TO 1995 FORECASTED
HOUSING UNIT PRODUCTION SCHEDULE

	1980 to 1985	No. of Dwelling Units
1.	1985 Est. Housing Requirements Based on 3,665 Population at 1.9 per housing unit	1,929
2.	1980 Est. Housing Units	1,779
3.	Additional Housing Units to Meet Pop'l. Change	150
4.	Vacancy Allowance, 3% of 1985 Est.	58
5.	Add 5% for Replacement & Substantial Repairs Based on 750 Units at 50 Years Old	37
6.	Net Increase in 1980 Housing Stock (Step 3 plus Step 4)	208
7.	Total Size of 1985 Housing Stock (Step 1 plus Step 4)	1,987
8.	Total New Housing Units 1980 to 1985 (Step 3 plus Step 4 plus Step 5)	245
	1985 to 1990	
9.	1990 Est. Housing Requirements Based on 4,200 Population at 2.0 per housing unit.	2,100
10.	1985 Est. Housing Units	1,987
11.	Additional Housing Units to Meet Pop'l Change	113
12.	Vacancy Allowance, 3% of 1990 Est.	63
13.	Add 5% for Replacement & Substantial Repairs Based on 989 Units Now 50 Years Old	44
14.	Net Change in 1985 Housing Stock (Step 11 plus Step 12)	176
15.	Total Size of 1990 Housing Stock (Step 9 plus Step 12)	2,163
16.	Total New Housing Units 1985 to 1990 (Step 11 plus Step 12 plus Step 13)	220
	1990 to 1995	
17.	1995 Est. Housing Requirements Based on 4,830 Population at 2.1 per housing unit	2,300
18.	1990 Est. Housing Units	2,163
19.	Additional Housing Units to Meet Pop'l Change	137
20.	Vacancy Allowance, 3% of 1995 Est.	69
21.	Add 5% for Replacement & Substantial Repairs Based on 800 Units Now 50 Years Old	40
22.	Net Change in 1995 Housing Stock (Step 19 plus Step 20)	206
23.	Total Size of 1995 Housing Stock (Step 17 plus Step 20)	2,369
24.	Total New Housing Units 1990 to 1995 (Step 19 plus Step 20 plus Step 21)	246
25.	Net Addition To Total Housing Stock 1980 to 1995 (Step 6 plus Step 14 plus Step 22)	590

The forecast model described above projects a new increase in the total number of housing units in the City of 590 dwelling units. Of the existing housing stock, another 121 dwelling units will either be replaced with another land use or the housing unit will essentially be replaced with one or more new dwelling units. Essentially, 711 new dwelling units are forecast to satisfy the demand for population increase and replacement due to age and obsolescence. The effect of the anticipated increase in household size is

fewer housing units will be required to satisfy the forecasted population increase of approximately 1,534 persons than would otherwise have been required if the household remained the same.

It is not possible to determine what proportion of the new housing stock will be purchased by seasonal home purchasers and therefore affect the estimated size of the permanent population. It was concluded, however, in the population section that the number of seasonally used units would remain about the same or decline slightly. The plan makes the proposition that the tendency for ownership of housing stock, by seasonal residents, will decrease as a percentage of total housing stock, if economic development goals are achieved.

Structure Type and Occupancy Mode Distribution Strategy

In order to assist the Planning Commission and the City Council in making zoning decisions that will effect a planned distribution of housing by structure type and occupancy mode, the following strategy is proposed(see Table 16).

IMPLICATIONS FOR BALANCED GROWTH MANAGEMENT STRATEGY

The housing production rate forecast described in the above tables (i.e. 590 new housing units plus substantial rehabilitation), has implications for the balanced growth management strategy which the goals of this plan hope to achieve. Based on today's cost, it can be expected that the assessed valuation, attributable to housing, could increase by 13 to 15 million dollars (actual value 26 to 30 million dollars). This fact should be kept in the forefront in planning for an improvement in the valuation of residential to non-residential development, in the City. In other words, if some improvement is to be made in the distribution of valuation away from residential, more than 13 to 15 million dollars of non-residential valuation will have to take its place.

ASSISTED HOUSING STRATEGY

The City of Charlevoix should expect that the nature of its population growth and change will require some reasonable level of response to the problems of providing some of its citizens with assistance in accessing decent housing opportunities. The housing structural quality survey already shows that a number of households may need some financial assistance to improve their homes. Property owners of marginally acceptable rental housing units may also need assistance in making repairs to rental housing units, so as to maintain the supply of lower rent units. With a total housing stock of 2,369 dwelling units, some twenty-five percent (25%) should be aimed at low to moderate income households, both owner and renter occupied. This means that nearly 600 dwelling units will have to meet the income specifications of low and moderate income households, including family, elderly, and primary headed households. Historical data advises that Charlevoix is

TABLE 16

STRUCTURE TYPE DISTRIBUTION AND TYPE OF OCCUPANCY/ OWNER OR RENTER OCCUPIED

Year	Total D.U.'s	One & Two Family						Multiple Family					
		Tot. 1& 2 Family	% Of Total D.U.'s	O/O	% Of Tot.S.F.	R/O	% Of Tot.S.F.	Total Mult.	% Of Total D.U.'s	O/O	% Of Tot.M.F.	R/O	% Of Tot.M.F.
Est. 1980 Distribution	1,779	1,227	69.0	1,127	91.9	100	8.1	552	31.0	279	50.5	273	49.5
Planned 1985 Distribution	1,987	1,292	65.0	1,163	90.0	129	10.0	695	35.0	348	50.0	347	50.0
Distribution of New 1980 to 1985 Units	208	65		36		29		143		69		74	
Planned 1990 Distribution	2,163	1,352	62.5	1,176	87.0	176	13.0	811	37.5	406	50.0	405	50.0
Distribution of New 1985 to 1990 Units	176	60		13		47		116		58		58	
Planned 1995 Distribution	2,369	1,421	60.0	1,208	85.0	213	15.0	948	40.0	474	50.0	474	50.0
Distribution of New 1990 to 1985 Units	206	69		29		40		137		68		69	
Distribution of Net Add'l. Dwelling Units Between 1980 - 1995 Exclud. Replacement Units/	590	194	33.0	78	40.0	116	60.0	396	67.0	195	49.0	201	51.0

substantially below the State median houshold income level and that this condition probably still exists today. In urban counties where the median household rate is substantially higher (i.e. Genesee County), over one-third of all households qualified as low and moderate income households under the HUD definition for those eligible to receive housing assistance. Therefore, the twenty-five percent (25%) target should be a fairly realistic goal.

Charlevoix is also characterized by higher levels of elderly headed households. The evidence supports housing assistance for this group as well. It is estimated that at least one-third of all assisted housing (i.e. 200 units) should be designed for the elderly. It is unlikely that new low cost single family housing will be required, given the potential availability of existing low cost single family housing, however it appears that this housing stock is in need of major rehabilitation goals. The City would be well advised to charge the Housing Commission with greater activity with respect to meeting this challange.

Role of Waterfront Land In Meeting Housing Goals

A review of the Housing Distribution Policies Plan Map #8 would show that waterfront land is expected to play a major role in helping to meet the planned distribution of housing.

COMMUNITY CONSENSUS BUILDING

At the outset, City officials decided that any planning effort to develop a comprehensive set of development guidelines ought to take place with as much input and direction from the general population as possible. About the same time as the planning study was initiated, the Keep Charlevoix Beautiful organization was initiated. This organization took a positive leadership role to encourage citizen participation in reaching a consensus plan regarding development policies and the use of all the land. A series of workshops were scheduled and four in all were held on Saturday mornings. Attendance ranged from twenty-five (25) to fifty (50) persons. At the first workshop a problem identification exercise was completed. At the second workshop the participants were given a handout of all of the natural and physical resource data which may impact land use decisions and population and economic information. Consultants also conducted a short course on techniques for graphically conveying ideas. Teams were then established, and each team was instructed to graphically describe on base maps, the problems which they believed needed to be addressed in subsequent land use plans. Each team was then directed to develop on a separate base map, their response to the problem identification map that they had developed. Between the first and second workshops a community attitude survey was conducted through placement of a questionnaire in the local newspaper. Response to the questionnaire was excellent and the geographical distribution of the responses suggested that the survey had statistical relevance. Total responses number almost one hundred and sixty (160) persons.

The major summary finding pointed up a major conflict between general development goals and specific geographic area goals. Respondents, when defining general development goals and issue resolutions, expressed the position that development should be encouraged and that the strategy should be aimed at producing a balanced year round economy, provided that development did not adversely impact quality of life and environmental preservation goals. When respondents moved to specific geographic areas of the City, the development options were severly narrowed to the point where it would not be possible to achieve some economic development and housing goals. This conflict had to be resolved in the workshop process.

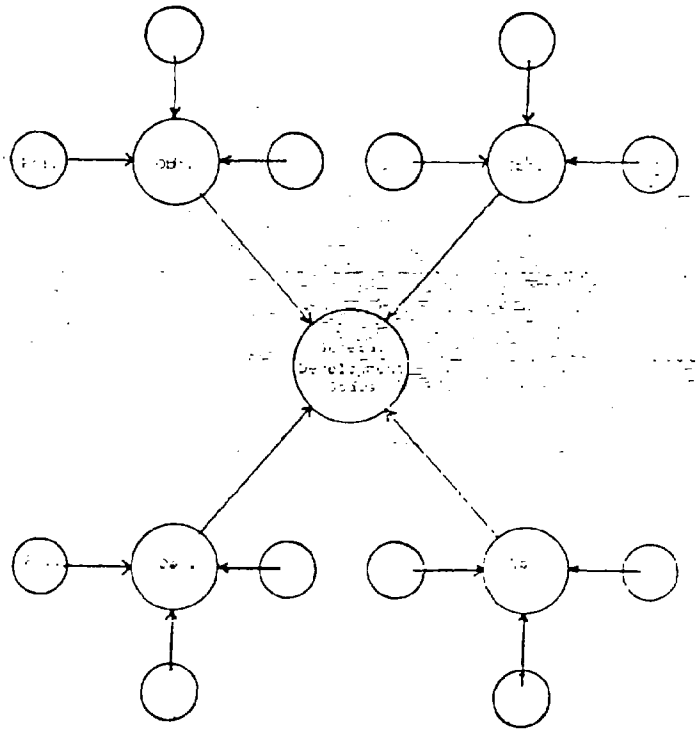
At the third workshop, the Consultants presented graphic expressions of three alternative future land use plans and development policy guidelines underlying each alternative. Workshop participants opted for adoption of the planned growth for optimum balancing of the City's economic development potential with environmental preservation. At the fourth and final workshop, the Consultants returned with architectural development expressions for the major areas of development potential adjacent to and near all bodies of water, including a waterfront management policies plan. Workshop participants generally agreed that the plans represented an optimum solution to the use of these lands.

PART II. PLANNING, RESOURCE AND MANAGEMENT STRATEGIES

GOALS, OBJECTIVES AND POLICIES

INTRODUCTION

The nature of goals, objectives and policies suggests a hierarchial framework going from the general to the specific. In other words, as we move from goals through objectives to policies, the idea is that statements become more definitive relative to carrying out the most general goal statement. The following illustration describes this process.



SYMBOLIC RELATIONSHIP OF GOALS TO OBJECTIVES TO POLICIES

Pol.=Policy
Obj.=Objectives

The goal formulation sequence, will therefore, begin with broad general development goals(citywide) by functional activity areas, followed by citywide objectives and policies. Following this process, objectives and policies will be designed unique to certain areas of the city (i.e. Downtown, Round Lake, Lake Charlevoix, and Residential Areas).

GENERAL DEVELOPMENT GOALS

The following General Development Goals, and for that matter, all of the goals, objectives and policies evolved through a workshop and survey questionnaire process. Specifically, the following General Development Goals were formulated.

1. Growth Goal

ENCOURAGE OVERALL GROWTH AND DEVELOPMENT OF ALL OF THE LAND IN THE CITY TO MEET THE GROWTH MANAGEMENT STRATEGY OF THE CITY. GROWTH SHOULD, HOWEVER, OCCUR IN A MANNER THAT BOTH CAPITALIZES AND RESPECTS THE NATURAL FEATURES OF THE LAND.

The growth goal says that increasing the size of the population and providing for more related land development is essential to the provision of adequate public and private services. It does not follow from this statement that the residents of the City are anxious to lose its "small towness" character, but rather the provision of adequate levels of goods and services demands a larger population base, and a happy medium can be established.

2. Economic Development Goal

PURSUE AN ECONOMIC DEVELOPMENT STRATEGY TO INCREASE ALL YEAR AROUND JOB OPPORTUNITIES SO AS TO LESSEN THE SEASONAL NATURE AND EXTENT TO WHICH ALL RESOURCES ARE USED.

This goal statement indicates that the City of Charlevoix is adversely affected by the seasonal nature of much of its economic activity. The land is essentially producing economic spillovers only on a part-time basis, and therefore, a less than typical population and household relationship exists to meet the public financial burden caused by the nature of the tourist economy. This could change with a more equitable way of providing state transfers to areas which have a statewide attraction, however, this does not appear to be a possibility at present. Therefore, it behooves the City to encourage year around economic development, because these types of activities will produce a more stable tax base to meet essentially the same public costs that are caused by seasonal economic activity.

3. Environmental Preservation Goal

PROTECT THE SCENIC AND ENVIRONMENTAL QUALITY THAT CHARACTERIZES THE CITY'S PHYSICAL DEVELOPMENT BY VIRTUE OF ITS RELATIONSHIP TO WATER AND ITS TOPOGRAPHY.

The ever presence of water views throughout a large part of the City and its varied topography which enhances scenic view possibilities, together with its small towness character, is why the City has a right to call itself "Charlevoix the Beautiful."

This condition could easily be destroyed by overpowering land development, that engulfs and destroys the vistas now open to the water. There is a place for both high rise and low rise buildings, small scale and large scale buildings, but they must be carefully located, always mindful of maintaining scenic views.

4. Waterfront Management Goal

THE CITY OF CHARLEVOIX'S WATERFRONT AREA IS ITS GREATEST ECONOMIC AND ENVIRONMENTAL RESOURCE. MAXIMIZING THE ECONOMIC AND THE ENVIRONMENTAL ASPECTS OF THIS RESOURCE CAN BE A POINT OF CONFLICT. IT IS THEREFORE ESSENTIAL THAT A BALANCE BE STRUCK BETWEEN ACHIEVING THE ECONOMIC POTENTIALS OF THIS RESOURCE WITHOUT DESTROYING THE ENVIRONMENTAL RELATIONSHIPS OF THE WATERFRONT AREA.

The City of Charlevoix's waterfront related land area, and the public exposure of most of its waterfront area, are Charlevoix's greatest resources. While it may be in the best interest of purely environmental goals to bring into the public domain most of the land adjacent to the waterfront, this is not practical for economic reasons. The City must strike a balance between development of the waterfront land for economic and environmental conservation which precludes development. It should be possible, however difficult, to achieve both. The function of the goal is to keep this balancing act ever-present in the minds of all decision makers.

Community Identity Goal

COMMUNITY DEVELOPMENT DECISIONS, PARTICULARLY THOSE AFFECTING THE VISUAL SENSES AND GENERAL CITY BEAUTIFICATION RELATED DECISIONS, SHOULD BE CARRIED OUT IN AN ATMOSPHERE OF COMMUNITY CONSENSUS BUILDING.

In a small community like Charlevoix, the opportunity for building a strong feeling of community is very good. By encouraging a wide consensus in decision making and always keeping questions of environmental integrity and city beautification to the forefront, a strong feeling of pride and commitment to "Charlevoix the Beautiful" can be maintained. A sense of commitment to the community of Charlevoix will be very helpful in addressing community improvements long before they become a crisis. To achieve this requires reasonable opportunities for expression and a stronger sense of partnership between the public and private sectors of the community to the notion that everyone is responsible for keeping high the integrity of Charlevoix the Beautiful.

6. Quality of Life Goal

ENCOURAGE PRIVATE AND PUBLIC ORGANIZATIONS AND AGENCIES WHOSE PURPOSE, EITHER DIRECTLY OR INDIRECTLY, PROVIDES SERVICES AND FACILITIES WHICH CONTRIBUTE TO QUALITY OF LIFE GOALS.

Included in this goal would be the attainment of city beautification measures, because these are perceived to add dimension to the quality of life. In addition, private organizations providing recreational, leisure, and art forms of endeavors should be given public encouragement.

7. Energy Conservation Goal

THE CITY GOVERNMENT WILL ADVOCATE AND PURSUE POLICIES WHICH ENCOURAGE ENERGY CONSERVATION.

The goal statement recognizes that energy conservation can be achieved by land use distribution, facilities, and housing styles. The government can set policies to help achieve the goal.

8. Physical Appearance and City Beautification Goal

UTILIZE THE CITY'S LEGISLATIVE AND ADMINISTRATIVE RESOURCES FOR THE IMPROVEMENT AND MAINTENANCE OF THE CITY'S PHYSICAL APPEARANCE AND TO ENHANCE THE VISUAL SENSES.

Several of the foregoing goals also provide a base for keeping this goal always in the forefront of decisions leading to public action. In addition, however, it is essential that adequate financial resources be made available to carry out a high level of city housekeeping efforts, and to provide adequate administrative staff to administer and enforce environmental control regulations. Achieving this task can be made easier by a public relations program and by a better working relationship between the institutions representing the private sector (i.e. Charlevoix Chamber of Commerce, Service Clubs, etc.) and the government.

9. Governmental Structure and Boundary Goal

OPPORTUNITIES TO ACHIEVE ECONOMIES OF SCALE THROUGH INTER-GOVERNMENTAL COOPERATION, COMPACTS, OR EVEN CONSOLIDATION NEED TO BE EXPLORED.

The relationship of Charlevoix Township to the City and its relatively small geographic and divided space, suggests that a more efficient level of governmental operation may be possible by consolidating the two units of government.

OBJECTIVES AND POLICIES

The foregoing attests to broad statements about the way one would like to see growth and development take place in the City of Charlevoix. Their very generality evades specific guidance for bringing about the goal statement, and in a sense, are not more than a state of mind or attitude about future conditions.

It now remains to narrow these statements to a more definitive pattern of the kind of action that can be pursued by the various areas of city development to affect change. Objectives and policies will be formulated for specific kinds of activities, such as land use, housing, recreation, etc., and their relationship to the overall goals of the plan will be identified. Statements of objectives are intended to bring about more definitive guidelines than are inherent in the goals statement, while the statement of policies represents a more finely tuned expression of intentions. The policies should identify what kinds of actions decision makers are capable of dealing with on a day to day basis.

Collective Land Use Objectives

(i) ALLOCATE THE LAND RESOURCES OF THE CITY OF CHARLEVOIX SO AS TO ACHIEVE A BALANCE BETWEEN RESIDENTIAL AND NON-RESIDENTIAL ASSESSED EVALUATION IN ORDER TO PROVIDE A FINANCIAL BASIS MORE CAPABLE OF RESPONDING TO THE GENERAL DEVELOPMENT GOALS.

This objective speaks to a growth management concern. It essentially advises that the City should try to offset the costs of residential development with sufficient non-residential development, so that the costs of providing municipal services can be shared by both residential and non-residential rate payers. There is no specific formula for this objective, and it is plagued with the vagaries of State law, which could change the local revenue base from one less dependent on property tax to something else. Presumaby, the higher the percentage of non-residential property, the better the position a community is in to respond to local service costs.

(ii) ENCOURAGE LAND DEVELOPERS TO STRIKE A BALANCE BETWEEN PHYSICAL DEVELOPMENT FOR MAXIMUM PROFIT WHILE BRINGING ABOUT DEVELOPMENT FORMS THAT ARE EXCITING TO THE VIEWER AND WHICH RESPECT THE PRESERVATION OF THE NATURAL ENVIRONMENT.

This objective can in part be achieved by making available certain financial incentives relating to economic development projects. These usually have to do with commercial and industrial development. On the other hand, residential projects can be made more humanizing by applying high sets of design standards, and through the use of financial incentives.

Collective Land Use Policies

The following policies should be implemented to achieve the land use objectives:

(i) Monitor the development of the land to determine what the assessment ratio is between residential and non-residential at all times. A ratio of 50/50 should be considered ideal. Departure from this ratio should trigger a concerted effort to achieve the balance. Establish appropriate development authorities who can engage in actions that will cause commercial and industrial development to happen, and thereby, achieve growth management objectives.

(ii) a. The City's zoning ordinance should be updated to include new performance zoning techniques that award private developers for utilizing higher standards.

b. The zoning ordinance should provide comprehensive provisions for the review and approval of site development plans. The City should require that site plans be reviewed by appropriate personnel to determine the extent to which the development when completed, will achieve the objectives herein stated. Every project should show a landscaping plan sufficient to accomplish beautification goals.

Housing Objectives

(i) ALLOW HOUSING OF VARIED STRUCTURAL AND OCCUPANCY TYPES THROUGHOUT THE CITY.

Housing structure types (i.e. single detached vs. multiple attached) and occupancy modes (i.e. owner occupies vs. renter occupied) are constantly changing. Traditional zoning tends to block the natural forces of the housing market, while attitudes tend to encourage homogeneity in development. Greater diversity in housing is possible without reducing or affecting quality of life standards.

Housing Policies

(i) The zoning ordinance should be updated to provide a more flexible method to diversify the type of housing accommodations available in the City.

(ii) Zoning standards should be designed to reward developers for employing high standards of design and complimentary facilities such as landscaping, recreation, etc.

(iii) Federal housing assistance programs should be utilized to upgrade existing housing and provide housing opportunities for those requiring financial assistance (i.e. the elderly).

Residential Land Use Objectives

(i) BRING ABOUT A PATTERN OF EFFECTIVE LINKAGE BETWEEN ALL RESIDENTIAL PARTS OF THE CITY.

The City of Charlevoix is not so large that in total it constitutes an area normally larger than a neighborhood. The entire City is one neighborhood and the linkages, therefore, between residential developments should be strengthened.

Residential Land Use Policies

(i) Before any major residential development occurs involving the construction of new streets, the relationship of that area to the total community should be reviewed. This is to ensure that the development does not interrupt the flow of linkage between various areas of the City.

(ii) Major connections with key streets should be critically reviewed for safety concerns, and direct access from individual building lots on major streets should be discouraged.

Commercial Development Objectives

(i) THE DOWNTOWN AREA OF CHARLEVOIX SHOULD SERVE THE MAIN FUNCTION OF PROVIDING A CENTER FOR SOCIAL, CULTURAL, ADMINISTRATIVE, AND COMMUNITY INTERACTION.

Achievement of this objective will require a better understanding on the part of City and Township leaders that the downtown area has a very symbolic and historic relationship to the total City and its surrounding developing areas. The downtown's retail function is important to maintaining its central place role. The strength of this retail base is sensitive to development lying outside the downtown area. Major government installations in the outlying areas affect the people attractor potential of the downtown area. It is essential, particularly in a sparsely populated area, that government facilities compliment the central place function of downtown. Therefore, when a decision has to be made regarding the location of major government installations, high priority should be given to the downtown area.

(ii) UTILIZE THE ABILITY OF THE PUBLIC SECTOR TO PACKAGE OR ASSEMBLE LAND TO ACHIEVE THE KIND OF DIVERSIFICATION OF GOODS AND SERVICES NEEDED TO SUSTAIN A CENTRAL PLACE MARKET CONDITION.

Commercial Development Policies

(i) This planning effort is only a very preliminary step to capitalizing on the potential of the downtown area of Charlevoix. The City must be prepared to financially participate in developing a comprehensive strategy to make the downtown area, one of the more significant small town urban design achievements in the State and Nation. Establishment of a "Downtown Development Authority" (DDA) need not await the completion of the Comprehensive Plan. The level of planning a DDA must engage in is far more detailed than what will be addressed in this Plan.

(ii) Commercial zoning in the Township should emphasize a neighborhood service character. Comparison type shopping in the Township should be discouraged in favor of shopping in the downtown area. This is but one of several reasons why consolidation of the Township and the City would be beneficial.

(iii) Strip linear commercial development should be discouraged and clustered commercial development should be encouraged. In the case of small strip development, driveways should be minimized and controlled driveways should be encouraged.

(iv) Provide creative, attractive, pleasant, as well as functional shopping environments, by utilizing a comprehensive site development plan approval requirement. The process should emphasize aesthetic, as well as functional standards.

(v) Encourage architectural compatability for both new development and major commercial rehabilitation. The downtown development authority should commission an architectural facade study.

(vi) Provide efficient transportation, including non-motorized vehicle paths and sufficient off-street parking facilities for commercial establishments.

Industrial Development Objectives

(i) THE MOST STRATEGICALLY LOCATED LAND, SUITABLE FOR INDUSTRIAL PURPOSES, SHOULD BE SET ASIDE, BASED ON MARKET PLACE PROJECTIONS, IN ORDER TO ENCOURAGE A BALANCED ECONOMIC BASE.

The City is limited in terms of what it can do to achieve industrial economic development objectives, because of its limited geographic area. The City can, however, wisely decide how this can best be developed with the minimum of environmental impact on the community.

Industrial Development Policies

(i) Promote concentrated rather than scattered industrial development at strategic locations.

Future industrial development programs should promote expansion of existing industries, and also attract new industrial activities into the City. New industrial establishments should ideally be concentrated in planned industrial parks.

(ii) Establish an Economic Development Corporation to facilitate local economic development goals.

A more purposeful and positive program is needed, including the acquisition and development of land for job producing activities. For this reason local E.D.C.'s are justified.

Transportation Objective

(i) ENCOURAGE THE DEVELOPMENT OF A MULTI-MODEL TRANSPORTATION SYSTEM (i.e. personal auto, public transit, and non-motorized vehicles).

The Charlevoix urbanized area is a relatively small geographic space. In the summer months non-motorized trips to the downtown area should be encouraged. Bicycle paths and convenient and pleasant pedestrian routes would be very helpful. Small passenger public transit vehicles, utilizing a less costly fuel technology (i.e. electric), operating in the Charlevoix area may be feasible, particularly in the event the strategy of creating year around jobs is successful. A tightly knit urban development pattern would also help achieve public transit objectives.

(ii) TRANSPORTATION AND ENERGY CONSERVING OBJECTIVES MAY BE DESTROYED BY IGNORING THE INTERRELATIONSHIPS OF LAND USES. THE CHARLEVOIX COMMUNITY, PARTICULARLY THE TOWNSHIP, MUST EXERCISE PRUDENCE IN TREATING MAJOR ROAD FRONTAGES IN SUCH A MANNER AS TO PRESERVE THE ROADS NORMAL VEHICLE CAPACITY.

Unrestricted access onto Petoskey and Bridge Streets throughout the Charlevoix area could have an adverse impact on vehicular movements.

Transportation Policies

(i) Promote a variety of modes of travel to meet the needs of different people.

The basic objectives of transportation development is to provide an efficient system of travelways and terminals for the movement and storage of persons, vehicles and goods.

(ii) Provide a transportation system which is compatible with other activities, and with the environment. Miscellaneous through traffic may be having an adverse impact on downtown Charlevoix.

In addition to reducing hazards to human life, transportation systems must minimize pollution of the atmosphere, generation of noise, and disruption of residential environments. The improvement of highways outside the downtown area which will help traffic circulation in the downtown area should be pursued.

(iii) Encourage high aesthetic standards in the design, routing, and landscaping of future improvements and additions to the circulation system.

The impact of transportation facilities can be reduced by landscaping methods.

(iv) Strip or linear non-residential (i.e. commercial and industrial) with uncontrolled road access is destructive of a highway's normal carrying capacity and therefore, shall be discouraged by subsequent land use regulations.

Waterfront Management and Development Objectives

(i) TO PRESERVE PUBLIC ACCESS TO AS MUCH OF THE WATERFRONT SHORELAND AS POSSIBLE, FOR PURPOSES OF ENHANCING PUBLIC RECREATIONAL USE OF THIS LAND, WHILE RESPECTING PRIVATE PROPERTY RIGHTS.

(ii) TO MAXIMIZE THE ECONOMIC POTENTIAL OF THE CITY'S WATERFRONT AREAS BY PRIVATE HIGH-YIELDING PROPERTY TAX INVESTMENTS AND BY THE ABILITY OF THIS LAND TO ATTRACT TOURISTS THROUGH PUBLIC RECREATIONAL USES.

(iii) TO MAKE WHATEVER CAPITAL INTENSIVE INVESTMENT IS NECESSARY TO PROTECT THESE RESOURCES FROM DESTRUCTION BY NATURAL CAUSES, IN CONCERT WITH FEDERAL AND STATE ASSISTANCE PROGRAMS.

(iv) TO USE THE LAND TO ACHIEVE A BALANCE BETWEEN ENVIRONMENTAL PRESERVATION AND ENHANCEMENT CONCERNS WITH ECONOMIC MAXIMIZATION GOALS.

Waterfront Management and Development Policies

(i) A new and more appropriate zoning ordinance is required, utilizing performance and incentive standards, to encourage the maintenance of view corridors and pedestrian access to the waterfront area.

(ii) Institutional agencies need to be established to effectively use existing state laws that could help to improve the quality of the potential recreation experience on waterfront areas. This includes the establishment of development authorities and the application of tax increment financing to pay for shoreland capital intensive improvements.

(iii) To acquire, where necessary, shoreland development rights to preserve pedestrian access to as much of the waterfront area as possible.

(iv) The City will actively pursue federal and state funding assistance to protect the shoreland from natural elements and to improve its recreation serving qualities.

Open Space and Recreation Development Objectives

(i) DEVELOP AN OPEN SPACE AND PARK AND RECREATION SYSTEM (i.e, local, county and state) FOR THE BENEFIT OF, AND ACCESSIBILITY TO, ALL THE PEOPLE OF THE AREA AND TO PROVIDE AND PROMOTE OPPORTUNITIES FOR BOTH THE PHYSICAL AND AESTHETIC ENJOYMENT OF THE OUT-OF-DOORS.

The public and private open space system is conceived of as a service to the needs of the people of the community on an inter-community basis. At other than the county level, local community parks are recognized as necessary to meet the more intensive recreational needs of the people on a local area basis.

(ii) MAXIMIZE THE QUALITY OF OPEN SPACE AND SATISFY THE PEOPLE'S OUTDOOR RECREATION NEEDS.

It is noted that one of the major functions of open space is to meet positive human needs - both physical and psychological - with recreational amenities. The importance of outdoor recreation cannot be overstressed. A fundamental outdoor recreational goal is to improve the quality of living by providing pleasant open space and adequate outdoor recreation facilities including passive forms for the citizens of Charlevoix.

Open Space and Recreation Development Policies

(i) Reserve sufficient desirable land for recreation and open space.

The City will encourage the preservation of unique features and woodlands and encourage private developers to preserve their most unique lands in proposed residential developments.

(ii) Provide a balanced year-round recreational program encompassing a full range of facilities and activities to serve effectively a population with various characteristics, needs and interests.

Recreation sites should be set aside which will provide for a wide variety of activities. They should be located close to the population that will use them. To accommodate the recreational needs of students, it is desirable also to coordinate the recreational facilities with school sites.

(iii) Conserve and maintain natural processes and scenic resources throughout the City of Charlevoix.

By "natural processes", is meant the following elements:

a. Natural Environmental Areas, suitable for such traditional outdoor activities as walking, etc., all in a natural "as is" environment and usually in combination with other resource uses.

b. Uniquie Natural Areas, managed to permit the enjoyment of the central features. The view of Round Lake is a key element in the scenic resources of Charlevoix.

Environmental Preservation Objectives

(i) PRESERVE, ENHANCE,AND PROTECT NATURAL ENVIRONMENTAL SYSTEMS IN THE CITY OF CHARLEVOIX WITHOUT TOTALLY DIVORCING THEM FROM PEOPLE AND POTENTIAL USERS, AND TO THE EXTENT POSSIBLE, CAPTURE THEIR INTRINSIC CONTRIBUTION TO ENHANCING THE QUALITY OF LIFE.

Topographical relief, woodland, water bodies, and wetland environments need not be separated totally from the community to enhance their preservation and aesthetic quality. It is possible to judiciously allow households to inhabit areas that enjoy a close relationship to these natural features without destroying them.

Environmental Preservation Policies

(i) Provide a zoning mechanism whereby the natural features are preserved and nearby developable land is made available for housing in such a manner that only a small part of the land is required to achieve the number of housing units that could have been achieved over a greater area.

(ii) Use performance zoning standards which provide incentives for preserving wooded areas and steep slopes.

Energy Conservation Objectives

(i) SITE PLANNING AND LAND DEVELOPMENT PROJECTS SHOULD BE ENCOURAGED TO MAXIMIZE SOLAR ACCESS TO EACH BUILDING STRUCTURE AND TO NOT BLOCK SOLAR ACCESS TO ADJACENT LANDS.

Any solar heated or cooled building can profit by energy conservation and energy-conserving site design. In solar access planning, buildings should be oriented so that large areas of the roof and walls receive solar radiation from the south.

(ii) PRIVATE ENTERPRISE SHALL BE ENCOURAGED TO CONSIDER COGENERATION FACILITY TECHNOLOGY INCLUDING WASTE-HEAT RECOVERY SYSTEMS FOR PLANNED UNIT PROJECTS AND FINANCIAL INCENTIVES SHOULD BE MADE AVAILABLE TO STIMULATE SUCH DEVELOPMENT.

The cost savings that would accrue to the City by not having large planned development projects tied to the City waste/water system would more than offset the tax incentives which could be used to encourage independent generation facilities.

(iii) THE CITY SHOULD ADOPT REGULATORY MEASURES TO ENCOURAGE ENERGY SAVING IMPROVEMENTS WHEN EXISTING BUILDINGS ARE BEING RETROFITTED, BROUGHT UP TO CODE, OR OTHERWISE.

Improving energy efficiency in existing housing and non-housing structures will nationally produce the largest savings of energy inasmuch as the majority of our energy consumption now and in the near future results from in-place energy using facilities.

Energy Conservation Policies

The following energy conservation policies will be implemented by the City:

(i) Regulations shall be formulated to provide alternative energy systems.

(ii) Incentives will be developed and given to developers who include alternate energy systems in their housing and land development proposals.

RESIDENTIAL AREAS DEVELOPMENT
STRATEGY PLAN

INTRODUCTION

The purpose of the Residential Areas Development Plan is to lay out a strategy by which the needs of housing for existing and future populations can be realized. In the process of supplying housing opportunities, the Plan is also sensitive to the goal that residential areas be environmentally sound, and satisfy the physical, social and psychological needs of its residents. Because new residential development means increased population, and this contributes directly to increasing municipal costs, the Plan is sensitive to the concern that increases in new housing must be balanced with other kinds of development to offset the costs of housing and population increases. Invariably, this means new commercial and industrial development. In addition to achieving the objectives described above, the Plan is intended to identify the amount of land needed for residential and related uses in order to achieve housing distribution and growth management goals.

"Residential Development" as used in this context means residential dwelling units of various structural and occupancy arrangements. It includes single family detached housing units, and various forms of attached or multiple dwelling unit structures. Within each type there may be owner or renter occupancy.

IDENTIFICATION OF MANAGEMENT UNITS AND FUNCTION

The City of Charlevoix was divided into three management units. The purpose of the management unit is to establish a more objective basis for dealing with land use and housing decisions on a smaller area basis than the City in its entirety. The purpose of the management unit is similar to, but more comprehensive than that associated with the concept of neighborhoods. By identifying management units and establishing appropriate development objectives for each, the likelihood of discriminating between various sections of the City is reduced and a more balanced development across the City is likely to emerge. This assumes that initial development standards at the outset do not discriminate one management unit against another. The management units also provide a framework for determining the distribution of community services, and in particular recreation services. This technique will establish an objective basis for zoning decisions. The boundary for each management unit is graphically illustrated on Map #8. For the purposes of name identification, they are referred to as;(1) North Round Lake Management Unit, (2) Southeast Round Lake Management Unit, and (3) Southwest Round Lake Management Unit.

RESIDENTIAL LAND USE STRATEGY

The Residential Land Use Strategy includes an evaluation of the amount of land needed to satisfy the forecasted housing production goal. It also includes an appropriate distribution of housing by management units and a Residential Land

Use Strategy Map, which illustrates the areas of the City where land will be preserved for residential purposes. The word "Density" should not be construed to mean a unique structure type. The density emphasis is shown on Map #7. The housing distribution strategy is shown on Map #8, the Residential Areas Plan Map, and on the Housing Distribution Stragegy Plan Map. The box illustration within each management unit on Map #8 is intended to provide guidelines for determining the total population, the total number of dwelling units, and their distrubition by density and occupancy for each management unit.

A definition of low, moderate and high density is provided as follows:

Low Density

Low Density means that housing development will not exceed four (4) dwelling units per acre. Low density housing areas are generally characterized by single family detached housing units. However, this should not be interpreted as excluding other housing structure forms as long as the planned density and the structural and occupancy distribution for the management unit in the low density areas are not exceeded.

Medium Density

Medium Density means that housing development will not exceed seven (7) dwelling units per acre. Medium density residential housing development is generally characterized by various types of multiple family structures or a planned combination of housing types. The following principles should govern decisions to rezone land for medium density housing.

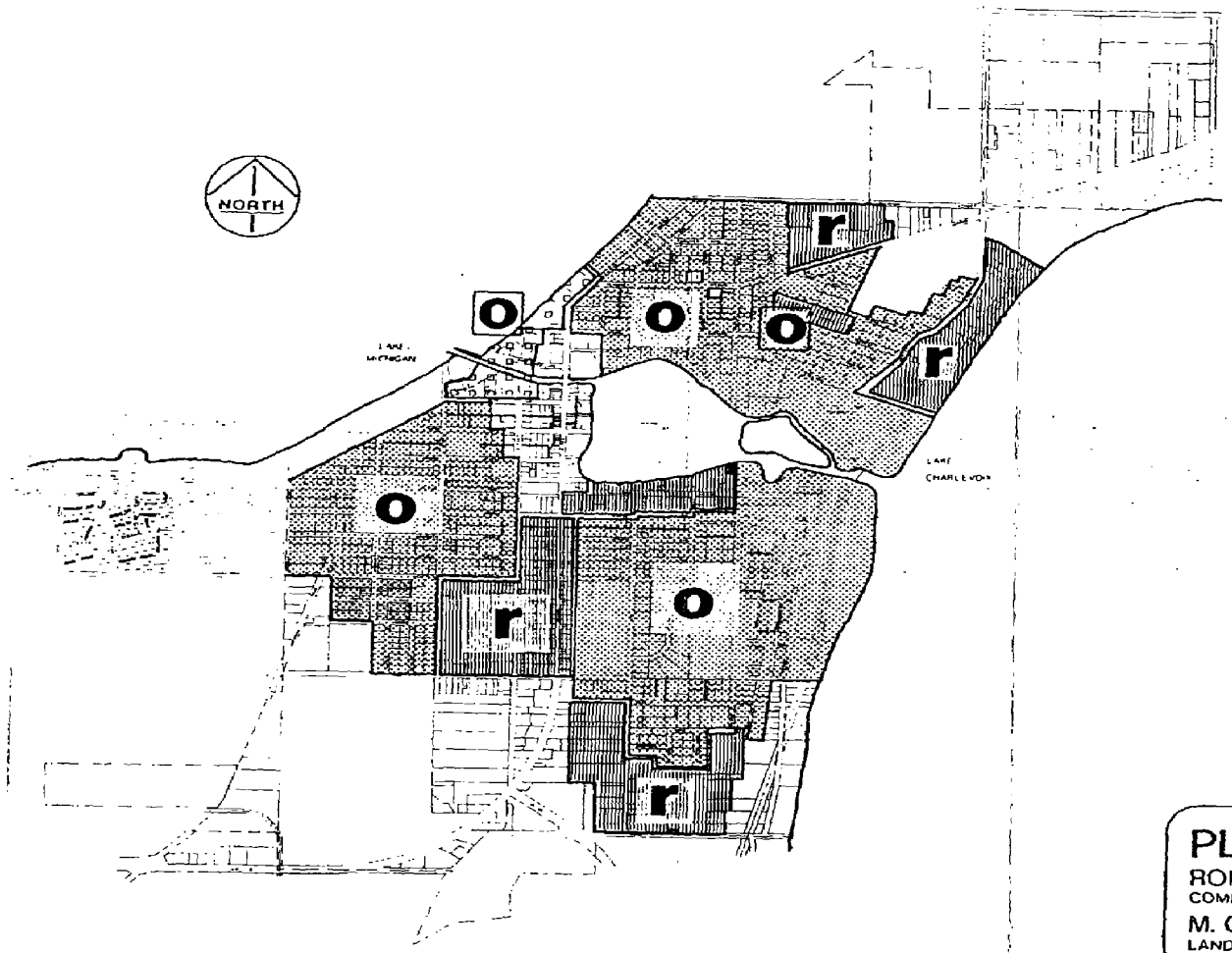
1. Excessive concentration of medium density housing in one or two areas of the City should be avoided.

2. In keeping with the defined residential housing objectives and policies, a balanced housing stock should be achieved in the management units. The plan establishes an overall distribution of sixty (60%) percent low density and forty (40%) percent medium and high density. This formula will vary by management units but generally a choice of housing opportunities should be made available in each management unit.

3. Generally, medium density residential housing should be placed where it serves as a transitional land use between non-residential activities and the low density areas and also along major transportation corridors so as to encourage energy conservation.

RESIDENTIAL AREAS PLAN MAP 7

By Density & Occupancy Emphasis



low density

medium density

high density

o r owner/renter emphasis

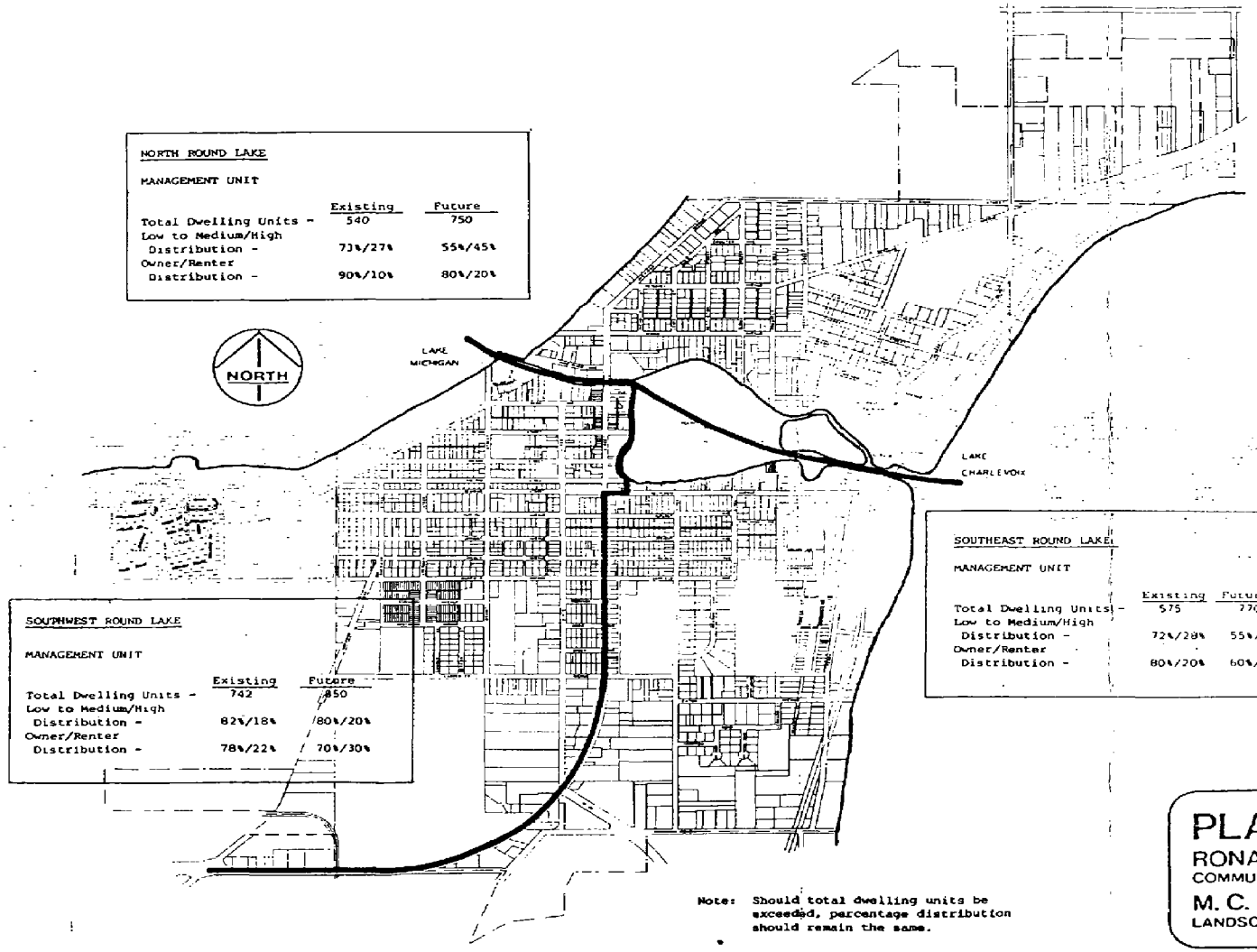
This map is intended to supplement the land use policies plan by adding an occupancy development emphasis to the planned density. Owner/Renter emphasis is not intended to be mutally exclusive.

PLANNING TEAM

RONALD F. NINO & ASSOCIATES
COMMUNITY PLANNING AND DEVELOPMENT

M. C. SMITH & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE · URBAN DESIGN

HOUSING UNIT DISTRIBUTION
STRATEGY MAP 8
By Management Units



NORTH ROUND LAKE

MANAGEMENT UNIT

	Existing	Future
Total Dwelling Units -	540	750
Low to Medium/High Distribution -	73%/27%	55%/45%
Owner/Renter Distribution -	90%/10%	80%/20%

SOUTHWEST ROUND LAKE

MANAGEMENT UNIT

	Existing	Future
Total Dwelling Units -	742	850
Low to Medium/High Distribution -	82%/18%	80%/20%
Owner/Renter Distribution -	78%/22%	70%/30%

SOUTHEAST ROUND LAKE

MANAGEMENT UNIT

	Existing	Future
Total Dwelling Units -	575	770
Low to Medium/High Distribution -	72%/28%	55%/45%
Owner/Renter Distribution -	80%/20%	60%/40%

Note: Should total dwelling units be exceeded, percentage distribution should remain the same.

PLANNING TEAM
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COMMUNITY PLANNING AND DEVELOPMENT
M. C. SMITH & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE · URBAN DESIGN

High Density

High Density means that housing units will be developed at undefined numbers of dwelling units per acre, except that the city zoning ordinance will establish an upper limit in this regard. High density housing development is generally characterized by apartment structures, which may be a component of a multi-use structure and which may contain various non-residential use activities. Potential areas where this type of development may occur are noted on the Plan Map. The following principles were applied to locations where this housing density may be permitted.

1. In and adjacent to the downtown area, particularly in conjunction with a plan of renewal mandated by a development authority.

2. To help in meeting the need for assisted elderly housing or combination elderly housing and care facility.

3. When part of an essentially commercial project in which the residential units are meant for seasonal occupancy.

Planned Unit Residential Development

Planned Unit Residential Development refers to the design of a residential project in which the housing structures are not located on platted lots or do not necessarily relate to individual lot lines, but rather are designed with spacing relationships between buildings. Another important criteria is that the project is developed by one development entity as opposed to each building being developed by a different legal entity. The characteristic of a planned unit residential development is that the density (i.e. dwelling units per acre) over the entire site is the same as the underlying zoning district although it may be higher in some areas of the overall site.

A planned unit residential development, as herein defined, may be permitted in any residentially defined area of the City.

Planned Unit Development

While having the same characteristics as a planned unit residential development, a planned unit development is generally construed to include non-residential activities (i.e. mixed land uses). Because of this emphasis, two characteristics are generally associated with planned unit development. They include; (1) a large acreage, or (2) an existing urban area undergoing renewal, which may be a relatively small parcel of land. They key element is that the development includes both residential and non-residential land uses. Planned unit development is therefore not likely to be a major development force in the City of Charlevoix, because of the

City's limited area. This is not to say that a planned unit development is inappropriate as a part of a development strategy aimed at redevelopment of existing uses for the central area of the City of Charlevoix. Other areas may include waterfront lands.

RESIDENTIAL AREA LAND USE REQUIREMENTS

Having established a residential development framework, it is now necessary to define for subsequent decision-makers, particularly for the zoning process, the amount of land that needs to be put in place to meet the housing goals described under this development strategy. The following Table 17 defines the anitici-pated overall land area requirements for new housing.

TABLE 17

ANTICIPATED RESIDENTIAL LAND USE REQUIREMENTS
YEARS 1985, 1990 AND 1995

Structure Type	Density Range	Forecasted Number of Dwelling Units 1980/85	1985/90 - 1990/95	Gross Acres 1980/85	1985/90	1990/95	Total Acres	% of Total
Emphasis Single Family Detached Structures	Low Density(Max. 4 d.u.'s/ac.) (33%)	65	60	13	15	17	45	52%
Emphasis Low Rise Multiple Family Structures	Medium Density (Max. 7 d.u.'s/ ac.) (33.33%)	71	58	13	9	10	28	30%
Emphasis Multiple Family Structures- Low and High Rise	High Density (7 or more d.u.'s ac.) (33.33%)	72	58	9	5	6	17	18%
		208	176	35	29	33	93	100%

Table 17 advises that ninety-three (93) acres of land will be required to accommodate the rate of new dwelling unit production based on the assumption that 33%, 34% and 33% respectively, of the new units should fall within the low, medium and high density ranges. This development emphasis will produce a condition where the total housing stock at absorption capacity will be sixty percent (60%) low density and forty percent (40%) medium to high density. The existing land use study shows that this much vacant land could not be allocated to residential purposes given the attainment of growth management goals. On the other hand, marginally used land or land with re-use and redevelopment possibilities could be utilized to satisfy some of the housing production forecast. The majority of vacant land that is recommended for residential use is located in the southeast management unit in the area north of Stover Road between May Street and Ferry Avenue. This land should be used for medium density housing. Further redevelopment possibilities exist on the south shore of Round Lake where mixed uses are recommended including high density residential usage. Residential density strategies are specifically designed to bring about a planned distribution in each management unit. In the process the following development emphasis is recommended in each management unit.

North Round Lake Management Unit

This management unit contains the City's most expensive housing and, with the exception of three medium to high density projects, is a low density residential area with minimal incursion by commercial uses. There are, however, several commercial developments on Petoskey Avenue. There are no substantial parcels of vacant land, however with effective utilization and assembly of contiguous vacant parcels, approximately eleven (11) acres of land could be used for housing in the area between Division Street and Petoskey Avenue, east of Meech Street. This land is ideally located for medium density housing and should not have an adverse effect on nearby single family housing, if properly designed and site-planned. Another area where opportunity for new housing exists, is adjacent to Lake Charlevoix. In the event the railroad is abandoned, this land could be used for housing. The development strategy recommends abandonment of the railroad and this is consistent with the State's railway abandonment plan. This land is ideally situated for low to medium density housing, and would make ideal condominium sites. At present, the majority of the Charlevoix lakefront is unproductive because of the railroad, which no longer has any economic significance for the City of Charlevoix. Numerous vacant lots are located throughout the remainder of the management unit and these should be available for additional housing. In all cases, these lots should be used for low density housing, because of their location to existing housing.

Southwest Round Lake Management Unit

This management unit includes a major portion of the downtown area and the City's oldest housing. There is an ever present conflict at the interface between the residential area and the business area. The likelihood of further incursion into the residential area may be necessary to support the City's growth management goals. This management unit contains the greatest amount of housing in need of rehabilitation, repairs and other physical improvements. Opportunities for new housing as a result of available land is limited. There are, however, a number of vacant platted lots in the area which could be used for one and two family housing structures. These lots are limited to these uses because of their relationship to existing single family housing. It is expected that several existing residences will be demolished or substantially rehabilitated. This action, in effect, would constitute a new residential unit. In some other situations, existing housing structures should be demolished to make land available to satisfy growth management goals. Potential areas where this action would be appropriate include both sides of Norwood Road south of Garfield Road, and the west side of State Street, from Park Avenue to Hulbut Avenue. The proposed Charlo Street lots (i.e. platted but not yet developed), should be given serious consideration for a multiple form of housing as opposed to single family detached housing units, particularly in view of their contiguous nature to an industrial park. This action would help meet housing distribution goals for moderate to high density housing. The frontage along

the west side of Bridge Street should be made available for redevelopment, preferably to medium density housing, however mixed uses are also considered appropriate. Generally, the block of land bounded by the rear of the lots on the east side of Bridge Street to Grant Street is considered an appropriate area for renewal and infilling to a medium density level of housing.

Southeast Round Lake Management Unit

This management unit is predominately residential in character with the exception of commercial properties on Bridge Street and U.S. 31, and some commercial and industrial activity on M-66 and Stover Road. North of Stover Road lies the largest amount of vacant land. The most suitable use of this property is for housing, preferably medium density housing. Housing quality in this management unit is generally fair, however there are some isolated conditions of substantial deterioration. The Ferry Street properties between Stover Road and the Belvedere Resort property appear to be lacking any sense of development direction. Its contiguous relationship to Lake Charlevoix makes this land a very valuable resource to the City. The City has a responsibility to provide its residents with adequate waterfront recreational opportunities. It would appear that the reservation of land on Lake Michigan and the beach area on Lake Charlevoix offer more than adequate waterfront opportunities, therefore the area north of the Ferry Avenue beach should be used to accommodate uses that will assist the City in maintaining a stable tax base. The possibility of abandoning the railroad would make more land available for economic uses. Given the nature of this area; its scenic, environmental and potential resort possibilities oriented to boating, mixed land uses incorporating some aspect of housing would be most appropriate for this area. Complimentary uses could include commercial, retail, and service uses such as apparel shops, restaurants, arts and crafts shops, etc.

Conclusion

The above described housing development strategy is further graphically illustrated on the following housing development policy plans.

ECONOMIC DEVELOPMENT
STRATEGY PLAN

INTRODUCTION

The Economic Development Strategy Plan includes both the plan for commercial and industrial development and the institutional mechanisms that are available to carry out economic development activities. Essentially, references to a growth management concern throughout the Plan include a strategy for balancing the burden of local taxes between residential and non-residential development. The word "strategy" implies that a sufficient amount of land will be reserved for commercial and industrial uses, and when developed, will have an evaluation proportionate to the residential valuation of property. It also implies that the City will take positive steps to stimulate the development of this land in a timely fashion.

THE PLAN FOR COMMERCIAL DEVELOPMENT

The Plan for Commercial Development is intended to maximize the City's potential for commercial development. A market study will determine the potential of the City of Charlevoix to attract various commercial land use endeavors, particularly because the City's commercial development is heavily dependent upon tourism. The influence of tourism and its impact on sustaining commercial development, is dependent upon state and national variables over which the City has little or not effect, and therefore any estimate of market potential for commercial development is affected by these variables. This makes any forecast less precise.

The City of Charlevoix will always have a high commercial peak in the summer months with declining activity throughout the winter months. The development strategy will be directed to achieve a condition whereby most commercial activity will have an adequate base of support to remain open for business throughout the year. This will provide permanent residents with a full range of shopping opportunities, thus eliminating the need for residents to travel to other communities to make major purchases. This task cannot be achieved without the City becoming the trade area for a much larger community, which in turn will require increased employment opportunities in the general Charlevoix area. The City of Charlevoix now appears to have a competitive advantage over some nearby communities such as Boyne City and East Jordan, because it has a more viable existing business district. The City is at a competitive disadvantage when compared to Petoskey and Traverse City, both major commercial centers now serving the comparison shopping needs of all of Charlevoix County. The Plan will show how the City, by purposeful action, can increase market penetration and become an important central place for a larger share of consumer dollars from Charlevoix County's permanent residents and tourist dollars that flow to the northwestern Michigan region.

Commercial Development

The predominant use of land in commercial areas shall be for the buying and selling of goods and services, custom workshops, offices, and private recreational facilities. Retail uses and services will focus on serving a tourist clientele. Therefore, it can be expected that there will be more boutiques and gift shops, food serving places, motels, and shops selling specialized items, than one would normally find in a less tourist impacted community. As market penetration and area population increase, a more diversified representation of retail, service and office uses can be expected. Multi-use buildings, which include residential dwelling units as an integral part of a commercial development, should be considered appropriate to central city development goals.

The goals, objectives and policies previously enunciated to guide commercial development in the City of Charlevoix, should be referred to in the context of this Plan. The major thrust of the objectives is to establish the Downtown Business District as the major center for commercial and related social interaction for the City and its trade environs. The relationship of Round Lake and its interface with Michigan waterways is important to this objective.

Required Land Area Forecast

Two methods are popularly used to determine the amount of land that should appropriately be set aside to accommodate retail, service and office land uses. These include the ratio method and the market analysis method. The ratio method is based on a historical relationship between land used for retail, service and office purposes and the size of the population (i.e. persons per acre). The market approach is a more deductive method of estimating income characteristics of the trade area, total dollars potentially available and capture rates, and thereby estimating the amount of floor area that could be supported. However, this approach is limited to retail types of activities and does not apply to most service and office uses. Where the market approach is used, a different estimating technique is necessary for service and office uses. For the purpose of this plan both approaches and combinations will be looked at to determine the amount of land that should appropriately be set aside for all commercial uses. This will also be tempered by the growth management goal.

The Market Approach -- The first step in the market approach is to define the primary trade area influence of the City of Charlevoix's business district, and to determine how many households live in that trade area and their income characteristics.

Because some types of businesses benefit greatly from the area's tourist attraction, total income available to the businesses will have to be accounted for in addition to the normal income flows from the primary trade area. The task of defining a market area and calculating potential income flows to various business sectors is not a precise science and many businesses, because of their market strategy or the quality of their goods or services, can extend their influence far beyond the limitations of the traditional methods used to determine the market area for a collection of businesses. Of necessity, generalization across all business is necessary and in the process, some preciseness is lost.

A primary trade area for the City of Charlevoix was designed by application of an essentially time-distance ratio (i.e. Rielly's Law) in proportion to the size of the population centers and some subjective determinations as a result of highway and land configurations. Furthermore, because the size of the primary trade area population is important and because population data includes the entire township, it was necessary to include or exclude entire townships depending upon whether a greater or lesser portion of that township fell within the primary trade area.

A secondary trade area was also defined. This is the area where households tend to shop less frequently in the target area than households from the primary trade area. Based on the above procedures the following governmental units were assigned to the primary and secondary trade areas.

TABLE 18

POPULATION ASSIGNMENTS IN
PRIMARY AND SECONDARY TRADE AREAS (1985)

Governmental Unit	Current Population		Number of Households	
	Primary	Secondary	Primary	Secondary
City of Charlevoix	3,296	-	1,774	-
Charlevoix Township	993	-	926	-
Hayes Township	1,274	-	651	-
Norwood Township	540	-	253	-
Marion Township	946	-	390	-
Evaline Township	1,061		869	-
Banks/Ellsworth	1,951	-	1,035	-
Central Lake/Central Lake	-	2,661	-	1,622
Torch Lake Township	-	771	-	735
Echo Township	-	723	-	456
East Jordan Township	-	2,185	-	910
Jordan Township	-	410	-	200
South Arm Township	-	1,237	-	716
Wilson Township	-	1,199	-	477
Bay Township	-	599	-	487
TOTALS	10,061	9,785	5,887	5,677

What emerges from this process is an estimate of approximately 10,000 persons in the primary trade area and 9,785 persons in the secondary trade area. Because it is essential to determine the amount of total income, population must be converted into an estimate of the number of permanent households. Seasonal households and tourist income will also be identified in any estimate of spendable income. In the absence of definitive data, these are at best estimates. It is apparent from the above table that a great many dwelling units are second homes (i.e. seasonal) because there are nearly as many dwelling units in some cases as there are people. Historical data indicates that generally families are smaller and the population is older in the up-state area. This is attributed in part to the fact that families tend to move to the northern lower Michigan area upon retirement or as their family rearing responsibilities terminate, and they therefore have fewer income producing demands.

If we assume that the average household size of the permanent population is 2.5 persons per household then sixty-nine (69%) percent of the number of dwelling units are owned by permanent residents. This relationship will vary by community.

TABLE 19

ESTIMATED NO. OF PERMANENT RESIDENT FAMILIES AND SEASONAL FAMILIES

Primary Area	
Total Dwelling Units	5,887
Total No. Permanent Residential Units at 69% of Total	4,024
Total No. Seasonal Residential Units	1,863
Secondary Area	
Total Dwelling Units	5,677
Total No. Permanent Residential Units at 69% of Total	3,914
Total No. Seasonal Residential Units	1,763

Effective Buying Income -- "Sales Marketing and Management 1981,Survey of Buying Power" provides an acceptable basis for

determining the potential effective buying income available for the purchase of goods and services in the City of Charlevoix. This publication will also be used as the source for total retail sales and retail sales by store group.

TABLE 20

ESTIMATE OF EFFECTIVE BUYING INCOME
FROM CHARLEVOIX PRIMARY AND SECONDARY TRADE AREAS

Trade Area	Est. # of Hshds	Median Hshd EBI $ *	Total Hshd EBI $	Adjustment for Seasonal Hshds & Tourists **	Total Estimated EBI $
Primary	4,024	13,151	52,919,624	16,722,601	69,642,225
Secondary	3,914	13,151	51,474,014	16,265,472	67,738,486
TOTAL	7,938	13,151	104,392,638	32,988,073	137,380,711

*Source: 1981 Survey of Buying Power, Sales and Marketing Management.

**Based on same ratio that now prevails between percentage of total retail trade comprised of tourist dollars for Charlevoix Co.

Retail sales characteristics were obtained from the 1981 Survey of Buying Power for ten categories of retail sales. The left hand column generally describes how each household divides the amount of money that it has available for the purchase of retail goods and services. The conclusions reached were obtained by dividing the total retail sales for Charlevoix County by the retail sales reported for the particular category.

TABLE 21

TOTAL RETAIL SALES AND RETAIL SALES BY MAJOR
RETAIL CATEGORY FOR CHARLEVOIX COUNTY

Category	Total Retail Sales($000)	Existing % of Total Sales($000)	State %	More Likely Future Condition*
Food Store Sales	24,660	33.6	20.3	30
Eating & Drinking	7,207	9.5	9.6	11
General Merchandise	1,667	2.3	11.7	5
Furn/Home Furn/App'l.	4,570	6.2	4.7	5
Automotive Sales	11,882	16.2	17.4	16
Drug Store Sales	2,793	3.8	3.9	4
Gas Service Stations	6,605	9.0	3.9	9
Apparel & Accessories	3,670	5.0	N/A	6
Bldg. Supplies/Hdw.	4,403	6.0	N/A	8
Misc. Retail	5,934	8.4	N/A	6
TOTAL	73,391	100.0		100.0

Source: 1981 Survey of Buying Power, Sales and Marketing Management and the 1977 Census of Retail Trade.

* Based on increasing permanent resident population which should produce characteristics closer to statewide averages, compensated by expected tourism impacts.

The above are atypical of statewide averages, no doubt attributable to tourist economic influences and age distribution characteristics. The percentage of total retail sales to total EBI for Charlevoix County is 69.7% whereas this same average statewide is 53%. This would appear to suggest that total retail sales are 17% higher due to seasonal residents and tourists. We suspect that the effect of seasonal residents and tourism is even higher than indicated because it can be expected that permanent residents in Charlevoix County spend a considerable amount of their disposable income (i.e. major comparison sales purchases) outside of the County. More appropriate county comparisons where retail sales are almost entirely the result of permanent population expenditure patterns would find the relationship of retail sales to EBI running as low as 40%. In such cases, however, there is usually a great deal of sales going out of the County. Therefore, it would appear reasonable to use the statewide average to determine what the total amount of retail sales if all disposable income were spent in the trade area should be and add to this, the difference for seasonal and tourist dollars. This extrapolating procedure was executed in the preparation of the above Table 21.

The next step we will want to analyze is the estimated retail sales by major retail category, extrapolating from Table 20 and Table 21, which results in the following:

TABLE 22

TOTAL CURRENT POTENTIAL ESTIMATED RETAIL SALES BY MAJOR RETAIL ACTIVITIES FOR THE PRIMARY AND SECONDARY TRADE AREAS

Category	% of Budget Devoted to	Primary Area Million $	Secondary Area Million $
Food Sales	30	20.9	20.3
Eating & Drinking	11	7.6	7.4
General Merchandise	5	3.5	3.4
Furn/Home Furn/App'l.	5	3.5	3.4
Automotive Sales	16	11.0	10.8
Drug Sales	4	2.8	2.7
Gas Service Stations	9	6.3	6.1
Apparel & Accessories	6	4.2	4.1
Bldg. Supplies/Hdw.	8	5.6	5.3
Misc. Retail	6	4.2	4.1
	100*	69.6	67.8

* May not total due to rounding of decimal points.

The above Table 22 serves to indicate the potential market condition for the ten retail categories. It is now necessary to estimate the percentage of retail sales in the major groups identified above which could be captured by existing and new development in the City of Charlevoix if these uses were provided.

The following Table 23 is based on the above guidelines and provides an estimate of total retail sales by major retail categories based on existing perceived market conditions.

TABLE 23

ESTIMATED CAPTURE RATES PRIMARY AND SECONDARY TRADE AREAS EXTRAPOLATED INTO POTENTIAL RETAIL SALES BY MAJOR RETAIL CATEGORY

	Primary Area			Secondary Area			
Category	Potential Retail Sales $	Capture Rate %	Estimated Retail Sales $	Potential Retail Sales $	Capture Rate %	Estimated Retail Sales $	Total Sales $
Food Sales	20.9	75	15.7	20.3	35	7.1	22.8
Eating & Drinking	7.6	60	4.6	7.4	25	1.8	6.4
General Merchandise	3.5	35	1.2	3.4	10	0.3	1.5
Furn/Home Furn/App'l.	3.5	35	1.2	3.4	10	0.3	1.5
Automotive Sales	11.0	35	3.8	10.8	10	1.1	4.9
Drug Sales	2.8	75	2.1	2.7	35	0.9	3.0
Gas Service Stations	6.3	60	3.8	6.1	25	1.5	5.3
Apparel & Accessories	4.2	60	2.5	4.1	25	1.0	3.5
Bldg Supplies/Hdw.	5.6	60	3.4	5.3	25	1.3	2.7
Misc. Retail	4.2	60	2.5	4.1	25	1.0	3.5
	69.6	58.6	40.8	67.8	24.0	16.3	57.1

Capture Rates -- In 1977, according to the Census of Retail Trade, the City of Charlevoix captured 46.3% of total retail sales spent in Charlevoix County. Based on the estimated number of establishments and the floor space that was in existence in 1977, the productivity rate per floor space is estimated to be on the average of between $100 and $105 per square foot. National indicators suggested in 1978 (i.e. Dollars and Cents of Shopping Centers) a median sales per square foot of $80.69 for community-type retail space. In other words, retail space in the City of Charlevoix is high productivity floor space. This suggests room for expansion based on existing productivity levels, even without capturing a greater proportion of the market, and not accounting for population growth in the trade area.

Market area shares of available consumer dollars are affected by a number of variables which defy rigorous mathematical solution. It ought to be apparent that capture rates are a function of the quality of the environment, marketing efforts, and quality and variety of business establishments. Capture rates likewise vary by type of

establishment, inasmuch as competition (supply and demand factors) differs for various business categories. Householders are more likely to travel longer distances in search of major household consumer goods (i.e. furniture, appliances, etc.), as opposed to daily necessities (i.e. food and personal services). At the present time, capture rates vary from a high of seventy-eight (78%) percent to a low of thirty-six (36%) percent of the total potential retail sales. This is based on the relationship of County expenditures to sales in the City of Charlevoix. However, this does not explain the entire situation, because the entire County is probably losing sales to areas outside of the County. Capture rates can be expected to continue to vary by commercial functions, particularly for comparison type goods as opposed to local conveniences. Based on this premise, it would be reasonable to expect that nearly all potential consumer dollars allocated to food products, drug store related items and personal services, such as clothes cleaning would be spent in nearby stores. On the other hand, it would be unreasonable to conclude that major household appliance purchases will be made on the basis of a total commitment to such facilities in the City of Charlevoix.

Capture rates, or consumer spending, can be significantly influenced by marketing strategies, environmental improvements (both on-site and off-site, such as public areas), and by planned cooperation, such as is achieved in a shopping center environment. While it must be acknowledged that environmental improvements are more difficult in a strip shopping or other parcel-by-parcel situation, nonetheless, given a high level of public and private commitment, shopping patterns can be modified.

Capture rates from the primary and secondary trade areas were determined as follows:

1. The City of Charlevoix should capture most potential sales from primary trade area households. Note: the primary trade area essentially includes those townships within twenty minutes driving time or less. Some of the sales may go to Petoskey, Boyne City or East Jordan.

2. Sales dollar flows from the secondary trade area will be considerably less than from the primary trade area. In this regard, sales are equally likely to go to Boyne City, East Jordan, Petoskey or other small shopping areas (i.e. Elks Rapids, Central Lake, Ellsworth, etc.).

3. The 1977 capture rates, as indicated in the 1977 Census of Retail Trade, serve as one barometer of today's probable capture rates.

4. Subjective and objective evaluations based on the proposition that the City of Charlevoix is going to initiate purposeful actions to stimulate business development as part of its growth management strategy.

5. The City has a competitive advantage because of the size of its existing area and store mix vis-a-vis Boyne City, East Jordan and other small shopping areas, but the City remains at a competitive disadvantage for high value comparison type purchases vis-a-vis Petoskey and Traverse City.

The City of Charlevoix was determined to have the characteristics of a community and neighborhood shopping area. The City of Charlevoix serves an area larger than the immediate City, while the immediate City area itself is only large enough to essentially be served by neighborhood stores. Extrapolating dollar sales into potential floor space, while imprecise when applied to the generalized major category groups, nonetheless provides a base indicator for the amount of potential development that could be supported. This impreciseness stems from the fact that there is a wide divergence between types of retail outlets in a major category relative to the amount of sales dollars needed to support a square foot of gross leasable space. Additionally, these characteristics vary between community supported space versus neighborhood space. Individual investment decisions should therefore not be made based on this data but rather should be made after a market study of the specific retail type of function that is intended. Therefore, the following table provides a base generalized estimate of the amount of retail floor space, given the estimated capture rates in Table 24, that could be financially supported if provided in the City of Charlevoix.

TABLE 24

ESTIMATED GROSS LEASABLE FLOOR AREA FOR RETAIL SPACE IN THE CITY OF CHARLEVOIX BY MAJOR RETAIL CATEGORY

Category	Estimated Total Sales (Million $)	$ Required Per Square Foot of Leasable Floor Area*	Estimated Gross Leasable Floor Area
Food Store Sales	22.8	237	96,202
Eating & Drinking	6.4	107	59,813
General Merchandise	1.5	80	18,750
Furn./Home Furn.App'l.	1.5	74	20,270
Automotive Sales	4.9	65	75,384
Drug Store Sales	3.0	104	28,846
Gas Service Stations	5.3	180	29,444
Apparel & Accessories	3.5	106	33,018
Bldg. Supplies/Hdw.	4.7	79	59,493
Misc. Retail	3.5	98	35,714
	57.1		456,934
Overall	57.1	115	496,522

*Represents average conditions between community and neighborhood shopping centers.

The above table advises that the City of Charlvoix could support between 456,934 and 496,522 square feet of retail floor space if it was able to capture approximately 58.6% and 16.3% of estimated primary and secondary trade area sales respectively. Presently there is approximately 270,000 square feet of retail sales space. The comparison between existing and estimated space by major category is as follows.

TABLE 25

COMPARATIVE ANALYSIS OF FORECASTED AND CURRENT MARKET ESTIMATE OF REQUIRED RETAIL FLOOR SPACE BY MAJOR RETAIL CATEGORY

Category	Existing Floor Space	Estimated Current Mkt. Reqs. in Sq. Ft.	Current Market Shortfall or Surplus (+ or -) Sq. Ft.
Food Store Sales	46,731	96,202	- 49,471
Eating & Drinking	42,011	59,813	- 17,802
General Merchandise	10,000	18,750	- 8,750
Furn/Home Furn/App'l.	10,622	20,270	- 9,648
Automotive Sales	26,948	75,384	- 48,436
Drug Store Sales	8,974	28,846	- 19,872
Gas Service Stations	18,022	29,444	- 11,422
Apparel & Accessories	29,303	33,018	- 3,715
Bldg. Supplies/Hdw.	36,143	59,493	- 23,350
Misc. Retail	41,000	35,714	+ 5,286
	269,754	456,934	-187,180

The above Table 25 advises that under estimated current market conditions there is a shortfall of 187,180 square feet of retail floor space. This does not account for any consideration relative to future growth in the primary and secondary trade areas nor for increased tourism resulting from planned economic development actions.

It would appear that in the long run the City's potential for new retail development exceeds the availability of land within the City for new commercial development. Some of the existing commercial area could be more intensively developed and in certain areas renewal action would be appropriate. It is unlikely that new retail development in excess of 200,000 square feet can be accommodated. However, when new office and service space is accounted for, sufficient opportunity for new commercial development in the City of Charlevoix is in place to meet the growth management goal.

It is apparent from Table 23 that the Charlevoix trade area gives up consumer dollars to the Petoskey and Traverse City trade areas, otherwise

there would be more retail trade area in the City of Charlevoix, In terms of some of the deficiencies identified in Table 25, no attempt should be made to encourage their location in the downtown area because they use up a disproportionate share of land. For example, automotive sales and supplies, building materials and supplies, and hardware are probably more suitable in an outlying shopping district. In the downtown area the emphasis should be on intensive retail activities and offices.

The above represents an investment of about twelve million dollars.

Office and Service Market Analysis

All of the previous work refers specifically to retail activities. For retail activities the data required to facilitate market expectations is available. This is not the case for service and office uses which must rely on more subjective data. No reporting service is available to determine the amount of service and office uses that can be supported relative to personal spending characteristics. Service uses include amusement services such as bowling alleys, tennis clubs, etc., personal services such as barber/beauty shops and repair services, while offices include the entire range of finance, insurance, real estate, professional and general offices. There may be an indirect relationship between the amount of retail development and service and office uses in the sense that the greater the concentration of retail development the more likely it is that this will attract service and office uses. Some office uses tend to have certain location requirements such as the legal and medical professions which tend to locate near the courthouse and hospitals.

Real estate, finance and insurance offices, and services tend to not be as constrained in their location decisions. More often than not office development decisions are based on factors indicating a relatively non-existent vacancy rate combined with rental rates high enough to make the project financially feasible. Because of the indeterminate nature of this estimating requirement, the technique used to estimate future service and office uses will be by application of the existing ratio relative to population.

Services -- A total of 71,549 square feet of services was inventoried in the primary trade area. Services included dry cleaning establishments, hair cutting and beauty shops, recreation services, repair services, boat storage, etc. If we deduct boat storage facilities there are 38,450 square feet of service uses. Boat storage facilities are not considered appropriate for service use projections because these facilities can just as easily move inland and because a more intensive land use is justified in the City of Charlevoix. The effect of this is that there

are 11.7 square feet of service uses per capita of resident population. The effect of tourism on this ratio is noted from comparison studies. More typically this ratio seldom exceeds 4 square feet per capita. On the other hand, this condition is unlikely to change and may become more pronounced as population growth occurs and economic development efforts attract more tourism. Therefore, it would not appear unreasonable to forecast a service land use ratio of 12 square feet per resident population (i.e. 4,700 persons by the year 1995). This advises that service uses, as restructured, would expand to 56,400 square feet for an additional 17,950 square feet. Major emphasis will probably be with respect to personal service uses, amusement services, and small repair shops. This suggests an additional investment of about one million dollars.

Motels and Hotels -- There are at present 183 motel/hotel room accommodations in the City of Charlevoix. A report prepared by the Michigan Department of Commerce advised that Charlevoix County was the fourth highest tourist impacted county in the State of Michigan. A recent study by one major local motel indicated an average annual occupancy rate of nearly 62% with peak occupancies of over 90% in July and August. Current plans call for a major expansion of one facility, together with the introduction of a conference facility. Appropriate conference-maximization goals suggest that a total supply of 450-motel/hotel rooms would be desirable. The Waterfront Management Plan recommends additional areas where motel/hotel expansion possibilities are good. This suggests an additional 267 units, of which 39 are now planned to proceed. This appears to be a practical forecast for new units. This additional supply would require an area of about ten (10) acres of land, and would represent an investment of about six million dollars.

Offices: Professional and General -- Approximately 63,000 square feet of office space was inventoried in the City of Charlevoix. This includes all offices, both professional and general. This represents about 19 square feet per capita of resident population. The environmental qualities of the Charlevoix area make it particularly attractive to professional practioners, while interest in real estate is likely to remain high. The growth potential of the Charlevoix County area provides a base for further growth in the financial, institutional, and governemtal service sectors. An appropriate future guide to new office space development would appear to justify a ratio of 20 square feet per resident population. This suggests a total area of 94,000 square feet, and an additional 32,000 square feet of office space. This represents an investment of about two million dollars.

Summary Space Requirements for All Commercial Development

The following Table 26 provides a summary overview of all forecast commercial development and what this means in terms of land use and financial investment.

TABLE 26

SUMMARY OVERVIEW OF FORECASTED
COMMERCIAL BUILDING SPACE, DOLLAR
INVESTMENT AND LAND AREA REQUIRED

Category	Current Floor Area Sq. Ft.	Net Increase Forecast Sq. Ft.	Net Additional Investment	Net Additional Land Area/Factor 3.0 X Sq.Ft.(Acres)
Retail	269,754	200,000	$12,000,000.	13.8 ac.
Services	71,549	18,000	$ 1,080,000.	1.2 ac.
Offices	62,566	32,000	$ 1,920,000.	2.2 ac.
TOTAL	403,869	250,000	$15,000,000.	17.2 ac.
Motels/Hotels	183 Units	267 Units	$ 6,000,000.	9.8 ac.
			$21,000,000.	27.0 Acres

As indicated above, approximately twenty-seven (27) acres of either vacant land or more intensively developed existing commercially used land will be required to accommodate market projections for new commercial development. This assumes a one story building configuration with a support area of three (3) times the forecasted floor space. Should part of this development occur in multi-story configurations then a smaller land area will suffice. The Future Land Use Plan designates areas where sufficient opportunities exist for in-filling and where more intensive use of existing properties, either by redevelopment or expansion, is available to accommodate the forecasted growth potential.

Downtown Development Strategy

The Downtown Development Strategy Plan is addressed as both a sub-element of the Plan for Commercial Development, and as a major part of the Waterfront Areas Management Plan. Clearly, the thrust of the Plan for Commercial Development,and its relationship to achieving growth management goals,is that redevelopment and expansion of the downtown area is very important.

The downtown area is expected to play a pivotal role in helping the City achieve economic balancing and stabilizing goals in addition to projecting the environmental qualities of the City. The downtown area, and its sensitive relationship to Round Lake, is no doublt the most visible piece of real estate in the City. For this reason, the relationship of the land contiguous to west Round Lake is seen as an integral part of the downtown area, and the total area is terribly important to the image which people have about the City of Charlevoix. This area, therefore, is the most important real estate in the City, and if handled properly, can sustain and increase the City's

economic base. However, because this goal is interdependent with a high level of tourist support, it becomes imperative that the environmental qualities be further improved. It is this quality that sustains, and is needed to increase, the market condition. This is a prerequisite to new private investment in the area.

From a conceptual development perspective, the urban design qualities necessary to achieve this dual purpose is graphically illustrated in the Waterfront Area Management section. The revitallization and plan for change in this area calls upon a close partnership between the public and private sectors. In particular, the plan calls upon the public sector to institute a long range plan of public improvements, all of which are aimed at beautification of the downtown area. However, in the process of doing this, the improvements also stimulate market conditions because they are expected to attract many more potential buyers of goods and services to the area. The amenities to be added include increasing pedestrian space by extending the sidewalks into areas now used for street purposes, converting traditional concrete sidewalk space to attractive brick paving, and adding decorative landscape planter boxes, benches and similar street decorations. New street lights are proposed. These would be fed by underground wiring. Substantially larger off-street parking areas, screened from public view by landscape methods, are also expected to environmentally enhance the downtown area, while at the same time, improve its market condition. If all of these improvements are executed, a favorable climate would be established to stimulate private reinvestment and new investment. The Concept Development Plan illustrates interesting ways that new commercial space can be added to the downtown area. The emphasis is on small, specialized stores in clustered building structures. The pedestrian linkages and the arrangement of building spaces is designed to create visual surprises, of both street scenes and of interesting landscape spaces linking the building masses to streets and parking lots.

It may be necessary in some cases to use the powers and functions of the Downtown Development Authority to bring this about. The Downtown Development Authority can more easily assemble land in sufficiently large enough areas to entice private investors to implement pieces of the downtown plan. Similarly, creative financing strategies will probably have to be utilized by the Downtown Development Authority and the City Council to implement the recommended public improvement strategy, without which new private investment is unlikely to take place.

Conceptually, the downtown improvement plan is illustrated in the Waterfront Areas Management section.

Economic Development and Growth Management Strategy

The economic development and growth management strategies are interrelated. The growth management strategy attests to purposeful action to define how much non-residential development will be necessary to maintain an assessed baluation distribution of at least 40%. This then is further refined to determine what portion of the 40% valuation is potentially possible in commercial development and therefore, what is remaining to the industrial development goal. This analytical process then serves to indicate how much land must be set aside to satisfy the growth management conclusions.

While the growth management strategy and economic development goals are synonymous, nevertheless the economic development goal includes institutional structures that could be used to bring about economic development. Growth management is essentially concerned with space allocation while economic development is concerned with institutional ways of bringing about economic development.

Under the growth management strategy goal it was decided that an appropriate distribution of residential to non-residential valuation should be 50% to 50%. However on reflection, and given the fact that approximately 25% of the existing housing stock is seasonal housing, it was concluded that the cost of services caused by home owners is somewhat less than if all the housing was used by year around residents. Therefore, a 60% to 40% residential to non-residential assessed valuation distribution would still represent an optimal distribution of the local tax burden. The following development emphasis would therefore have to occur to bring this about.

TABLE 27

PLANNED DISTRIBUTION OF ASSESSED VALUATION FOR GROWTH MANAGEMENT STRATEGY

Land Use	Existing State Equalized Valuation(1981) $	Planned State Equalized Valuation Increase(1980-2000) $	Total State Equalized Evaluation $	% Distribution
Residential	35,520,000.	17,700,000.	54,220,000.	60
Commercial	8,786,700.	10,500,000.	19,286,700.	
Industrial	1,266,300.	9,800,000.	11,066,300.	40
Personal(Commercial & Industrial)	1,948,700.	3,478,100.	5,426,800.	
TOTAL	48,521,900.	41,478,100.	89,999,800.	

Market survey forecasting data advised that the necessary development valuation for all commercial development to produce nine million dollars of additional state equalized valuation (i.e. $18 million construction value) was a possibility. The Plan for Industrial Development will now have to address how it will be possible to bring about $22 million of new industrial development.

Appropriate Locations for Planned Commercial Retail, Service and Office Uses

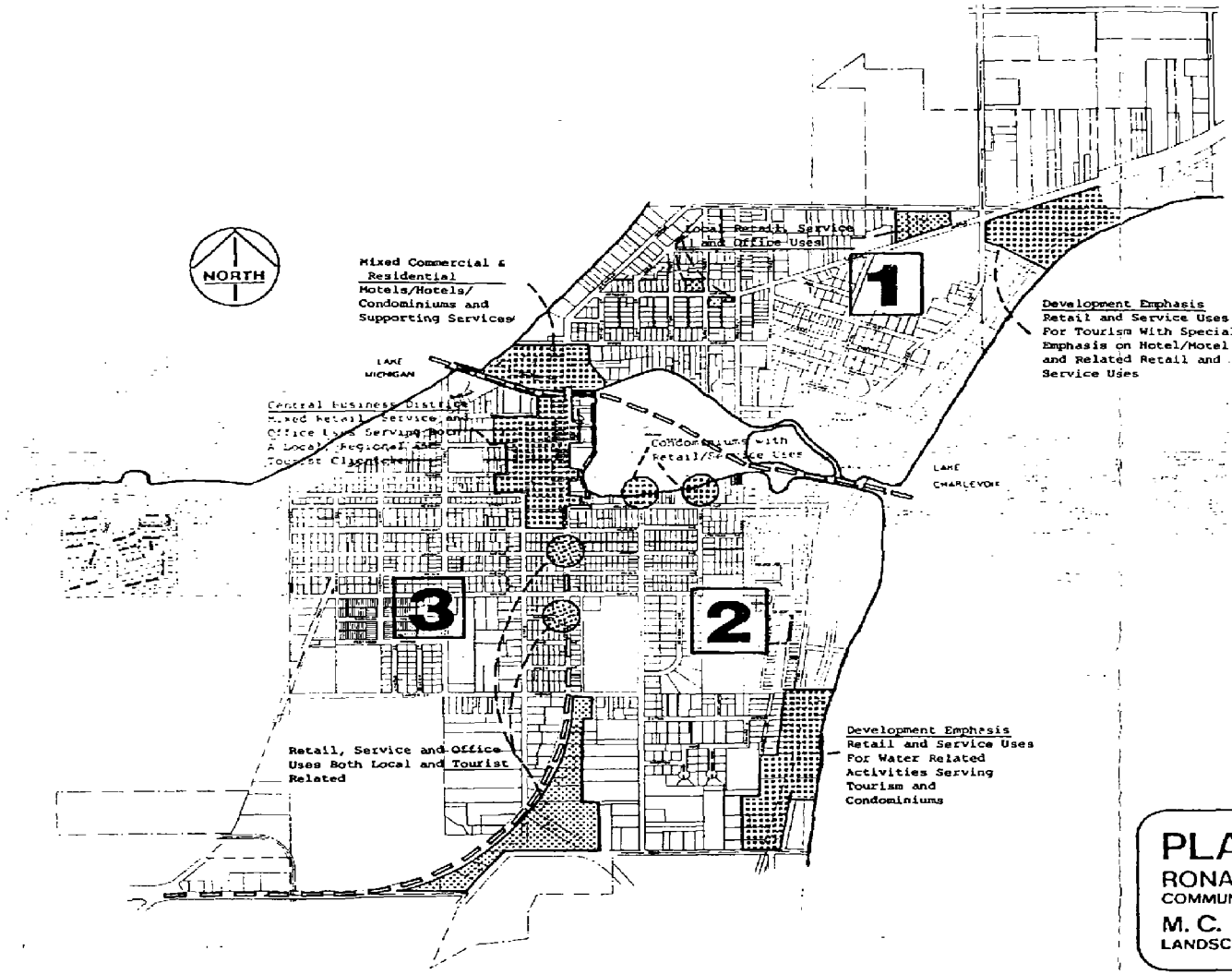
The above analysis advises that twenty-seven (27) acres of land, not now used for commercial purposes, and/or existing commercial space capable of further development, are required to satisfy the market potential. This can only be achieved if supporting parking facilities by and large are placed in multi-level facilities. Multi-level parking is made more appropriate in Charlevoix, in the long run, because of the potential loss of parking spaces in surface parking lots due to snowfall accumulation. Large central city concerns relative to criminal activity within parking structures would not appear to be a factor in Charlevoix. Therefore, multi-level parking structures make a great deal of sense in Charlevoix, particularly in view of the constraints on available land. In the short run, it is expected that parking will be met on surface parking lots.

Redevelopment and reuse actions leading to a more intensive use of the land area bounded by the Pine River Channel, Hurlbut, State and Round Lake would allow for the introduction of additional commercial floor area. Office space in a strong market condition for retail and service uses would generally tend to occupy upper-story space. This condition would support multi-story buildings. Other communities with severe winter climates have successfully marketed subsurface retail and service space; therefore new building development should seriously be considered for subsurface spaces.

The present tendency to allow strip commercial development on Bridge Street is ill-advised and unnecessary to meet planned commercial growth expectations. Several block faces are predominately residential and should remain so. More intensive commercial use could be considered south of Carpenter Avenue and a planned expansion of the existing shopping center at M-66 and Bridge Street would be very desirable. Those uses requiring outdoor storage space such as new or used car sales, building supplies, etc., should be encouraged to locate or expand in the area of M-66 and the airport. The increase in expected motel and hotel accommodations should be met by existing motel and hotel operations and in some cases may require the acquisition of adjacent properties on which residences are located.

Commercial development on Petoskey Avenue should be discouraged, except for existing commercial development and the few properties lying west of Duffy's Restaurant and opposite the Charlevoix Golf Course. These few properties should be appropriate for professional office development.

COMMERCIAL DEVELOPMENT
POLICY PLAN MAP 9



low intensity commercial

high intensity commercial

mixed use

PLANNING TEAM
RONALD F. NINO & ASSOCIATES
COMMUNITY PLANNING AND DEVELOPMENT
M. C. SMITH & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE · URBAN DESIGN

Other areas appropriate for mixed commercial uses including some element of residential uses, include the land area fronting Lake Charlevoix from the existing public beach north to the Belvedere Club property, the south side of Round Lake, and Lake Charlevoix frontage lying east of Mercer Boulevard. To achieve effective utilization of Lake Charlevoix frontage it is necessary to remove the now abandoned railway lines and to facilitate the sale of this property. The City of Charlevoix would be well advised to obtain title to the railway right-of-way. The City could then dispose of the land for appropriate development purposes. Altogether the above referenced properties should, if properly developed, provide sufficient land to satisfy the market forecast (see Map #9).

Recommended Institutional Actions

The commercial land use development strategy is critical to the City achieving its growth balancing goal. Private investment and reinvestment can be stimulated by a public improvement program aimed at improving the environmental quality of the areas set aside for commercial purposes. Other public incentives can also be used. A desire to cooperate with the private sector could be very helpful in stiumlating private investment.

In Michigan the legislature has specifically provided special legislation to encourage commercial development and redevelopment. The legislation provides for establishing downtown development authorities, commercial redevelopment districts, and also provides financial techniques to help carry out public and private improvements.

It is recommended that the City of Charlevoix begin a program of encouraging conditions under which private investment will flourish by creating a Downtown Development District and appointing a Downtown Development Authority as an initial step. The Downtown Development Authority should then be authorized to prepare a specific plan of improvements for the land in the district and propose appropriate financing techniques.

Commercial private investment and reinvestment outside the Downtown Development District should be charged to other appropriate authorities or ad hoc committees.

Recommendations Regarding Maintenance of Quality Development

Officially, Charlevoix claims for itself the title "Charlevoix the Beautiful". A recent attitude survey advised that respondents felt very strongly about preserving environmental qualities. Certain

aspects regarding the visual appearance of physical conditions in the City have either gone unnoticed or have simply not been seen in a negative manner. The fact remains that there are quite a few buildings, particularly of a non-residential nature, that are unattractive and make the claim "Charlevoix the Beautiful" less meaningful. It is true that the geography and environmental setting of the City of Charlevoix is its most valuable asset and these characteristics project the environmental quality associated with the City.

It is apparent that officials charged with approving property development plans have not been sensitive enough to ensure that no building project detracts from the visual quality of the City. To achieve this it may be necessary to adopt higher building and site development standards. An area of deficiency is one which permits unpainted shell structures, often referred to as pole buildings. Site improvements in several areas were obviously not required as evidenced by the absence of paved and structured parking lots, landscaping, and outside storage. The following actions are advisable if Charlevoix intends to preserve the visual quality of the City:

1. Site improvement standards should be adopted for all new or substantially altered building projects which uniformly require landscaping improvements, structured hardsurfaced parking lots and driveways, and a prohibition on outside storage.

2. Building codes should be amended to prohibit unattractive building facades, specifically unpainted exterior surfaces. Instead, the building code should require a factory-finished exterior surface similar to painted exterior surfaces.

3. Building faces on highly visible sides should preferably be constructed of so-called sandwich wall construction methods as opposed to a skin wall. Architecture and scale should be appropriate to the situation.

THE PLAN FOR INDUSTRIAL DEVELOPMENT

The City of Charlevoix has land resources which meet locational criteria generally thought suitable for industrial development. This statement is irrespective of economic base indicators that may or may not support expansion of industrial development opportunities.

The Plan for Industrial Uses is intended to address the total land area required for all industrial type activities and related uses in the City of Charlevoix. Industiral land uses have generally developed over the past several decades to include more than conventional manufacturing, processing, and storage type operations. While the Land Use Plan advises that the predominant uses are for manufacturing, processing, and storage (i.e. warehousing/wholesaling), nonetheless, the plan recognizes the expanding area of

research and development as part of an industrial land use environment. The objectives and policies previously enunciated to guide industrial development should be referred to in the context of this plan.

Relationship to Growth Management Goals

The previous section specifically addresses the assessment valuation that falls to new industrial development to meet the growth management goal. Specifically, about twenty-three million dollars of new industrial development will have to occur, in addition to forecasted new commercial development, to bring about an assessed valuation distribution when total development is expected to consist of sixty percent (60%) residential and forty percent (40%) non-residential uses. The growth management goal and its relationship to industrial land use requirements, therefore determines that amount of land that should be reserved, irrespective of economic base factors. By this action, the City is determining that even if it does not have an economic base condition requiring the reservation of land in the short run,nevertheless the economic stability of the City in the long run, demands that a certain amount of land be held in reserve. This will allow for the eventual balancing of the City's tax base between residential and non-residential rate payers, and provide for a condition that will allow a high level of response to the provision of essential public services. Traditional economic base studies are simply not applicable to a small geographic area, and therefore are inadequate tools for determining the amount of land that should be held in reserve to accommodate industrial growth. For this reason, no consideration of economic base factors will be made. However, it was judged that such an analysis would be unable to show substantial industrial development opportunities and would probably have led to the conclusion that industrial land needs are minimal. This would have resulted in prioritizing the use of the land for another purpose, thus forever barring its use for industrial development. Additionally, relying on traditional economic base factors to justify reserving land for industrial purposes does not account for unique local promotional efforts and possible financing incentives. Neither do they account for those positions, sometimes taken by chief executives of corporations, to place environmental considerations above market considerations when determining a plant location site. It is a known fact that several of the existing industrial plants came about through environmental reasons, not as a result of industrial location theories.

Industrial Land Use Requirements

As indicated above, predictive models are not applicable to the City of Charlevoix for a number of reasons. A predetermined growth management goal will at least provide a target upon which a determination can be made regarding the amount of land necessary to achieve the growth management goal. The technique to be applied for an assessment of land area that should be reserved for industrial purposes, is based on the amount of land needed to accommodate some twenty million dollars of industrial plant construction. This was determined as follows:

TABLE 28

REQUIRED LAND AREA BASED ON
GROWTH MANAGEMENT GOAL

Growth Management Factors	Cost Factor/ Land Area Relationship
Growth Management Goal for New Industrial Valuation	$20,000,000.00
Estimated Costs of Industrial Plant Space(per Square Foot)	$30.00/square foot
Estimated Amount of Industrial Plant Space	666,667 square feet
Land Area Factor 3.0 (i.e. average at 33%)	2,000,000 square feet of land area
Land Area Converted From Square Feet to Acreage	46 Acres

Land Area Availability and Preferred Areas (see Map #10)

The attainment of the growth management goal makes it essential that the City of Charlevoix reserve approximately forty-six (46) acres of vacant land. The largest available area is in the northeast corner of the City. Land adjacent to this area is now developed for industrial purposes. The area is unofficially referred to as an Industrial Park, although it has not been officially recognized as an approved Industrial Park by the State of Michigan. Land adjacent to or near the airport offers an additional location for industrial development and, from a location point of view, is better than the land in the northeast corner of the City. A number of vacant lots are available in the Charlevoix Industrial Center subdivision. The subdivision is located immediately north and east of the airport. Redevelopment possibilities include the land on both sides of Norwood Road south of Garfield, and the land at the southwest corner of State Street and Carpenter Road. The total area described contains approximately the amount of land required to satisfy the growth management goal and is appropriately situated for industrial purposes. By virtue of its location, this land is undesirable for residential uses in light of adjacent development. It would have been preferable from a location standpoint, to have the greater amount of land available near and adjacent to the airport because all major modes of transportation are essentially available. This includes waterborne transportation via the harbor facilities at the Medusa Cement Company, the M-66 highway, and the C and O Railroad spur line into the Medusa Cement Company. The land located to the west of the airport is

in Charlevoix Township and is zoned for industrial purposes. Should consolidation take place between the City and the Township, then it may be preferable to use the land in the northeast corner of the City for another purpose.

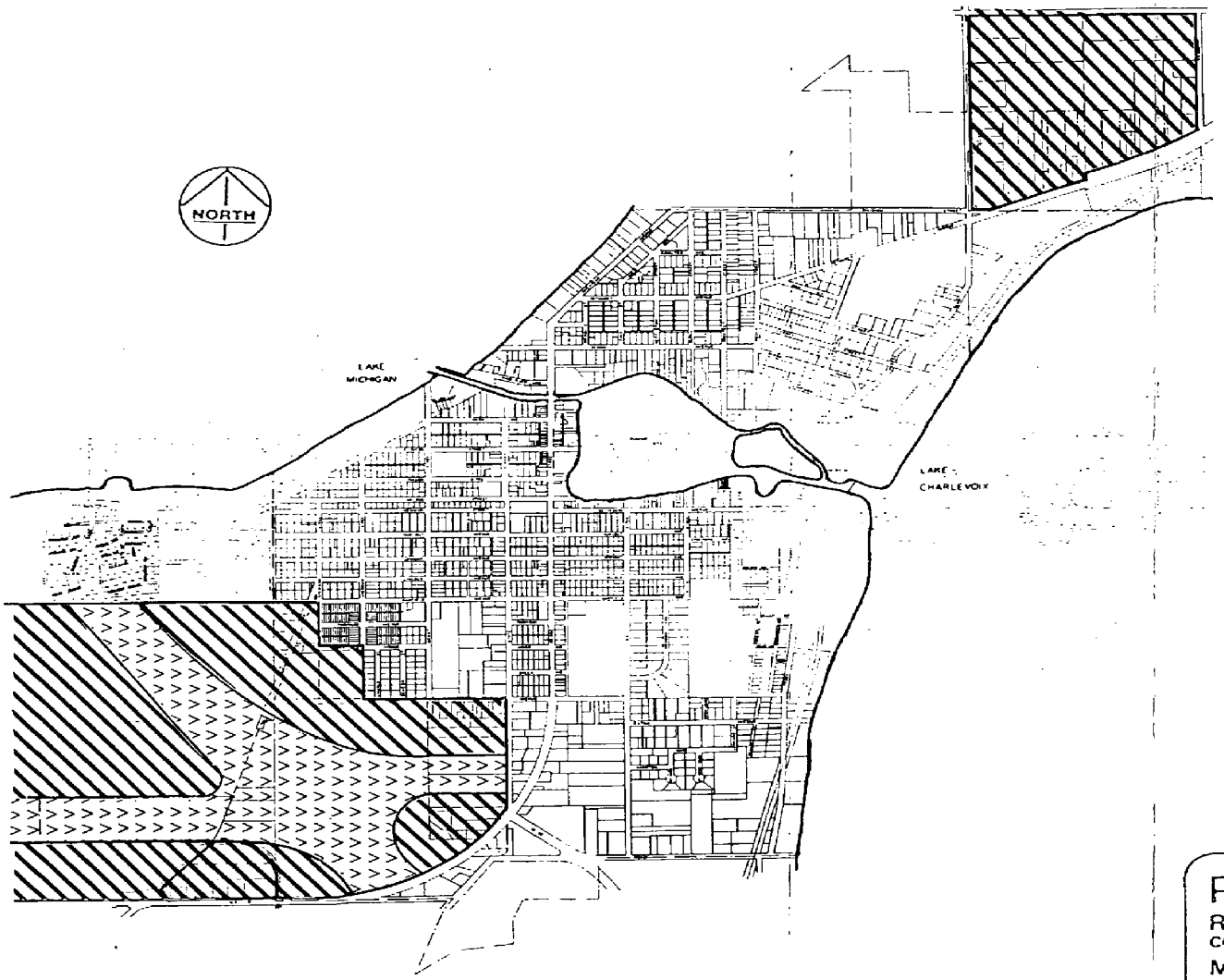
Land Improvements Necessary

The availability of raw land by itself does nothing to cause industrial devleopment to happen. A public sector agency must take an active part in encouraging the development of land set aside for industiral purposes. In some instances this may include acquiring the land, particularly in the event it is held in numerous ownership arrangements. Land assembly facilitates more logical development patterns and allows for maximizing the use of all of the land.

The land area lying east of Mercer Boulevard and north of Petoskey Road to Waller Road, part of which is in the City, in one such area which is recommended for industrial development. This area should more appropriately be developed as a planned Industrial Park. It is large enough to justify a system of internal streets. Because of the gerrymandered boundary with the City it would be more appropriate to consolidate all the parcels into one tract of land and then cause an appropriate design for an Industrial Park. The City and Township should cooperate to effectively utilize this land. This will require the extension of sewer and water lines and the building of roads suitable for industrial use. Should consolidation between the Township and the City not become a reality then perhaps the Township would agree to consolidating the land only into the City in exchange for an agreement whereby the City and the Township would share tax revenues on the consolidated lands. If this were possible, then a City Authority could be authorized to develop the land and resort to special taxing techniques to pay for land development costs.

The only other area where there is land suitable for industrial development is situated next to the airport, and in some cases would include airport land. From a location point of view, this area is the most preferable for industrial development, however, there is not a great deal of land available in the City. This area also has the advantage of being served with all essential public utilities. The industrial development policies plan advises the use of certain land which is now being used for residential purposes on Norwood and Carpenter Roads. This land is recommended for industiral reuse because the existing development is marginal in quality, and because as a residential environment it is unsuitable given the impact of the airport. The Charlevoix

INDUSTRIAL DEVELOPMENT POLICY PLAN MAP 10



industrial

airport related

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Industrial Center is a nine (9) parcel industrial subdivision plan occupying the north side of Carpenter Road, immediately east of Norwood Road. Additional opportunities to expand industrial influence exists on Garfield Road in the Township, particularly if the land in the City is approved for industrial reuse. This action is further supported by the Airport Master Plan which proposes a north/south runway west of Norwood Road (see Map #10).

Aesthetic Concern for Industrial Development

An overriding concern of the people of Charlevoix is to maintain pleasant views and vistas throughout the City. Consequently, there is concern that industrial buildings, and attendant exterior conditions will not help achieve the high goals that the people hold regarding the appearance of their community. There is justification for this attitude based on several existing industrial buildings (shell type) in the City. It is important that existing building codes be revised to demand a more aesthetic response from industrial building construction methods. Factory finished or otherwise painted exterior faces should be required. Outside storage should be properly screened and every development should have an appropriate amount of landscaping. Large parking lots should also be screened.

Assessment of Industrial Development Marketing Requirements

A 1978 publication of the Northwest Michigan Regional Planning and Development Commission discussed the economic development potential of the region. Essentially, the report calls for considerable public sector improvement in economic development activities. It identifies economic development opportunities in natural resource based industries, including recreation/tourism, timber, and minerals. The report specifically identified the following targeted opportunities:

1. Local industry interested in expanding.

2. Industry which can provide raw materials or services to other local or regional industry or can further add value to the product of local industry.

3. Industries utilizing local raw materials or providing services to other local industry.

4. Growth industries which were identified from industry groups in the United States and Michigan as having substantial growth potential and locational characteristics compatible with Northwest Michigan.

5. Industries involved in new product development based on the substantial timber resources in the area.

The following scenario of a development scheme using the above criteria is possible, in the event sufficient investor interest can be identified.

Waste/Wood Energy Producing Facility -- The possibility of encouraging investor interest in a regional waste disposal energy conversion plant in the City of Charlevoix to be located in the center of the northeast proposed Industrial Park should be explored. A 100 tons per day facility could initially be established which would convert waste materials into steam heat which could then be transmitted to adjacent industrial users and/or co-generated into electricity. As waste disposal volumes increase, so could the size of the plant. Waste streams could be supplemented with wood, particularly in the winter months when waste streams are less in the region. Such a facility could be an incentive to new industrial development, because energy could be sold at substantially below the costs of typical energy sources. Additionally, with the advent of new stringent waste disposal requirements, the cost of disposal at a waste incineration facility can become competitive with land disposal costs. The waste/wood energy producing facility is then both a profit making center and an incentive to new industrial development through cheaper energy costs. The plant costs are estimated to be approximately five million dollars ($5,000,000.00).

Methanol Plant -- The economic feasibility of a waste-to-energy conversion plant demands immediate energy users and therefore concurrent development by energy users is essential to the feasibility of the waste-to-energy plant. A methanol plant offers this immediate possibility. A methanol plant could be designed to produce wood alcohol from the timber resources of the region. Such a facility is a high energy user which would use a major portion of the energy producing capacity of the waste-to-energy plant. It is estimated that a plant producing six (6) million gallons per year would cost forty million dollars ($40,000,000.00). There are large corporations in the United States involved in this type of activity, however none are in Michigan. These corporations should be contacted and proposals made to them showing why it would be advantageous to build a methanol plant in Charlevoix.

Northeast Industrial Park -- The City and Township should cooperatively secure the land and assemble all of the pieces into one larger tract of land. This would include all the land north to Waller Road and make available a potential area of approximately 125 acres. Some of this land is industrially developed along Petoskey Road. What is effectively available for new development can only be determined following the result of a land assembly effort and a subsequent design of the Industrial Park. If these actions were taken concurrently with the development proposals described above, the technique of captured taxes through a tax increment financing scheme, would probably offset land acquisition and development costs. Furthermore, this may make it possible to provide industries with free fully serviced land and sites.

Miscellaneous Plants -- In the event the City and Township are able to accomplish the above, it would appear reasonable to assume that, from time to time, new small industrial plants would locate in the Industrial Park in the same manner as other small plants of a diversified manufacturing interests have, from time to time,made the Charlevoix area their choice for doing business.

SUMMARY ECONOMIC DEVELOPMENT STRATEGY

Commercial Development

1. The City of Charlevoix has the potential to gain substantial new commercial development. A market analysis would tend to support the proposition that 200,000 square feet of retail floor space is feasible.

2. To a large extent (i.e. 25%), this market condition is created by tourist dollars predominantly in the summer months. The development strategy is therefore also one of extending the tourist (or visitor) season throughout the year. This can be accomplished by capitalizing on the environmental qualities of Charlevoix which could make it an attractive area for an executive-type conference and training location. Additionally, every effort must be made to increase winter recreation opportunities in the immediate Charlevoix area.

3. Active competition as an executive conference and training center will call for a commensurate response for additional lodging facilities. At the present time, good lodging facilities are limited, while supplementary services (i.e. whirlpool, saunas, games, etc.) are almost non-existent. Weekend vacation packages similar to the Gaylord Holidrome deserve attention for development in Charlevoix.

4. If the above can be accomplished, and if permanent year round jobs created by industrial sector employment occur, then real population growth will be the product. As a result of this a commensurate increase will occur in related office and service commercial-type development. These are additional spin-off employment effects,which also contribute to the overall growth balancing goal.

5. The response to anticipated commercial investment and reinvestment will be met primarily by land located within the existing downtown area. For the purposes of the Plan, this includes the area along Bridge Street,from Dixon Avenue to Hurlbut Street. South of the Pine River Bridge, the area extends from the east side of Bridge Street to the west side of State Street. Additional commercial

development opportunities exist on Lake Charlevoix and Round Lake. This potential is graphically illustrated in the section on Waterfront Areas Management. Commercial development is expected to be tourist/water related and will likely include mixed uses such as residential condominium units, tourist lodging facilities, specialty retail shops, restaurants, and marine related activities.

Industrial Development

6. Intensive public involvement will be necessary to overcome perceived competitive and/or locational disadvantages for industrial development. This will likely demand public acquisition and development of lands suitable for industrial use.

7. The growth balancing goal requires some twenty million dollars ($20,000,000.00) of new industrial growth which is expected to require some forty-six (46) acres of land. The City, in cooperation with Charlevoix Township, can respond to this land allocation requirement. The City by itself would be hard pressed to do this. It appears that the land located in the northeast corner of the City, now referred to as an industrial area, provides the best opportunity to achieve industrial development goals.

8. The City and Township should cooperatively assemble all of the available land in the area bounded by Mercer Boulevard, Waller Road, Martin Road and Petoskey Avenue. An appropriate design for an Industrial Park should be effected and a financing arrangement made to cause required infrastructure improvements. If acquisition and development were timed to occur with a large private investment in new plant facilities, it is possible that tax increment financing could be used to retire the debt for land acquisition and improvement costs. In this manner, it may also be possible to provide prospective industrial clients with free fully serviced land.

9. Since the above is dependent upon an immediate implementable industrial project(or projects) some thought was given to what could immediately happen that was independent of the State's generally poor economy, and made sense because of its resource based application. This resulted in the proposition that a waste-to-energy producing facility and a methanol (wood alcohol) production plant may offer an immediate project which could be the catalyst for the Industrial Park development strategy.

The State's increasing sensitivity to the problems of waste land disposal may give rise to the economic feasibility of using waste materials as an alternate fuel. The City of Charlevoix, if it acted expediously, could develop a regional waste-to-energy facility which in turn could provide below market rate sources of energy to potential industrial plants within the Industrial Park.

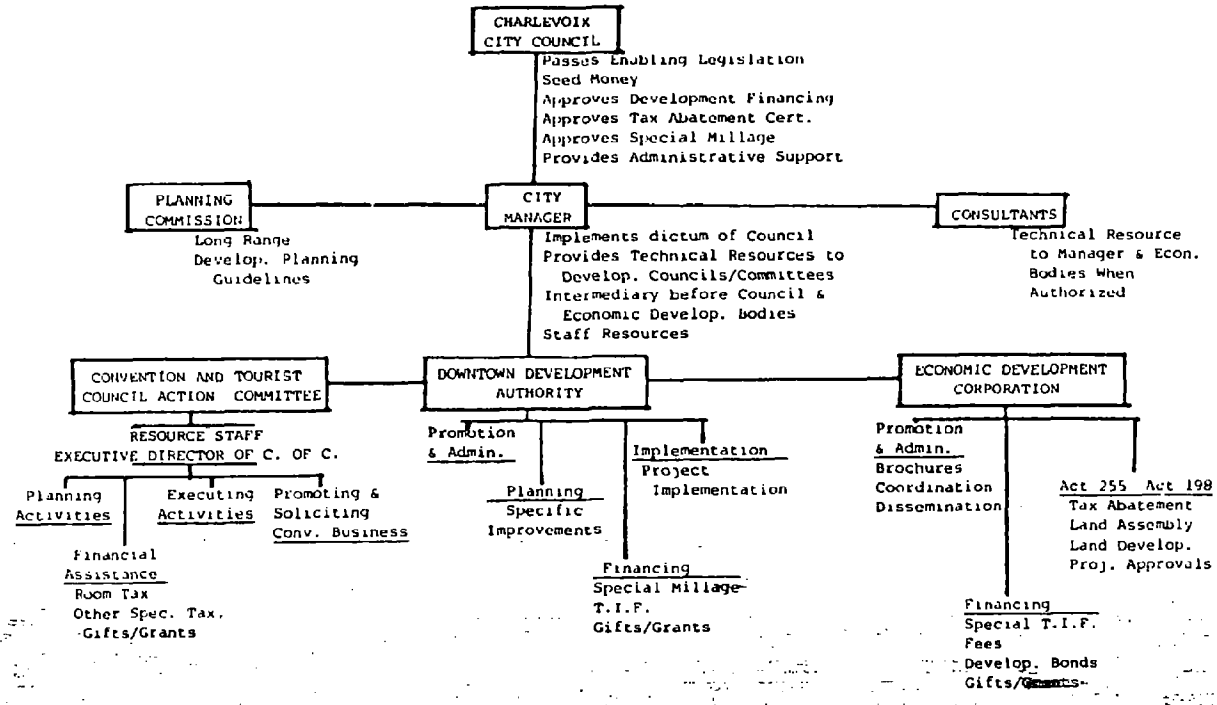
Because of the "Catch 22" nature of a waste-to-energy plant which simultaneously requires a high energy user, it is essential that such an energy user also be concurrently built. That which makes the most sense is a methanol plant utilizing the timber resources of the area. The great bulk of the alcohol used in the country is imported,while the technology to produce alcohol with timber resources is in place. The State of Michigan in an attempt to diversify the economy of the State is actively involved in packaging a similar type of development in Alpena, Michigan.

10. If the above strategy can be accomplished, a number of fully serviced highly attractive properties will be made available for industrial purposes at very competitive conditions. Presumably, these properties will slowly be developed in a selective manner thereby completing the overall economic development strategy.

Institutional,Administrative and Financing Strategy

11. If all of the above is to be accomplished, an institutional, administrative and financing scheme is essential. Some of these are prescribed by State law and are appropriate mechanisms to accomplish the economic diversification goals of the City of Charlevoix. These will be called upon to accomplish the goals. The institutional and administrative strategy for accomplishing the economic development program may be diagrammed as follows:

CHARLEVOIX OVERALL ECONOMIC
ENHANCEMENT AND DEVELOPMENT
STRATEGY FLOW CHART



Roles

City Council -- All tax related incentive and financing programs must be approved by the City Council. Without the expressed commitment of the City Council economic development strategies which rely on the provision of creative financing using taxation or other tax incentive measures (i.e. abatement) would be a fruitless effort. For this reason the highest local legislative authority which is the City Council, stands on top of the organizational pyramid.

City Manager -- The City Manager in a small city like Charlevoix is the most visible technical person. The person who occupies this office is expected to lead all planning and implementation measures and to carry out the mandate of the Council. The City Manager is not expected to be all knowing and possess expertise in the entire field of economic development. The City Manager is however the person the Council will look to in deciding what supplemental expertise is required to best facilitate economic development programs. The City Manager's office in the context of Charlevoix is also expected to provide administrative support for operating authorities and committees and to personally take a strong leadership role. The City Manager is also expected to arrange for the soft costs associated with the overall economic development program.

Planning Commission -- The Planning Commission's role in the Economic Development Process is essentially limited to the City's Master Plan which is the key policy document regarding the City's overall economic development strategy. Because economic development is an ongoing process, whereas plans tend to be static, the Planning Commission will be involved in a constant monitoring and reevaluation process. Economic development policies are transmitted to the City Manager and City Council.

Consultants -- The function of Consultants is to directly provide the City Manager with unique guidance relative to specific economic development projects and for specific planning of feasible projects. Consultants may also be employed to work directly with an Authority or Committee through the City Manager's office.

Downtown Development Authority -- A Downtown Development Authority (DDA) is seen as the most effective conduit to carry out a prolonged plan of improvements in the historic commercial district area of Charlevoix. It is recommended that a Downtown Development Authority be established pursuant to Act 197, P.A. 1975. Essentially, the Authority is empowered to cause a specific plan of improvements to be made and the authority, with the support and approval of the City Council, to finance said improvements. Specific powers which the Authority has are as follows:

1. Prepare and implement plans to halt the deterioration of property values.
2. Acquire and dispose of real and personal property.
3. Improve land, construct or restore and operate and maintain any building for the use of any public or private person or corporation or combination thereof.
4. Fix and charge fees and rents for such property and pledge the same for repayment of revenue bonds issued by the Authority.
5. Accept grants and donations.
6. Acquire and construct public facilities.
7. Municipality may condemn for DDA.

Financing specific improvement programs and the administrative costs of the Downtown Development Authority can come from the following sources:

1. Donations.
2. Proceeds of ad valorem tax on downtown district properties of up to 2 mills to be used for purposes of financing only the operations of the Downtown Development Authority.

3. Revenues from property owned, leased or licensed by the Downtown Development Authority.

4. Proceeds of revenue bonds issued by the Downtown Development Authority.

5. Proceeds of a tax increment financing plan.

6. Money received from other sources approved by the Municipality.

Convention and Tourist Council Action Committee -- This activity spills over into the area which is traditionally the function of the local Chamber of Commerce. For this reason it is suggested that the activity be addressed jointly by the Chamber of Commerce through Chamber of Commerce appointments and by officially delegating to the Chamber's Executive Director the task of providing technical and administrative resources to the Committee.

The function of the Convention and Tourist Council Action Committee is to promote Charlevoix's potential to attract tourists and to work with the private sector to cause the development of an executive conference and training center. Actions span the gamut of providing convention bureau services,to planning specific events throughout the year which would increase tourism.

Economic Development Corporation -- An Economic Development Corporation (EDC) is seen as an essential vehicle for implementing the economic diversification and balancing strategy for areas lying outside the DDA district. This could include commercial or industrial development. While Charlevoix County has an Economic Development Corporation and one might ask why duplicate the County's efforts, nevertheless, it is felt that the targeting of substantial efforts to one community is unlikely to be favorably met by the County EDC. For this reason an Economic Development Corporation for the City/Township area is seen as essential to economic development goals.

The City/Township EDC, for instance, would be the instrument through which the proposed Industrial Park in the northeast corner of the City, and partly in the Township, would be brought to fruition. The EDC may borrow money to assemble this land and to carry out an improvement program. The EDC presumably would also be actively involved in implementing the waterfront area's Master Plan insofar as commercial development is concerned. This involvement could include the provision of essential services through tax increment financing, approval of bonds, etc. The EDC may also engage in similar land assembly programs in the areas of the waterfront and airport. One such area in particular may include acquiring the railway right-of-way recommended for abandonment and reuse.

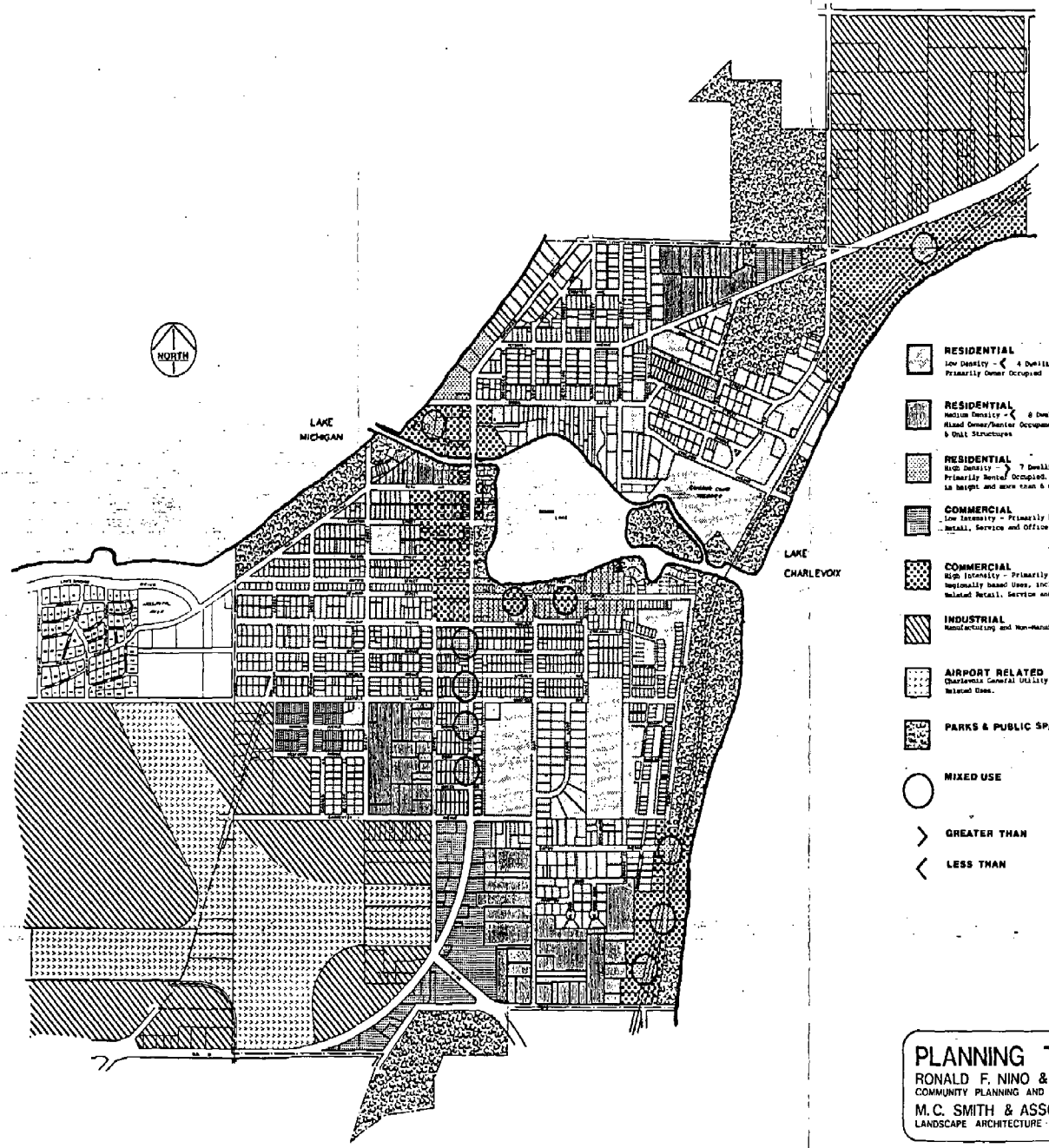
Specifically, the Economic Development Corporation would deal with Act 255 of 1978, Act 198 of 1974, and related Acts that deal with encouraging economic development activities.

Future Land Use Plan Map (Map #11)

The residential and economic development strategies described in the foregoing work, can now be graphically illustrated by a Future Land Use Plan Map. The plan illustratively describes the recommended broad land use categories for all of the land in the City of Charlevoix. The Future Land Use Plan Map and supporting detailed use emphasis and policy maps (Maps #7, #8, #9, and #10), provide a legal basis for zoning decisions. These maps also form the basis upon which a more appropriate zoning ordinance and map are to be developed.

When reviewing the Future Land Use Plan for zoning consistency, zoning administrators should also review the maps pertinent to residential, commercial and industrial use emphasis and development policies. Similarly, the waterfront schematic development plans, shown in the subsequent Waterfront Planning and Management Strategies section, should also be referenced before any administrative, legislative or capital improvement decision is made which would affect the development of land in the City of Charlevoix.

FUTURE LAND USE MAP



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WATERFRONT PLANNING AND MANAGEMENT STRATEGIES

INTRODUCTION

The City of Charlevoix waterfront land use study includes all of the land fronting on Lake Michigan, Pine River Channel, Round Lake and Lake Charlevoix. Because of the integral relationship of the downtown area to the Pine River/Round Lake basin, the entire downtown area was studied. These shorelines, and their geographical makeup, provide a unique environment for the development of the City of Charlevoix. Residents of the City of Charlevoix are very proud of their City and its environmental quality. This quality results from the City's waterfront orientation. This sense of pride is reflected by the fact that residents refer to their city as "Charlevoix the Beautiful". This claim is boldly emblazoned on all official stationery.

The Charlevoix waterfront management planning process was structured to focus on several critical issues. Perhaps the most important role the waterfront has is its economic relationship to the City. In this regard, the recreation potential of the waterfront is intertwined with economic benefits because of the tourist attraction potential of its public beaches, boating facilities, and its environmental quality which encourages visitation. Clearly, the emphasis on economic potential is not at the expense of non-recreational uses of the waterfront areas. On the other hand, the City views the waterfront land areas as a very important property tax resourse base. If the City is expected to respond to the service needs of its permanent population, in addition to its visitor population, then clearly it needs to balance the use of its land between non-taxable and taxable uses. This fact was of paramount importance in the development of waterfront land use strategies and management planning decisions.

ESTABLISHING A COMMUNITY CONSENSUS

Very early in the planning process it was decided that as many people as possible would be encouraged to participate in the decision-making process. To accomplish this level of community consensus building, several workshops (four in all) were held. The workshops were preceeded by an attitute survey which was published in the local newspaper. Local response was very good and, based on the geographic distribution of the survey responses, was clearly representative of the City as a whole. It was apparent that the residents of the City wanted growth to take place in an economically balanced way without seriously impairing the quality of life in Charlevoix. Workshop participants generally accepted this proposition and at the fourth workshop reached a consensus on a Citywide land use plan with particular development emphasis on all of the waterfront and related areas. This level of local input was sustained throughout the program and played an important role in determining the management emphasis for all waterfront land areas. This review included the design of schematic site development plans for each waterfront segment where development options were determined to be available.

...YSIS OF WATERFRONT SEGMENTS

In developing the Waterfront Land Use Management Plan, the waterfront area was broken into segments and sub-segments for ease of referral. It should be noted that the development emphasis for each segment followed a market analysis of the development potential for all land in the City of Charlevoix. Furthermore, the use of waterfront land is related to land use decisions made for all of the land in Charlevoix. This is because the total land mass is functionally and economically interrelated to the waterfront area. For this reason, a study of the land in the waterfront area alone would not make any sense. Finally, the most appropriate development emphasis for waterfront land followed the growth management goals and strategy that were devised for citywide application. These are described in other appropriate sections of this Comprehensive Development and Waterfront Management Strategies Master Plan, of which this section is an inseparable part. Waterfront segments and sub-segments are described as follows: (See Map 12, Waterfront Areas Management Plan Map.)

1. South Lake Michigan Shoreline - Pine River south to the City limits.

2. North Lake Michigan Shoreline - Pine River north to the City limits.

   (a) Dixon/Pine River Lane Section.

3. Pine River Channel Shoreline - North and south sides of the Pine River Channel from Lake Michigan to Bridge Street.

   (a) Park Avenue and Channel Section

4. West Round Lake Shoreline - Foot of hill to Belvedere Avenue.

   (a) Downtown Development Section.

5. South Round Lake Shoreline - Bridge Street to Round Island.

6. North Round Lake Shoreline - Michigan Avenue to Round Island.

. Lake Charlevoix Shoreline - North city limits to south city limits

   (a) North Resort Development and Residential Area.
   (b) Lake Charlevoix North Beach Site (Depot Beach).
   (c) Chicago Club, Belvedere and Coast Guard Area.
   (d) Park Island (Round Island).
   (e) South Resort Development Area.
   (f) Lake Charlevoix South Beach and Launch Ramp Site (Ferry Beach).

South Lake Michigan Segment

The South Lake Michigan waterfront area refers to that area lying south of the Pine River Channel. It includes all of the land known as Michigan Beach, also referred to as the Park Street Beach. It also includes the property on which the Fish Hatchery is located. This area is now publicly owned and is intensively used as a public beach. It is recommended that no functional change of use be made to this property. Recommended management policies are shown on the Waterfront Areas Management Plan Map No.12. These management policies are supported by the Land Use Plan Map No.11. The Lake Michigan, or Park Street, Beach is an important recreation resource with substantial economic benefits to the City of Charlevoix. Short term tourists are provided an opportunity to enjoy the recreation pleasures associated with the beach,which include swimming, games and sunbathing. The fact that the facility is available no doubt contributes to the level of tourism which Charlevoix experiences.

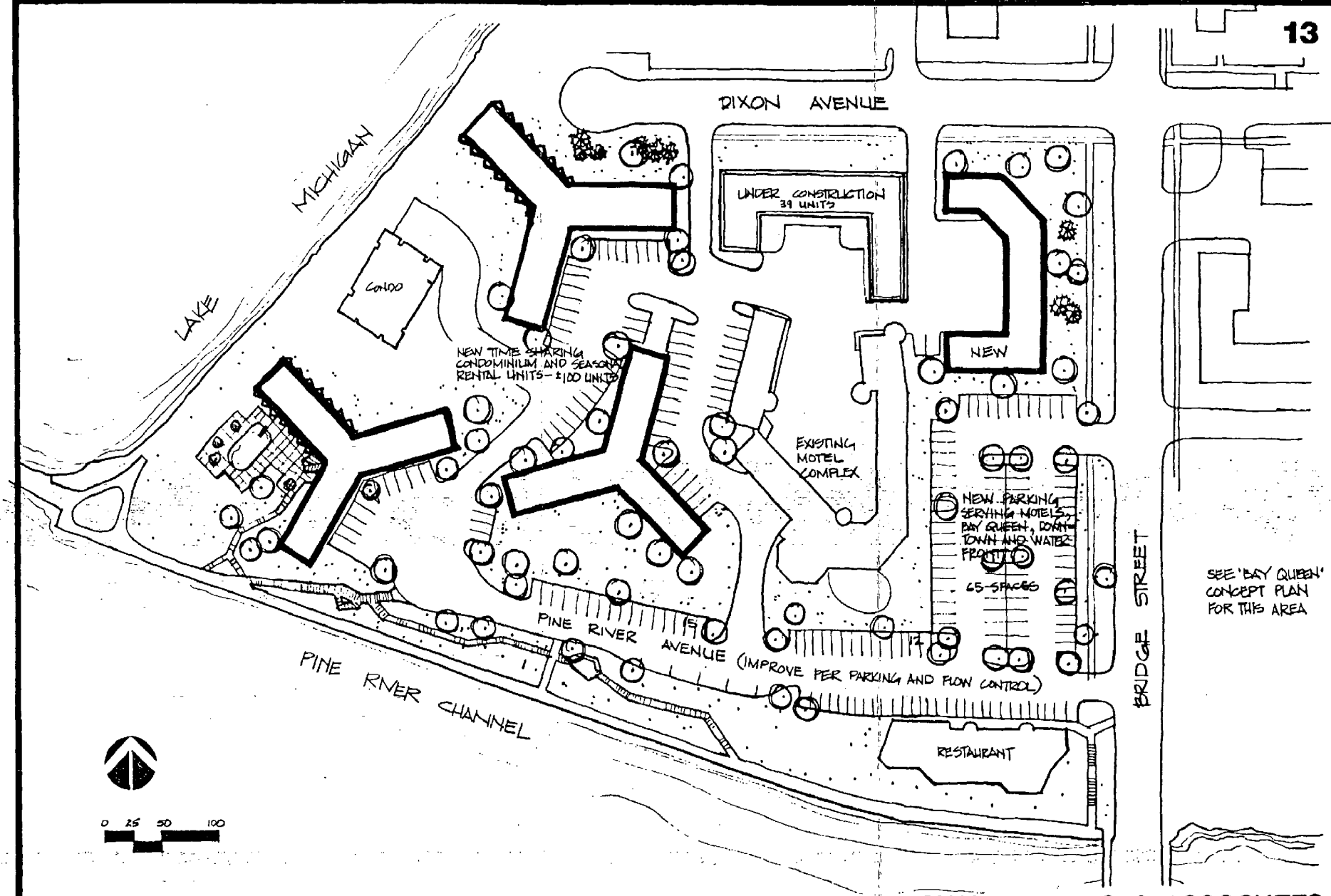
North Lake Michigan Segment

The North Lake Michigan waterfront area refers to the waterfront area lying north of the Pine River Channel. With the exception of three (3) access points (including Dixon Avenue), the land is in private ownership. The management strategy for this waterfront segment is described on the Waterfront Areas Management Plan Map No. 12. This is further supported by the Land Use Plan Map No.11. Generally, a low intensity level of useage is encouraged in this segment, although public access is being maintained to Lake Michigan. Stately homes line the lake side view of Michigan Avenue. The retention of these homes is important to the character of Charlevoix. Intensive use of the shoreline in this area would probably lead to the loss of this important housing stock and is therefore not encouraged.

Dixon/Pine River Lane Section -- This section of the North Michigan Lake waterfront segment is recommended for new intensive development. Land uses include the Weathervane Terrace Motel and Inn and residential uses. The acquisition and assembly of the remaining single family housing for high density housing and/or additional motel-hotel lodgings is consistent with the growth management goals of the Citywide General Development Plan. Nevertheless, careful site utilization practices are recommended which will maintain the view of Lake Michigan and the Pine River Channel area from all portions of the redeveloped land mass and from Dixon Avenue. A schematic site development plan showing an appropriate site utilization scheme is illustrated on Map No. 13.

Pine River Channel Segment

The Pine River Channel segment includes a narrow band of land on either side of the Pine River Channel. The management strategy for this waterfront segment is described on the Waterfront Areas Management Plan Map No. 12. The management



· NORTH PINE CHANNEL AREA ·
DEVELOPMENT CONCEPT PLAN

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policy for this segment is to enhance its function as a scenic, pedestrian view corridor, joining the downtown area and Round Lake to Lake Michigan. An illustration of how this land area should be designed to accommodate pedestrian use and to enhance its aesthetic contribution to the City is shown on Maps No. 13 and No. 14.

Park Avenue and Channel Section -- This section includes the land area between Park Avenue and the Pine River Channel. The management strategy in this area includes the development of a conference center, together with supporting lodging facilities. These facilities are intended to replace the existing uses lying east of the existing condominium development. West of the condominium development there are several homes of historic value and a low density use is recommended in this area. This would not preclude redevelopment of the small area of housing next to the Fish Hatchery for a high density housing project. A schematic site plan for the conference center area is shown on Map No. 14 as a part of the Downtown Area Master Development Plan.

West Round Lake Segment

The West Round Lake waterfront area refers to that area lying on the west side of Round Lake from approximately Belvedere Avenue to the foot of the hill, south of Dixon Avenue. This area includes East Park which is an important feature of the downtown landscape, due to the fact that it provides the principal public access to Round Lake and the municipal marina. The park, in essence, is a gateway to visitors to the City who arrive by water borne vessels. The specific management strategy for the East Park area calls for substantial restructuring of the public space, including some small increase in the size of the park. This is described on the Waterfront Areas Management Plan Map No. 12. The management plan for the segment between the Pine River Channel and Belvedere Avenue calls for converting a greater share of the publicly owned land to park space and supporting activities which would accommodate boaters, tourists and city residents. The impact of off-street parking in this area will be reduced by a reduction in the area set aside for parking and by appropriately landscaping the area which remains for parking. The following schematic site development plan further illustrates management and development concerns. The space between Round Lake and Bridge Street is seen as having substantial economic importance to the City of Charlevoix. The recommendation to increase boat dockage facilities is particularly noteworthy for economic and recreational reasons. This would be accomplished by providing new permanent finger floating docks and temporary docks in the area now occupied by the Coast Guard vessel (see Downtown Plan Map No. 14).

Charlevoix Downtown Development Section Strategy -- The Downtown Development Plan is shown as a part of the West Round Lake Management strategy plan because of its integral relationship to Round Lake. The plan is graphically illustrated on Map No. 14. The Downtown Plan plays an important role in the City's effort to balance its tax base between residential and non-residential ratepayers. The plan essentially envisions a substantial increase in retail, office and service floor space, resulting largely from urban renewal type actions. A Downtown Development Authority is now in place and the Authority is expected to play a

vital role in the renaissance and expansion of the downtown area. Market support for the expansion of the downtown area is described in the section on Economic Planning.

South Round Lake Segment

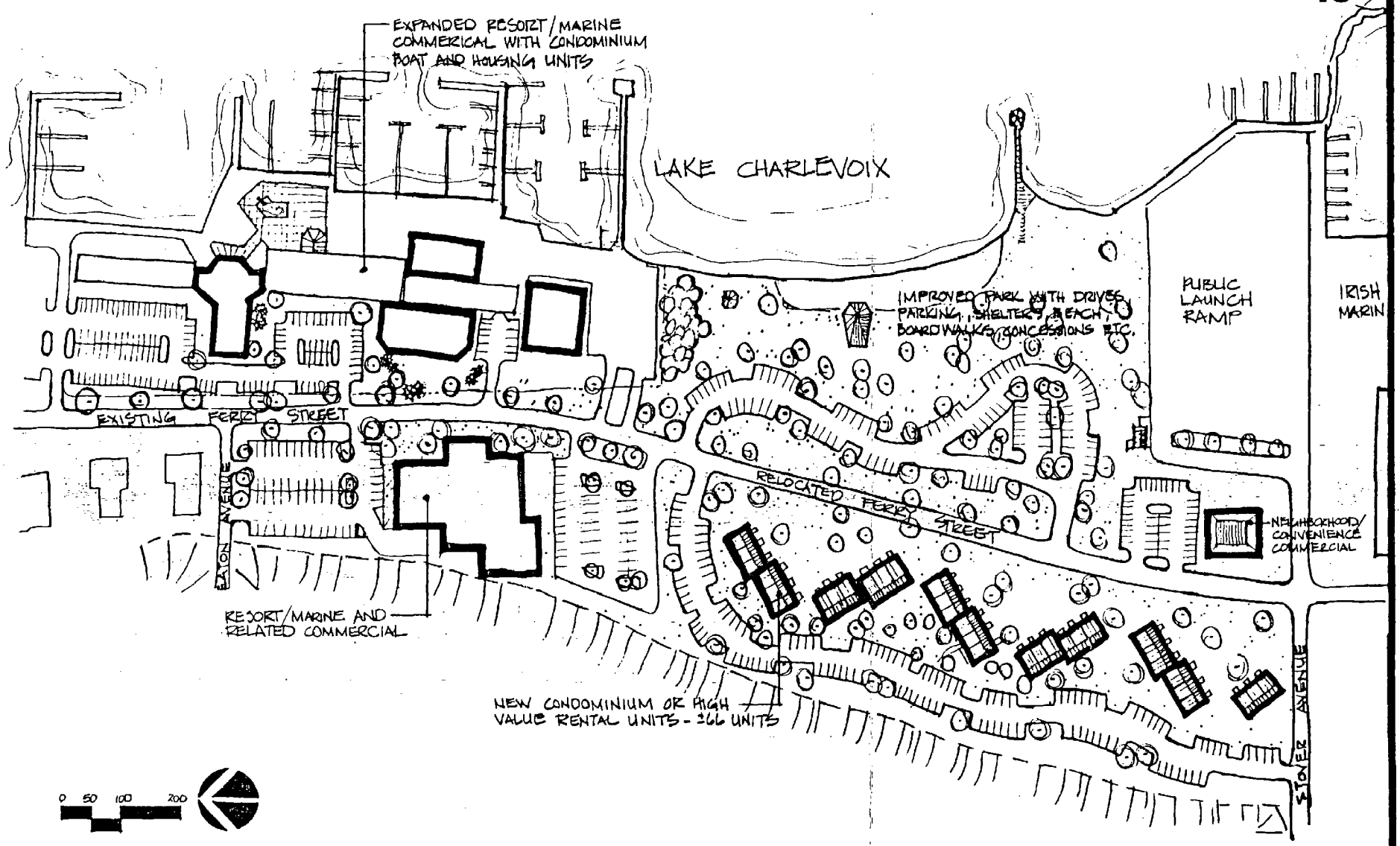
The South Round Lake segment addresses the potential for new land uses along both the south and north sides of Belvedere Avenue. A substantial portion of the land fronting on South Round Lake will remain intact, inasmuch as this development is relatively new. The management strategy for this waterfront segment is described on the Waterfront Management Strategies Plan Map No. 12. New development opportunities within this segment are graphically depicted on Map No. 15. An important element of the schematic site plan is the preservation of view corridors to the maximum extent that is possible. Zoning techniques of incentive zoning will be used to encourage developers to provide limited public access, basically walking paths. Allowable development on the north side of Belvedere Avenue must be sensitive to preserving the view of residences above the hill on Hurlbut Avenue.

North Round Lake Segment

The North Round Lake segment includes the land mass lying north of the Round Lake/Pine River Shoreline to Dixon Avenue. Minimum change is planned for this area. Dixon Avenue is lined with stately residences while some of the land immediately next to the lake also contains very high value housing. Private boating facilities line the shoreline. The area immediately adjacent to Michigan Avenue from the foot of the hill to the water's edge, now the site of the Finn Lumber Company, and facilities of the Bay Queen dining and sightseeing cruise boat, are recommended for redevelopment. With the exception of this proposal for intensive development, no other change is anticipated. Management recommendations are described on the Waterfront Areas Management Plan Map No. 12. A schematic site plan (Map No. 16) is provided showing a possible development scheme for the existing lumber company and the Bay Queen property. The reuse of this property for a major hotel/motel development in conjunction with the Bay Queen cruise boat is consistent with the City's Economic Development section of the Plan. On the other hand, the hotel/motel and related Bay Queen cruise boat fulfill and expand upon the community's recreation/tourist resource base.

Lake Charlevoix Segment

The Lake Charlevoix segment includes the land areas lying adjacent to Lake Charlevoix from the north to the south city limits. In some cases more inland area will be addressed than in others. These will be graphically illustrated by illustrative site plans. Site plans were not prepared for the entire shoreline because no development is anticipated in the major portion of the shoreline, with the exception of the recommended management strategies. These



· SOUTH LAKE CHARLEVOIX AREA · DEVELOPMENT CONCEPT PLAN

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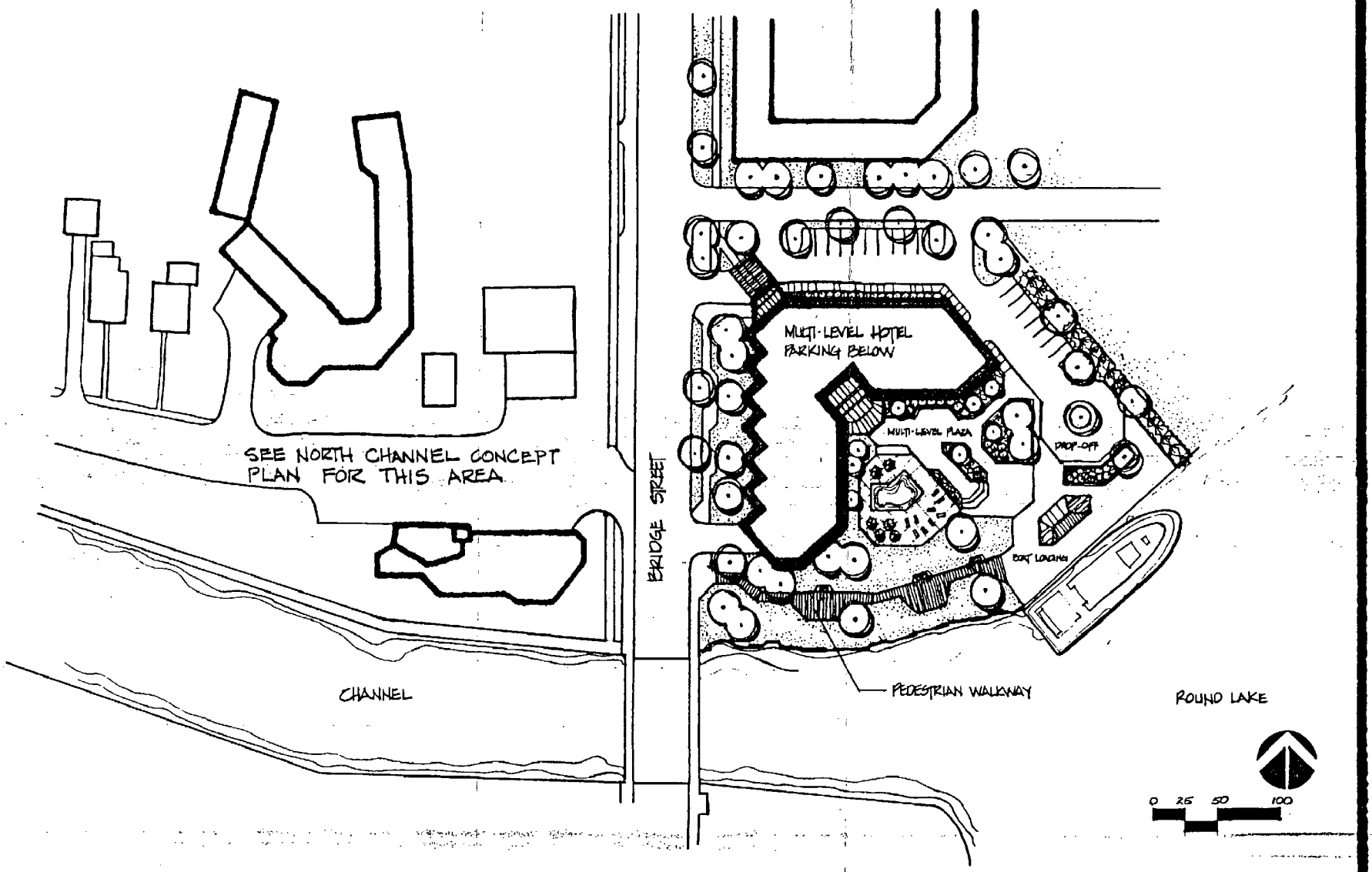

• BAY QUEEN PLAZA DEVELOPMENT CONCEPT PLAN •

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are described for the total segment on the Waterfront Management Strategies Map No. 12., with particular emphasis being placed on the abandonment of the existing C and O Railway line. The Waterfront Management Strategy is consistent with the Land Use Plan recommendations described in the Land Use component of the overall General Development Plan. Specific management and development recommendations for the following sub-segments are recommended:

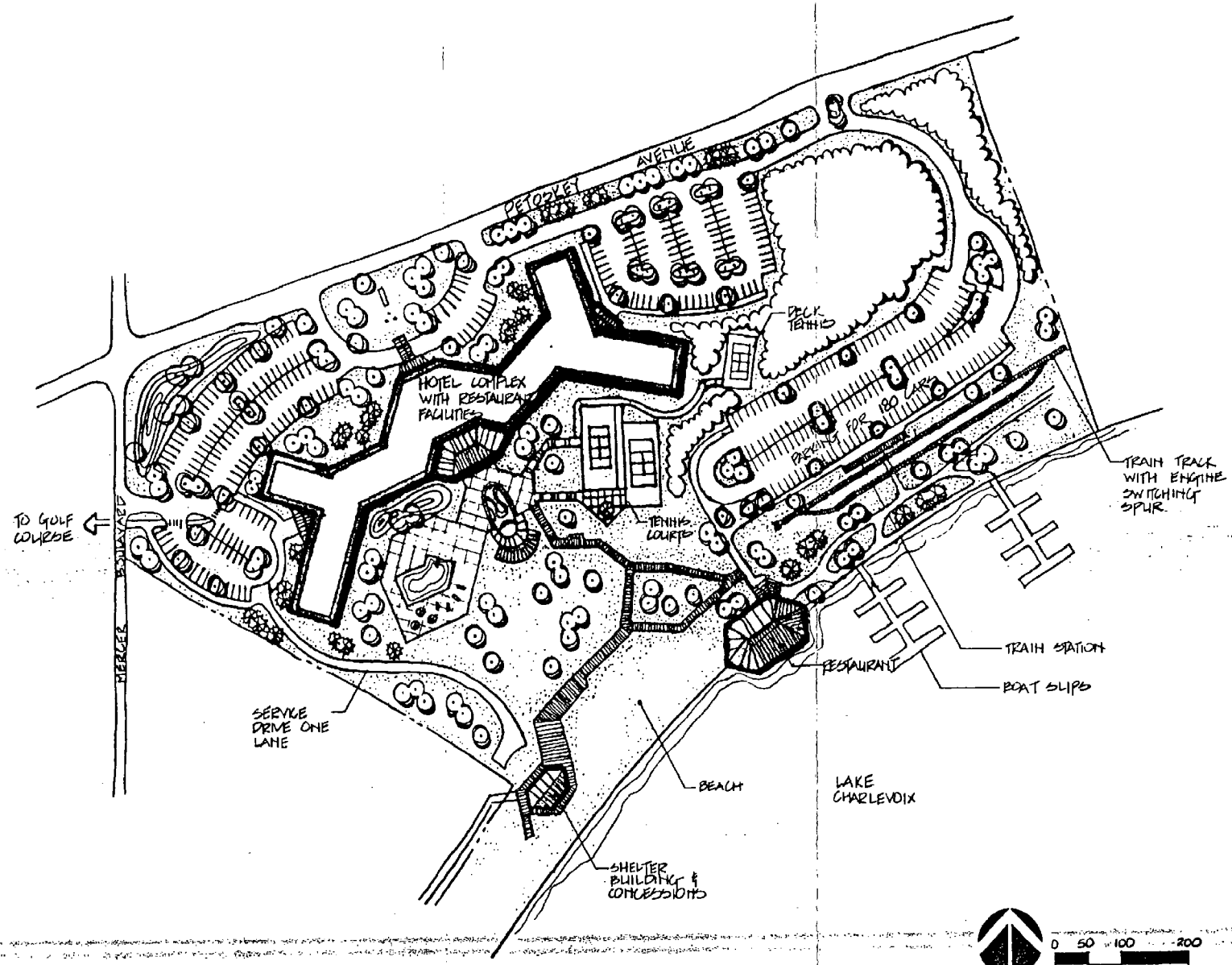
North Resort Development Area -- This area includes land in the City and the Township. A major hotel/motel resort development is envisioned for this general area. A schematic site plan is shown on Map No. 17. Additional management concerns are addressed on the Waterfront Management Strategy Map No. 12. The development of this site as proposed, with a multi-purpose hotel/restaurant and marina/beach facility, is expected to be extensively used by boating patrons. The remainder of the shoreland south to the north beach site is expected to be used for low density residential uses. A pedestrian and/or bicycle path will be maintained between the hotel site and the north beach site.

Lake Charlevoix North Beach Site -- The north beach site (Depot Beach) should remain and even be enlarged if this is possible. This could be accomplished by including in the site the abandoned railway right-of-way and the former railway depot building. Improved access and parking is needed for this site. The above mentioned management concerns are addressed on Map No. 12.

Chicago Club, Belvedere and Coast Guard Area -- No change in land use is recommended for these areas. The Chicago and Belvedere Clubs are private residential compounds with extensive shoreline ownership. No public access directly through these areas is possible. Acquisition of the C and O railway right-of-way would however at least increase visual exposure of Lake Charlevoix to the public. This would be possible if the land were converted to a pedestrian and/or bicycle path. These management concerns are addressed on Map No. 12.

Park Island (Round Lake) -- Park Island should remain as an unencumbered open space area. Optimally, the City should attempt to secure public access rights from the present owners of the Chicago Resort Club. Additional management concerns are identified on Map #12.

South Resort Development -- From the Belvedere Club resort property to South Beach (i.e. Ferry Beach), intensive commercial development which is primarily dependent upon tourist and water-borne patrons will be encouraged. Some residential uses, most likely condominiums, will also be encouraged, particularly near the foot of the hill on properties expected to be redeveloped and which now include the City's D.P.W. buildings and the electric utility building. With the relocation of the railway, adjustment in the Ferry Road alignment is recommended to realign it with Ferry Road in the Township. The two actions will create additional depth on the waterfront in which new development can occur. Additional waterfront management concerns are addressed on Map No. 12.



• NORTH HOTEL SITE •
DEVELOPMENT CONCEPT PLAN •

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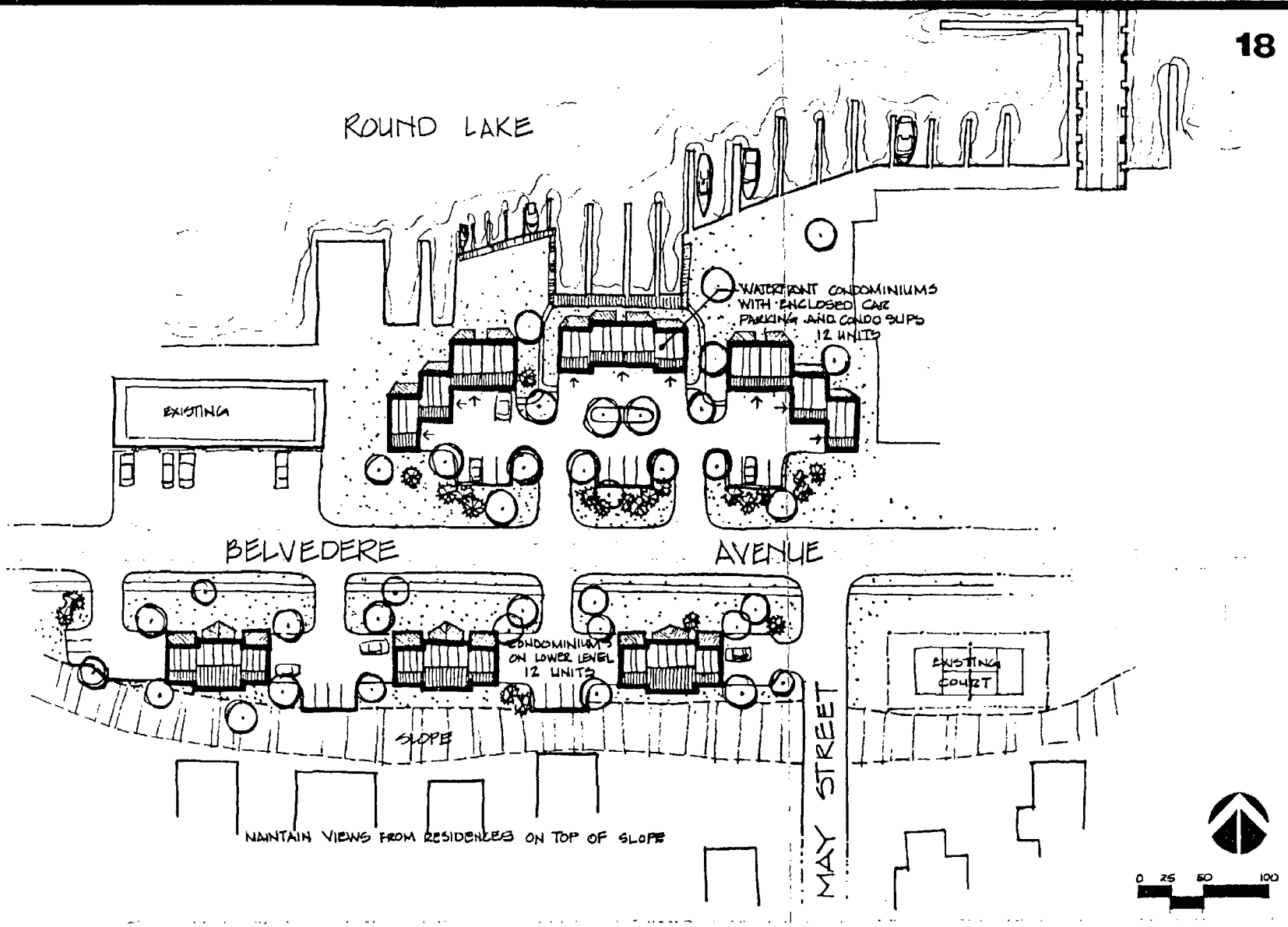
A schematic site plan representation of a redevelopment scheme is presented on Map No. 18. This area has potential for helping the City meet its growth management goal while at the same time preserving a portion of Lake Charlevoix shoreline for public recreational uses. Again, zoning incentives will be applied to encourage public access to the water's edge.

Lake Charlevoix South Beach and Launch Ramp Site -- Recommended strategies include maintaining these facilities and some minor expansion of the public space when Ferry Avenue is relocated to the existing railway right-of-way. Additional management strategy concerns are addressed on Map No. 12.

Summary of Waterfront Management Strategies

The overriding objective of participants in the decision-making process regarding the use of the waterfront resources, was that private development, where encouraged, should first and foremost preserve the view of the waterfront. Public recreation lands, it was recognized, should be preserved and, where possible, their land masses should be increased, because these areas are of direct economic significance to the City. The management strategy, therefore, both recognizes the importance of the waterfront as a recreation resource but also as an area where the City could largely achieve economic goals. The trick is to achieve one without injuring the other. Conceptual development plans were prepared for areas where private development is recommended to show how development should be handled to achieve the maintenance of view corridors and possibly, public access, to the greatest extent possible.

It was concluded that the natural harbor on Round Lake should be used for pleasure boating because this was most consistent with maintaining the environmental qualities of Charlevoix. Commercial shipping is inconsistent with this objective and in any event does not appear to have a market justification. This compliments the City's decision. If any potential for commercial shipping is available it can be adequately accommodated at the docking facilities at the Medusa Cement Company. If an agreement is necessary to achieve this, it should be entered into by an appropriate Economic Development Authority.



· SOUTH ROUND LAKE AREA · DEVELOPMENT CONCEPT PLAN

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III. PUBLIC AND SEMI-PUBLIC IMPROVEMENTS GUIDELINES

THE COMMUNITY FACILITIES PLAN

INTRODUCTION

Community facilities (i) affect the character of a municipality and its attractiveness as a place to live and work, (ii) influence the direction and pattern of urban growth, and (iii) require substantial capital investments. For these reasons they must be carefully planned and programmed. The Community Facilities Plan is intended to generally indicate what is necessary in the way of utilities, community facilities, and community services. It is not meant as an engineering study.

PLAN STRUCTURE AND FORMAT

The Community Facilities Plan divides community facilities into three functional categories: (i) public utilities, (ii) open space and recreation, and (iii) community services.

Public Utilities form a network of utilities which determines what type of development can realistically occur and where it can best be accommodated.

Open Space and Recreation also helps define a community's growth pattern by channeling development away from fragile ecological and unique natural resources. Long range planning and programming is needed to ensure that lands best suited for recreation and open space remain in the public sector.

Community Services cover the basic public facilities which are expected of local government. These include schools, police and fire protection, libraries, and government and administrative facilities. The distribution of community services is a function of population levels, development densities and available capital. The community services component of the Plan examines the relationship between community services and suggests criteria for their distribution.

Each component of the Plan will begin with an analysis of the current inventory. This will be followed by forecasts of additional requirements and will end with an analysis of how the forecasts are to be implemented.

PUBLIC UTILITY PLAN

Introduction

Perhaps no single public investment has as much of an impact on urban development as do investments in public wastewater pollution control

projects and water distribution systems. These investments have inter-local as well as regional impacts.

It is important that growth projections are reasonably attainable and further that zoning policies provide incentive for development in areas where there are facilities in place.

The myriad of public utility investments required of government, either township, city or county, also have important land use implications. If channeled on the basis of sound planning theory, public utilities are probably the most effective instrument for bringing about a planned distribution of growth. The City of Charlevoix has a wastewater pollution control system and water distribution system in place.

The purpose of this section of the Community Facilities Plan is to relate the requirements for various public utilities and facilities to anticipated development and therefore assist in determining the extent to which capital improvements may become necessary.

Wastewater Pollution Control Plan

The City of Charlevoix owns a modern activated sludge treatment plant. The plant is located on Lakeshore Boulevard in Charlevoix Township. The outfall from the plant extends one thousand seven hundred (1,700) feet into Lake Michigan. The existing plant is designed for an average flow of one million gallons per day (1 MGD). The design flow has a population equivalency of 8,000 to 10,000 persons depending upon the percentage of non-domestic flows. Typically design standards are based upon the assumption of one hundred (100) gallons per capita per day and include average domestic and non-domestic flow characteristics. Charlevoix's population today is approximately 3,300 persons. Therefore less than thirty percent (30%) of the plant's capacity is being utilized.

Sampling and testing programs, the laboratory facilities, and the quality of the maintenance program are all considered to be good to excellent. There is no evidence to suggest that the treatment plant operation or its discharge in any way degrades or adversely affects the recreational quality of Lake Michigan. The City commissioned a comprehensive study which resulted in the publication of the Greater Charlevoix Area Sewage Facilities Plan in December 1979.

Wastewater Treatment Requirements -- Based on the data presented in the Plan and the design characteristics of the existing activated sludge treatment plant, it is unlikely that any expansion of the design capacity of the plant itself will be required.

There are, however, problems that need to be addressed in the collection system. The most important of these problems is the need to separate

combined storm water, sanitary and sewer lines. Presently, during peak wet conditions the treatment plant is unable to handle peak flows caused by the contribution of storm water. Consequently, the flow by-passes the plant causing untreated sewage to enter into the lake. Population forecasts indicated in the Greater Charlevoix Area Facilities Plan would appear to be in error as a result of the 1980 availability of Census data. Even if all of the units of government within the greater Charlevoix area were to exceed a total of 10,000 persons by the year 2000 it is unlikely that this population would be located so as to produce cost effective conditions to justify their connection to the sewer system. The more likely possibility is one which suggests that by the year 2000 no expansion of the capacity of the plant will be justified based on the cost effective extension of sanitary sewers into surrounding townships. In any event, it should be noted that in the initial design of the plant provisions to accommodate expansion were made.

Because the purpose of the Community Facilities Plan is to identify potential capital improvement requirements it is necessary to forecast wastewater treatment requirements exclusively for the City's existing and future requirements.

By dovetailing sewer capacity with forecasted growth the following wastewater treatment requirements would be necessary:

TABLE 29

FORECASTED WASTEWATER TREATMENT REQUIREMENTS
CITY OF CHARLEVOIX, YEAR 1995

1995 Forecasted Population	Adjusted Population For Peak Conditions[2]	Anticipated Peak Wastewater Flows CFS[3]	Treatment Capacity in MGD[4]
4,830[1]	7,340	2.88	0.734 (734,000 gallons)

1 Estimated population at absorption capacity.

2 July/August for seasonal & tourist residents.

3 $CFS = \frac{\text{population size}}{1.77 \times 24 \times 60}$

4 Based upon 100 gallons per capita per day.

Land Area Requirements -- The site area of the existing treatment plant is adequate to meet existing and future requirements. It should be appreciated, however, that the plant is located in Charlevoix Township and does not compete for available vacant land resources in the City. Moreover, the City is able to dispose of the sludge from the treatment plant on the nearby Medusa Cement Company's lands. According to the treatment plant manager the landfill area where the dried sludge is buried is sufficiently large enough to accommodate an ever increasing quantity of dried sludge over the next several decades before exhausting its capacity.

Recommended Required Actions

The selected plan of action from the engineering study calls for the City of Charlevoix to undertake the following improvements:

1. Complete separation of sanitary and storm water sewers.

2. Improvements to the Belvedere Avenue interceptor and additions to Belvedere Avenue (May Street to Bridge Street) and May Street (Belvedere Avenue to Hurlbut).

3. Additions to Terrace Street, Ferry Avenue, Eaton Street and Stover Road.

4. Additions to Bridge Street (Carpenter Road to the City limits).

5. Additions to Robinson Street and Westwood Avenue.

6. Additions to the sewer collection system for Mercer Boulevard north and the area lying to the east for the proposed industrial park.

Water Distribution System

The City of Charlevoix operates a public water supply system. Its water supply is from a ground source and the water intake is located near the banks of Lake Michigan adjacent to the City owned park. The system includes the water intake system which consists of a two hundred and twenty-five (225) foot long slotted bottom wooden flume connected to a sixteen (16) foot diameter receiving well. Three (3) pumps draw water from the receiving well and pump directly to the distribution system after the water is fluoridated.

The City has two elevated storage tanks, one of which is no longer operational. The property is being considered for other uses upon

the possible dismantling of the elevated tank on the south bank of the Pine River Channel. The City has commissioned several engineering studies of the water distribution system, the most recent of which was completed in August 1978.

Existing Characteristics -- As indicated above, the existing water intake is from a receiving well near the shore of Lake Michigan and draws its source from ground water fed from Lake Michigan. Presently the well can pump 3,000 gallons per minute from three pumps. This is the equivalent of 4.32 million gallons per day. The three wells are capable of pumping 1,200, 1,200 and 600 gallons per minute respectively. The capacity of the existing well is related to the number and size of the existing pumps. At the present time there is an undesirable level of contaminant entering the well (TCE). The only solution to this problem appears to be to relocate or deepen the well. If it were not for this problem no changes would be needed to meet future capacity requirements.

Distribution Lines -- Generally distribution lines are in place throughout the City and range in size from four-inch to twelve-inch mains. The four-inch lines are no longer considered appropriate for today's distribution requirements.

Storage Tanks/Reservoir Capacity -- The City has two elevated tanks, one of which is no longer operational. The operational tank has a capacity of 300,000 gallons. The purpose of elevated tanks is to maintain pressures and supply during peak periods of use such as in the event of a serious fire.

Anticipated Water Consumption Requirements -- Water consumption requirements include home consumption, non-residential uses and more importantly, the guarantee of adequate supplies to meet fire protection requirements. This latter supply is, in part, usually in storage. Based on the forecasted population, consumption requirements are provided as follows:

TABLE 30

WATER CONSUMPTION REQUIREMENTS FOR THE CITY OF CHARLEVOIX 1980 & 1995

Year	Averaged Population[1]	Average Use Demand MGD[2]	Max. Use Demand MGD[3]	Storage Capacity MGD[4]	Required Fire Flow MGD[5]	Total Flow For Design MGD[6]
1980	4,340	0.695	1.15	1.04	2.96	4.11
1995	6,085	0.974	1.61	1.28	3.38	4.99

[1] Based on 50% of the projected summer population added to projected permanent population.

[2] Average use demand:160 gallons per capita per day.

[3] Maximum use demand:265 gallons per capita per day.

[4] Storage Capacity - Standard Handbook for Civil Engineers page 21-90, table 21-19.

[5] Ibid, page 21-90, table 21-19.

[6] Total design flow is the sum of the maximum used demand and required fire flow.

The above estimates vary slightly from an engineering study prepared in August 1978. The differences are largely attributable to permanent and summertime population estimates and to per capita consumption requirements. The reference study recommended increasing pumping capacity to 5.62 million gallons per day.

Based upon the above set of data, it would appear that the City well and pumping system has adequate capacity to meet today's requirements. However, this does not address the problem of contamination levels of TCE. While the City does not meet the recommended storage capacity for fire fighting purposes, nevertheless this is partly offset by the fact that this capacity is in the well and pumping system, and by the availability of natural storage supplies. It would appear more prudent, however, to have the capacity in storage and therefore the City should act to overcome this deficiency as early as possible. This was recommended in a previous engineering study.

Planning and Land Use Requirements -- The following planning and land use requirements should be addressed within the period of the Plan:

1. Begin a program of replacing existing four-inch water mains.

2. Deepen the existing well and intake flume to eliminate the current TCE problem. This action will have the effect of also increasing potential supplies which then can be addressed by pump replacements or increasing the pumping capacity of existing pumps as the need arises.

3. Complete extension of water mains to areas not now served.

4. Dismantle the existing abandoned water storage tank on the south side of the Pine River Channel and build a new elevated storage tank of 300,000 gallons capacity in an appropriate location to handle flow situations for future inland development. Given the excess capacity in the pumping system, the two elevated storage tanks should be adequate for emergency purposes. This action must be postponed until there is sufficient development too far removed from surface bodies of water.

5. A twelve-inch extension in the distribution system in the North Channel area is required to complete a "loop" system.

COMMUNITY SERVICES PLAN

Introduction

The Community Services Plan is intended to identify the level of services thought to be desirable in a community at a given point in time relative to its population size. The services included in this section are those which the City may have a direct or indirect financial responsibility. These are as follows.

Protective Services

Protective services include both police and fire protection.

Police Services -- The state and county typically provide the police protection services for all Michigan governmental units. In the case of the City of Charlevoix a law enforcement agency is also maintained by the City.

Existing Characteristics -- The City of Charlevoix Police Department includes six (6) police officers, a chief, an assistant chief, a secretary/dispatcher and four (4) patrol police officers. All police officers are graduates of the police training academy. Two of the six officers hold bachelors degrees in criminal justice and the chief holds an associates degree from the FBI National Training Academy.

The department operates two fully equipped patrol cars. These cars are manned for twenty-four (24) hour patrol service. The service is reduced during early morning hours. The two-way radio service is interfaced with the county sheriff's department.

Charlevoix's visitor influx and the operation of Castle Farms, an outdoor concert theater whose market is largely geared to young adults, places a heavier strain on the police department throughout the summer months. Consequently, five (5) volunteer people are employed during the summer months. These part-time officers have no arresting powers and are typically accompanied by a certified officer.

The police department is housed in the lower level of the City Hall and includes three rooms for a total area of approximately 800 square feet. Lock-up/detension facilities are available a short distance away at the County Jail.

Requirements/Standards -- The national standards for police officer manpower are usually referenced when estimating the appropriate size of the local law enforcement agency. The most prevalent national standard for typical small cities is one police officer for each 1,000 population. The standard may be varied for unusual local circumstances. Because of the City of Charlevoix's tourist resort nature and its proximity to the

Castle Farms outdoor theater, it cannot be considered in the same manner as a city without these characteristics. Moreover, the City intends to pursue a program which would increase the impact of visitorship throughout the year. Charlevoix is increasingly experiencing visitorship in the winter months because of the popularity of winter recreation. Because of these conditions it was decided that a more appropriate standard would be 1½ officers per 1,000 population. The following table describes the recommended police officer requirement for the City of Charlevoix through its estimated growth periods.

TABLE 31

FORECASTED NUMBER OF POLICE OFFICERS REQUIRED
BY BI-DECENNIAL PERIODS

Year	Permanent Population	Adjustment For Peak Seasons	Per Capita Standard	No. of Police Officers	Existing No. of Police Officers	Additional Need
1980	3,206	5,015	1.25	6	6	0
1985	3,665	5,820	1.25	7	6	1
1990	4,200	6,200	1.25	8	6	2
1995	4,830	7,340	1.25	9	6	3

Physical Space -- At the present time office/administrative space is adequate. The growth of the department is not expected to require more than one secretarial/dispatcher position. Should the City of Charlevoix's police department provide contractual services to Charlevoix Township, or in the event of consolidation, then the above statement may not be appropriate. It would appear that in the long run additional space on the lower level will be required. More effective utilization of the existing lower level area should be adequate to meet this additional space requirement.

Extra Territorial Consideration or Governmental Consolidation -- Given the relatively small and sparce population of the area, it would appear that certain economies of scale could be achieved if the police service area encompassed a larger geographic area. The immediate Charlevoix area could enjoy better police services if a consolidated approach were considered for the provision of police services in this area.

Fire Service

The availability and location of fire prevention equipment is important for the protection of persons and property. In considering fire station

needs, much of the locational criteria is determined by the American Insurance Association. This organization, supported by the nation's fire insurance companies, sets forth standards for evaluating services. These standards are then reflected by fire insurance rates as determined by the various State Inspection Bureaus. These standards will be applied in developing the fire protection plan.

Existing Characteristics -- The City of Charlevoix Fire Department is made up of both full-time and on-call (volunteer) firemen. The fire fighting force includes three (3) full-time men, a chief, an assistant chief, and a fire fighter. The remainder of the fire fighting personnel are comprised of seventeen (17) volunteers. The personnel have either completed the basic sixty-six (66) hour course or are in the process of completing this training.

Essentially there is one fire station which is located at the City Hall. This station is large enough for two pumper trucks and a small desk/dispatcher area. The City recently decided to use the Erbes Building on Clinton Street just north of the City Hall to house the remainer of the vehicles. This is a temporary situation.

Fire Vehicles -- The following major pieces of equipment contribute to the fire fighting capabilities of the department:

TABLE 32

INVENTORY OF FIRE PROTECTION VEHICLES

Description	Storage Capacity	Pump Capacity
1968 GMC With Howe Fire Package	750 Gallons	750 GPM
1951 GMC With Howe Fire Package	750 Gallons	750 GPM
1941 Chevrolet	500 Gallons	300 GPM
1974 Ford Tandem Axle	3,200 Gallons - Tanker Only	
1950 International	2,200 Gallons - Tanker Only	

The fire department is also charged with providing emergency ambulance service. The department has two vehicles; a 1968 converted Chevrolet Suburban and a 1974 Chevrolet with a Superior Ambulance body. Ambulance service is provided to nearby townships by contract as well as fire protection services. They include Norwood, Marion and Hayes Townships in addition to part of Evaline Township.

Future Fire Protection Requirements and Strategy -- Fire protection requirements and the service strategy address the number and type of vehicles required, extra territorial service areas, and manpower requirements.

Fire Stations -- Nationally recognized standards advise that a small community with a population of less than 10,000 persons would normally require one station. This is more true the less disbursed that population is. Inasmuch as the City is not large enough to contain more than 10,000 persons no more than one fire station is required. Should City and Township consolidation take place it is still unlikely that the population will exceed 10,000 persons within the next two decades. It is important that the response time to the more congested business area and the high density housing be almost instantaneous. The existing station at the City Hall satisfies this criteria for the most part. With the extreme traffic conditions that are present during the peak summer months it may be difficult to get to the outlying areas. This condition calls for improving traffic flows. It is understood that the lift bridge operator will lower the bridge when a fire run signal is emitted should the bridge be in its raised position. This will allow fire trucks to respond to calls north of the Pine River Channel. Therefore, the cost of two complete fire stations on either side of the Pine River Channel does not appear justified.

The downtown station is, however, inadequate to now accommodate all of the department's equipment. It should either be expanded or a new station should be constructed somewhere in the immediate downtown area. Attachment to the City Hall does have its problems, not the least of which are the disruption to work schedules and meetings, and simply the nuissance value of siren noise immediately next to an office environment. It is recommended that the fire station be expanded to a four bay station and that additional space be provided for dispatching and administrative duties.

Equipment -- The following standards are generally utilized to determine the appropriate number of fire fighting companies needed relative to the community's size (i.e. each company represents a fire fighting vehicle).

TABLE 33

MINIMUM RECOMMENDED STANDARDS FOR THE DISTRIBUTION OF FIRE COMPANIES

Size of Community	Pumper Companies	Ladder Companies
Under 10,000	1-2	-
10,000 - 30,000	2	1
Over 30,000	4	2

Source: Municipal Fire Administration, International City Manager's Association, 1967.

The analysis of the inventory advises that the City does have adequate numbers of pumper vehicles. A ladder company is not needed on the basis of standards. This situation is acceptable as long as the City does not allow multi-story buildings. At the present time only the

La Croft apartment/condominium structure exceeds a height of three stories at grade. The absence of a ladder vehicle/company, however, does constrain the potential creativity of development responses to certain land upon which a multi-story building may otherwise be acceptable

If the reasonable economic life of a fire truck is twenty (20) years then the City should consider the immediate replacement of the 1941 and 1954 vehicles. Therefore, it is recommended that the City replace these vehicles with a new larger tank and pumping capacity vehicle. A typical pumper truck capability today is 1,000 gallons with a 1,000 gallon per minute pumper. Equipment manufacturers can also provide some ladder company features on an essentially tank/pumper vehicle and any new engine should have this combined feature.

Manpower -- The number of companies recommended by the American Insurance Association is expressed in the following formulas:

Ladder Companies

Communities over 20,000 = 1 company + (0.03 companies x total population in thousands)

Communities under 20,000 = 1 company

Pumper Companies

Communities over 50,000 = 3.4 companies + (0.07 companies x total population in thousands)

Communities under 50,000 = 0.85 companies + (0.12 companies x total population in thousands)

In a professional department, three companies are usually assigned to a single truck. These companies rotate according to a duty roster so that one company is available per truck at any one given time. On-call departments require a larger pool of firefighters. The American Insurance Association advises municipalities that four (4) volunteer firemen are needed for each full-time position in a company. Thus, a four-man company would require sixteen (16) on-call volunteers to insure the proper turnout to a fire alarm.

Manpower needs for the City of Charlevoix Fire Department are based on the number of companies needed to efficiently operate firefighting equipment. Projections were prepared for both on-call and full-time departments since both types of firefighting units are expected to be operating in the future (see Table 34).

TABLE 34

PROJECTED EQUIPMENT AND MANPOWER NEEDS
FOR FIRE PROTECTION, YEAR 2000

Projected Population	Fire Stations	Pumper Companies	Ladder Companies	Personnel Full-Time	Personnel On-Call
Up to 10,000	1	2	3	8 or	32

[a] Based on standard manning level of 4 men for each required engine and ladder company

[b] Based on ratio of 4 volunteers for each full-time fireman

Source: Insurance Service Office

Note: Manpower requirements should not be interpreted to require 8 full time officers and 32 volunteers. These numbers are exclusive of one another. It is possible to have a combination of full time and volunteer personnel as is now the case. An increase in manpower of 1 full time or 4 volunteers now would satisfy the population equivalency of 10,000 persons. Under present population conditions it would appear that the City of Charlevoix has sufficient fire protection manpower.

Based on the ability to man two engine companies at all times, the fire department should have additional on-call or volunteer firemen. If the three full-time officers were transposed to volunteer equivalancies this would represent twelve (12) volunteers. This number plus the existing seventeen (17) volunteers produces an equivalency of thirty (30) volunteers. If the total manpower was based on volunteer personnel, thirty-two (32) firemen would be required.

Water Supply Facilities -- The National Board of Fire Underwriters has established fire flow standards for communitites ranging in size from 1,000 to 200,000 population. These standards are listed in Table 35.

Flows may be increased or decreased in accordance with structural conditions and degrees of congestion.

The required fire flow for residential districts ranges from 500 to 2,000 GPM for 2 to 4 hours, depending on the degree of exposure between buildings. In areas containing industrial, institutional, or other areas which require higher fire flows, water should be available at the rate of 1,000 GPM for 4 hours, the duration increasing the with larger fires up to a maximum of 10 hours for 2,500 GPM or more (see Table 35).

Where fire hydrants are not available, as in rural areas, fire departments must rely upon the capacity of their pumper and tanker trucks or upon water secured from ponds.

TABLE 35

REQUIRED FIRE FLOW

Population	Required Fire Flow Average City	Max	Duration Hours
1,000	1,000	1,000	4
1,500	1,250	1,500	5
2,000	1,500	2,000	6
3,000	1,750	2,500	7
4,000	2,000	2,750	8
5,000	2,250	3,000	9
6,000*	2,500	3,000	10
10,000	3,000	4,000	10
15,000	3,500	5,000	10
20,000	4,000	6,000	10
30,000	5,000	7,000	10
40,000	6,000	8,000	10

Source: U.S. National Board of Fire Underwriters (1956)

*. Approximate condition for Charlevoix at full development including peak season condition

The water consumption requirements, based on domestic usage and fire prevention needs, are detailed in the Public Utilities section of this Facilities Plan. Based on the criteria described above, it would appear that the City must overcome a shortfall of about 600,000 gallons per day capacity in the future. The apparent deficiency in storage capacity is debatable in view of the proximity of natural storage facilities (i.e. lakes, etc.). When sufficient development occurs which is too far removed from a surface body of water, then an elevated storage tank may be required. Beyond the scope of this report, but also very important, is the problem with respect to size of water mains in the older parts of the City. These water mains are only four (4) inches in diameter and may seriously impede dealing with a fire of serious magnitude.

Cultural Facilities

Cultural Failities in the City of Charlevoix include the Charlevoix Public Library, the Historical Museum and the K-12 school system.

Library Services -- The Charlevoix Public Library is owned and operated by the Charlevoix Public School District. The library is located on Clinton Street between Bridge Street and State Street. Its central location should enhance its use by the adult population as they go about their business in the downtown area. The Charlevoix Public Library serves an area greater than the City of Charlevoix. The librarian advises that persons using the library live in the following communities: Atwood, Eastport, Central Lake, Ellsworth, East Jordan, Boyne City and Beaver Island. Although not identified, one would assume that this includes all nearby townships. East Jordan and Boyne City also have a local library service.

Library Standards -- The American Library Association has adopted certain standards. These standards tend to be based on the population being served by a particular library.

Book Collection -- The minimum recommended book collection for a library system, regardless of the number of persons being served, is 6,000 volumes. The need for additional books is based on a per capita formula shown in Table 36.

Space Standards -- The American Library Association has developed space standards for libraries serving from under 2,500 to 50,000 persons. These guidelines are presented in Table 37.

Manpower -- The Bureau of Library Systems of the Michigan Department of Education states that a library system serving 100,000 population or more shall have a professional staff of at least ten (10) members. It also states that a professional librarian shall be in charge of each service point for each 10,000 population served. A professional librarian is one who has a master's degree from an accredited library school and who has four years of satisfactory professional experience.

Location -- Libraries should be located in areas easily accessible to the general public. Optimum locations are in activity nodes such as business and shopping areas or community buildings. Major streets should provide easy vehicular access and parking should be available to patrons.

TABLE 36

BOOK COLLECTION STANDARDS

Population of Library Area		Volumes	Maximum
Minimum	Maximum	Per Capita	Volumes
6,000	10,000	3.00	25,000
10,000	35,000	2.50	70,000
35,000	100,000	2.00	175,000
100,000	200,000	1.75	350,000
200,000	1,000,000	1.50	1,000,000
Over 1,000,000		1.00	Unlimited

Source: Planning Design Criteria, DeChiara and Koppleman, 1969.

Existing Characteristics -- The present library is a modern building of two floors. The upper floor is totally devoted to the library's current book inventory and has an area of 3,328 square feet. The lower level is a similar sized area and contains meeting rooms, space for audio-visual presentaions, storage and other support space. A parking lot containing sixteen (16) spaces at the rear of the building is available for library users. The library employs four (4) people and has a registered librarian. The total number of book volumes is 16,259. The library is affiliated with the Northland Library Cooperative and through this service has a much larger source of books and library services available to it. The library also offers newspapers, magazines, records, a microfilm print reader, historical local newspapers, and materials for the blind and physically handicapped. The library also has a Nuclear Regulatory Commission's local public documents room for the Big Rock Nuclear Facility and provides meeting rooms, a local history room, and magazine, paperback and pattern exchanges.

The library has the following audio-visual rental equipment; three 16mm projectors, two 35mm projectors, two 8mm projectors, an overhead projector, several cassette recorder players and projection screens. Special programs include a pre-school story hour, a summer reading program and parties, an eight week winter activity hour for elementary children, and semi-annual coloring contests.

Future Library Needs -- The present library is a modern facility providing a good level of library services. It would appear that the library's service area is within a population range of 6,000 to 10,000 persons. This will account for the service area which extends beyond the City and should account for future increases in population within the City itself. Based

on this assumption, the following standards should serve as future planning requirements:

TABLE 37

GUIDELINES FOR DETERMINING MINIMUM SPACE REQUIREMENTS

Population Served	Amount Of Floor Space	Reader Space	Staff Work Space	Estimated Additional Space Needed	Total Floor Space
Under 2,499	1,000 Sq. Ft.	Min. 400 Sq. Ft. for 13 seats. Add 30 Sq. Ft. per reader space	300 Sq. Ft.	300 Sq. Ft.	2,000 Sq. Ft.
2,500-4,999	1,000 Sq. Ft. Add 1 Sq. Ft. for every 10 books over 10,000	Min. 500 Sq. Ft. for 16 seats Add 4 seats per M. over 5,000 pop. served, at 30 Sq. Ft. per reader space	300 Sq. Ft.	700 Sq. Ft.	2,500 Sq. Ft. or 0.7 Sq. Ft. per capita, whichever is greater
5,000-9,999	1,500 Sq. Ft. Add 1 Sq. Ft. for every 10 books over 15,000	Min. 700 Sq. Ft. for 23 seats Add 4 seats per M. over 5,000 pop. served, at 30 Sq. Ft. per reader space	500 Sq. Ft. Add 150 Sq. Ft. for each full-time staff member over 3	1,000 Sq. Ft.	3,500 Sq. Ft. or 0.7 Sq. Ft. per capita, whichever is greater
10,000-24,999	2,000 Sq. Ft. Add 1 Sq. Ft. for every 10 books over 20,000	Min. 1,200 Sq. Ft. for 40 Seats Add 4 seats per M. over 10,000 pop. served, at 30 Sq. Ft. per reader space	1,000 Sq. Ft. Add 150 Sq. Ft. for each full-time staff member over 7	1,800 Sq. Ft.	7,000 Sq. Ft. or 0.7 Sq. Ft. per capita, whichever is greater
25,000-49,999	5,000 Sq. Ft. Add 1 Sq. Ft. for every 10 books over 50,000	Min. 2,250 Sq. Ft. for 75 seats. Add 3 seats per M. over 25,000 pop. served, at 30 Sq. Ft. per reader space	1,500 Sq. Ft. Add 150 Sq. Ft. for each full-time staff member over 13	5,250 Sq. Ft.	15,000 Sq. Ft. or 0.6 Sq. Ft. per capita, whichever is greater

SOURCE: American Library Association, Subcommittee on Standards for Small Libraries, Public Library Association, Interim Standards for Small Public Libraries: Guidelines Toward Achieving the Goals of Public Library Service (Chicago: The Association, 1962), p. 15

TABLE 38

RECOMMENDED LIBRARY STANDARDS

Book Volumes	@ 2.5/capita	15,000 to 25,000 volumes
Space Needs	@ 0.7 sq. ft./capita	4,200 to 7,000 sq. ft.
Manpower		1 professional librarian

Based on the above, it would appear that the library is not deficient. The number of book volumes should eventually be increased. The amount of space available would also appear to be appropriate for the longer term condition. Geographically, the library is well situated relative to its potential service area.

Educational Facilities -- Educational facilities in the City of Charlevoix come under the jurisdiction of the Charlevoix Public School District. The Charlevoix Public School District includes the City of Charlevoix and all or a portion of the Townships of Charlevoix, Hayes, Evaline, Norwood and Marion. However, this analysis of school district needs is limited only to likely impacts on the land resources within the City of Charlevoix and is not meant to be a comprehensive study of the total school district's requirements.

Existing School Characteristics -- The school district has three (3) schools. Their physical and enrollment characteristics are as follows:

TABLE 39

EXISTING CHARACTERISTICS OF SCHOOLS IN THE CHARLEVOIX PUBLIC SCHOOL DISTRICT

Name of School	Grade Division	Site Size	Number of Teaching Stations	Existing Enrollment	Design Capacity
Charlevoix Elementary	K - 5	7.9	24	546	720
Charlevoix Middle	6 - 8	3.0	19	347	475
Charlevoix High	9 - 12	17.9	31	539	700
Totals		28.8		1,432	1,895

There is one parochial school (i.e. St. Mary's) with grades K thru 5 and has a student enrollment of ninety-two (92) pupils.

Enrollment -- As stated at the outset, this is not expected to be a comprehensive study of total school district requirements. The above

table shows that the existing schools all have considerable room to accommodate a larger student population although enrollment has continued to decline in the most part since 1975. Enrollment projections prepared by Michigan State University advise that expected enrollment changes will not be greater than the present design capacity of each of the schools. Between now and the 1984/85 school year only the elementary school is expected to experience an enrollment increase but this increase will not be beyond the design capacity of the elementary school.

In view of this, it is not expected that land requirements to accommodate new school expansion will be required within the City of Charlevoix. It should be noted, however, that each of the three school sites fail to meet the recommended standards. The most seriously deficient is the Charlevoix Middle School.

Requirements for Administration -- The school district's administrative offices are located in a former residence on Clinton Street next to the Middle School. The school district has a total office staff of six (6) persons. It is unlikely that this level of administrative staff will change. The school district would be well advised to acquire additional property next to the Middle School and relocate its offices in a more appropriate modern facility on a corner of the expanded Middle School site.

Health Care Facilities

The Charlevoix Area Hospital provides primary care hospital services to Charlevoix area residents. The hospital which is a forty-four (44) bed acute care hospital, is directed by a non-profit private corporation. Its role is that of a primary care general hospital, however, certain medical, surgical and obstetrical cases are referred to Traverse City and Petoskey.

Hospital services include general medicine, obstetrics, pediatrics, general surgery and intensive coronary care. The hospital has a full range of ancillary departments for diagnosis and treatment which include laboratory, radiology, ultra-sound, physical theraphy, respiratory therapy, pharmacy and emergency room.

According to the Northern Michigan Health Systems Agency, the Charlevoix Area Hospital will continue to serve a limited general hospital function and will never develop as a comprehensive referral center.

The NMHSA is responsible for areawide health planning, and is officially recognized by federal and state agencies. As such, the areawide agency determines the appropriate level of health care facility investment and

designates the provider of the services. In this manner, they in fact control the amount of capital investment that can be made by an existing and future provider since this is inter-related to the federal system of financial aids.

OPEN SPACE AND RECREATION PLAN

INTRODUCTION

Recreation is a concept which can be interpreted in several ways. The term "open space" means different things to different people. Parks should be distinctive in order to cater to various interest groups. The goal of the Open Space and Recreation Plan is to provide opportunities for satisfying leisure time needs for all segments of the population. Included in the range of recreation facilities are ball fields or benches, playlots or open fields, cemeteries, waterways or parkways, and historical sites or nature trails. These may all be activities in the category of open space, which by itself does not serve as an active, participating land use, but rather as a linkage for joining into a system framework, urban activities and recreation opportunities. Open space corridors can be likened to highways joining urban activities or may simply provide a break in the urban landscape.

Recreation, or the use of open space, comprehensively includes the visual and the physical setting; it includes land, buildings, equipment and facilities. It can be publicly or privately owned, urban or rural, permanent or temporary. Recreation is aesthetic as well as physical, man made or natural, put into use or simply left in its natural state, which causes no ecological impairment.

Therefore, the term "open space" as used in the Plan denotes an area of land upon which there may be recreation type facilities or it may simply provide a break in the urban scene. It is important to emphasize, however, that to some people simply viewing a natural area is a form of recreation and that all recreation does not necessarily demand an athletic type of response.

RECREATION ROLES

Recreational opportunities are provided by several levels of government including the State, County and minor civil divisions such as cities and townships. Each has its distinct role and clientele even though there may be some overlap. The City's role is to provide recreational opportunities, normally of an active nature, for its resident population (i.e. play-fields and accessory equipment). This is not to say that passive recreational opportunities should be ignored (i.e. parks). The County, on the other hand, is responsible for providing a more passively oriented recreational opportunity for an intra-County clientele.

Existing Administrative Structure

The City Council, pursuant to Act 156 of the Public Acts of 1917, established a Parks and Recreation Board consisting of five (5) members. Chapter 32 of the

Code of City Ordinances describes the powers, duties and functions of said Board and authorizes the City Manager to appoint a Director of Parks and Recreation with the approval of the City Council. A director is presently engaged.

OBJECTIVES AND POLICIES

The section on Goals, Objectives and Policies included statements with respect to the acquisition and development of open space for recreational purposes.

CLASSIFICATIONS OF RECREATION SPACE

Recreation sites can be classified either according to their type or according to the use which will ensue. Generally, the five (5) categories according to use are: 1) urban recreation; 2) unique natural resource site; 3) historical and cultural site; 4) open space holding site; and 5) parkway and scenic drive. In all cases, the foregoing includes land that may be part of the natural drainage features of the City.

1. Urban Recreation - typical of most parks having either intensive uses such as swimming, tennis, ball games, or extensive uses such as golf courses or walking and nature trails.

2. Unique Natural Resource Sites - which possess natural features, scenic areas, flora, or fauna, with little or no man-made interventions.

3. Historic and Cultural Sites - associated with buildings, villages or settlements which have been preserved for heritage or historical reasons.

4. Open Space Holding Sites - used to guide and channel development through the form of airports, cemeteries, agricultural lands, floodplains, marshes or swamplands.

5. Parkways and Scenic Drives - which are used as connecting links between major parks and open space. They also function to provide scenic vistas and pleasurable travel experiences within the urban and through the rural areas. Bikeways and trails can also be included within this classification, as they also unite areas and provide enjoyment and scenic routes.

Facilities can also be classified by types which follow general location guidelines. The basic geographic areas of the neighborhood, community, county, and the regional setting each have representative recreational needs.

1. Playgrounds - This is an active recreation facility which is aimed at satisfying the needs of elementary aged school children. There is usually a wide range of facilities and equipment, including benches, sand lots, paved areas and possible wading pools.

   This area is often situated adjacent to a school site or located in such a fashion that children need not cross a major arterial street to reach it. The playground ideally should be developed in conjunction with a neighborhood park.

2. Neighborhood Park - The neighborhood park can be a combination of active and passive uses geared to serving a diverse age range within the population. It is often desirable to locate the activity area in the interior so that the more passive uses can provide a buffer for sound and safety to the surrounding area. Facilities for the older adults can be located into this portion of the site as well. The integration of the neighborhood park with a school site can attract people by combining centers for recreation, education and culture.

3. Community Playfield - This facility is an active recreation area with activity functions more encompassing than those at the neighborhood park level. Ball fields, tennis, and swimming serve as the nucleus for community recreation. Ideally, the community playfield should be developed in conjunction with a high school.

4. Community Park - Passive recreation is predominately visual or informative and is usually associated with the community park. Natural features are highlighted with activities such as zoos, gardens, or nature areas. Parks of this type are best located near thoroughfares, for they should be accessible to a wide service area.

5. Major Park - These activity nodes serve the entire urbanized area and maintain a broad spectrum of activities, including golf courses, museums, or camping areas. Such parks are acquired to provide the dweller an opportunity to get away from the highly urbanized areas within a relatively short time. A central location is desirable, but not always possible.

6. Private Facilities - Because of the nature of certain types of development, private recreational land is growing in importance in satisfying some outdoor activity needs. Even though their uses are not open to the general public, they must be included in the total recreational inventory.

7. Regional Recreation Uses - These facilities service an area which can encompass several political jurisdictions. The uses of the area may include hunting, fishing, wildlife preserve areas,

snowmobiling, or ski areas. They may be under state, regional or federal authority and are intended to serve a broad client population. However, regional parks should not take the place of neighborhood or district parks. Urban area expansion often exerts pressure to combine or eliminate facilities. The encroachment of one type of park on another need not exist if proper location and development of neighborhood and community parks is achieved. Facilities and land of this magnitude are normally viewed as the responsibility of a county or regional park authority.

When the above classification system was applied to Charlevoix it was found that the existing spaces, their usage, and level of attraction did not neatly fall into singular categories. For example, most facilities serve a wide user clientele from throughout the city and from tourism which in essence makes the facilities statewide people attractors. These characteristics will be taken into account in determining the appropriate nomenclature for spaces in their future context.

Recreation Standards

A comprehensive recreation system must be defined in quantifiable terms. This is difficult in light of the subjective nature of decisions regarding the proper size or amenities to be provided. Recreation standards have been established to serve as approximate guides for determining open space needs as well as providing a means for achieving prescribed community goals. Each city, township and county has distinctive physical and topographical characteristics, as well as varying economic and social conditions, which affect its ability to purchase and develop land for recreation purposes. Thus, standards and facility requirements are relative, and in view of economic and natural resource differences, they should be used only as an approximation of the amount of open space needed for a given population and to determine the most appropriate level of facility investments.

Table 40 outlines suggested standards for recreation and open space. It is arranged by type of area, land required per thousand population, site size range, and service area. The land requirements are grouped according to the following categories:

1. The Neighborhood Unit - requiring 3.5 acres per 1,000 population.

2. The Community Level - a combination of several neighborhoods, requiring seven acres per 1,000 population. Community level facilities are inclusive of a citywide park.

3. County Recreation Area - serving a larger area, say several minor civil divisions, and in some instances, the entire county depending upon the attractive force of recreational development. An acreage ratio is omitted, inasmuch as this is a city plan and such a ratio would have no purpose.

Therefore a total of approximately 10.5 acres of land for each 1,000 persons in the population is recommended on the basis of nationally defined studies for local recreational purposes. This is further broken down into specific recreation categories as follows:

TABLE 40

GENERAL RECREATION SPACE STANDARDS*

Type of Area	Acres/1000 Pop'l.	Size Range	Service Radius (miles)
Neighborhood Playground	1.5	.01 - .05 ac.	Subneighborhood .25 - .5 miles
Neighborhood Park	2.0	.05 - 20 ac	.25 - .5 miles
Neighborhood Level TOTAL	3.5		
Community Playfield	1.5	20 - 50 ac.	1.50 miles
Community Park	3.5	20 -100 ac.	2.0 miles
Major Park	2.5	100+ acres	3.0 miles
Community Level TOTAL	7.0		(15 minutes driving time)
TOTAL LOCAL	10.5		

*Adopted from: Joseph DeChiara and Lee Koppelman, Planning Design Criteria, (Van Nostrand Reinhold Company, 1969)and Robert Guechner, National Park Recreation and Open Space Standards, (Washington, D.C. 1970).

Likewise, facility standards have been developed by nationally recognized recreation authorities. Table 41 describes a level of facility investment, relative to population, that desirably ought to be achieved. These standards, like the land acquisition standards, serve as benchmarks for subsequent authorities charged with implementing this Plan, and further as a method for determining long range capital improvement costs. The list of facilities in the following table only represents a sample of the kinds of potential recreation activities possible in any community recreation development program. It was not intended to exhaust the list of potential recreation activities.

Program Development

All too often recreational planning over emphasizes land acquisition and recreational activities associated with outdoor sports. It is necessary to emphasize that there is no limit to recreation programs. They can include such activities included under literary (i.e. book clubs), language (i.e. public speaking), arts and crafts (i.e. ceramics), drama (i.e. stage

TABLE 41

RECREATION FACILITY STANDARDS

Facilities	Minimum Acres & Facilities Per Thousand People	Minimum Acreage Per Facility	Accessibility (Distance From Every Home)	Activities	Other Standards or Requirements
Play lot	1/4 acre per 1000, 1 facility per 800	1/4 acre	1/8 mile	Play for preschool child (supervised or volunteer)	Swings, other elementary play apparatus, benches, spray pool for high density & apartment house neighborhoods; where neighborhood playground not available, not applicable in low-density areas.
Neighborhood Playground	1-1/2 acres per 1000, 1 facility per 3000	4+ acres	1/2 mile	Play area for children age 6-15.	Apparatus area, informal play space, field for games and sports, shaded space for passive recreation, shelter building
Baseball Diamonds	1 field per 6000	3 acres	1/2 mile	"Pick-up" neighborhood games, neighborhood leagues, multiple use open space.	90' base lines -- 350' outfield, maximum distance away from streets & residences
Softball Diamonds	1 field per 3000	2 acres	1/2 mile	"Pick-up" neighborhood boys and girls team games; supplement reg. playground programs; multiple use open space.	60' base lines -- 275' outfield, maximum distance away from streets & residences.
Neighborhood Parks	1 acre per 1000	6 acres	3/4 mile	Passive and supervised recreation, such as a playground/park.	Lawn, shrubs, picnic and shade areas, park-like area for unsupervised play, open field areas, desirable to combine park, playground, school or community center.
Recreation Centers	1 facility per 40,000	5 acres	1 mile	Diversified indoor recreation programs for people of all ages, available for other compatible social services, central programming for area neighborhoods	Serves several neighborhoods within a community, provides compatible outdoor activities, includes gym, social and craft rooms, lounge, offices, staff space and maximum storage; may be located at facility.
Auditorium	1 facility per 50,000	4 acres	2 miles	Theater, dance, forums, concerts, community events, instruction and performance in the arts, community group meeting place.	Back-stage areas designed to be used for community meeting, workshop & game room.

TABLE 41 CONTINUED

[illegible] Park	4 acres per 1000 (1 facility per 40,000)	[illegible] acres	3 to 4 miles	Group picnicking, day camping, nature study, horseback riding, boating, swimming, fishing, winter sports, golf, arboretum, zoo, botanical gardens, resident camp, bike trails, canoe trails.	Should make effective use of natural developments, open meadows, water, or woodlots which offer attractive setting not possible in a small recreation area; several such parks should be available to serve regional and local metropolitan community needs.
Regional or County Parks	10 acres per 1000	Several hundred, or 1000 acres or more	Includes entire region	Similar to activities for a Major Park.	Similar to standards or requirements for a Major Park.
City Ornamental Areas	1 acre per 1000	1/8 acre	1/2 mile	Scenic enjoyment and green space within densely populated area.	Can include medians, triangles, walkways, riverfront development, squares, corner rest parks.
Recreation Building	1 facility per 25,000	1 acre	1/2 mile	Meetings, teen group activities, recreation information center, game room, pre-school, senior citizen meeting place, crafts.	Used as substitute for full community center, designed for immediate small group activities; should include snack area and storage.
Playfield	1-1/2 acres per 1000	20 acres	1 mile	Serves ages 15 and over for competitive activities requiring more space than provided by neighborhood park or playground.	Serves several neighborhoods within a community; designed to provide indoor and outdoor activities; desirable to include community center or Jr. or Sr. high school on the site.
Skating Rinks, Artificial (indoor or outdoor)	1 facility per 25,000	2 acres	2 miles	Supervised skating activities; hockey, speed, figure, "free" skating, multiple use for off-season activities.	Adequate parking, concessions, dressing area, centrally located equipment storage.
Skating Rinks, Natural (outdoor)	1 facility per 3000	1 acre	1/4 to 1/2 mile	Neighborhood skating and free skating; instruction usually offered on natural rinks of smaller size.	Warming shelter, aid station and lights for night use; number of facilities required decreases with available artificial ice.
Swimming Pools (indoor)	1 facility per 10,000 (15 s.f. per swimmer)	2 acres	1/2 to 1 mile	Swim instruction; competitive, free, handicapped, therapy, recreational and school.	Separate entrance, parking, spectator room; comply with state health standards; usually connected with school program.

TABLE 41 CONTINUED

Swimming Pools (outdoor)	1 facility per 40,000 (20 s.f. per swimmer - deck & water)	5 acres	1/2 to 1 mile	Swim instruction, competitive, free, special group activities, sun-bathing, diving, recreational.	Conform to state health standards, bathhouse should include concession and control facilities, lighted located at park, playfield or community center; minimum 25 meter pool, bathhouse and pool designed for off-season activities -- such as ice skating.
Tennis Courts	1 facility per 2000	2 acres (battery of 4)	1/4 to 1 mile	Instruction, tournament, free play, clubs.	Not an isolated facility, but located with community center, school, park or playfield; concrete or bituminous surfacing; well drained.
Golfing	1-18 holes per 50,000	120 acres	3 to 4 miles	Instruction, tournament, clubs, free play.	Should make effective use of natural landscape, serve as part of natural drainage system.
Picnicking	4 acres per 1000	Varies	3 to 4 miles	Barbeque, fishing, swimming for diverse population levels.	Locate in Major Park.
Gardens, Arboretums	1 acre per 1000	100 acres	3 to 4 miles	Scenic enjoyment.	Locate in Major Park.
Handball Courts	1 facility per 1500	Depends on #	1/4 to 1 mile	Instruction, tournament, free play.	Can be privately provided, serves several neighborhoods.
Shuffleboard Courts	1 facility per 1500	depends on #	1/4 to 1 mile	Tournament & free play.	Can be privately provided, serves several neighborhoods.
Bicycle Trails	1 per 2500	Indeterminate	1/2 to 1 mile	Scenic enjoyment, transportation.	Utilize as means to interconnect all recreation activity needs.
Hiking and Nature Trails	1 per 2500	Indeterminate	1/2 to 1 mile	Scenic enjoyment.	Locate in Major Park or parkway.
Bridle Trails	1 per 2500	Indeterminate	1 mile		

plays), social activities (i.e. card games), music (i.e. choirs), nature and outing groups (i.e. pet shows), and collecting activities (i.e. coins). The emphasis on recreation is unlimited as the above would indicate and transcends the mere acquisition of land.

Existing Inventory of Recreation Opportunities and Open Space

Recreation opportunities are available in the City of Charlevoix as a result of facilities owned and operated by the City of Charlevoix, in addition to facilities available at the schools which are owned by the Charlevoix Public School system. It is apparent that quantitatively there is sufficient land under public ownership to meet appropriate national standards as described in Table 42. Table 42 and Map 19 describe in detail the types of recreation opportunities available at each site. One should note from the existing inventory table that the assessment of recreation opportunities includes spaces and facilities that may be privately owned. In addition, the spaces, places and facilities listed acknowledge that recreation is not necessarily a physical engagement. Such examples include historic sites and areas where passive and visual recreation may be experienced.

Comparison of Existing Land Area With Land Area Standards

A comparison was made of the amount of existing recreation land area with the standards previously described. The following Table 43 makes this comparison.

TABLE 43

COMPARISON OF AVAILABLE LAND BY LAND CLASSIFICATION WITH STANDARDS TO DETERMINE LAND AREA REQUIREMENTS

Classification	Number of Acres Available	No. of Acres Required/ Standards	Deficiency/ Surplus(+ or -)
Neighborhood Spaces	16.40	25.69	- 9.59
Carpenter Road Field (4.0)			
Middle School (3.0)			
Elm Street Park (0.5)			
Grant Street Park (1.0)			
Charlevoix Elementary (7.9)			
Community Spaces	17.90	36.70	- 18.18
Charlevoix High School (17.9)			
Major Spaces	149.70	14.68	+134.92
Channel Walkways (14.0)			
Michigan Beach (17.0)			
Depot Beach (4.0)			
Ferry Beach (4.0)			
Mt. McSauba (54.0)			
Charlevoix Golf Course (62.0)			
East Park (4.7)			
		TOTAL	+107.25

TABLE 42

INVENTORY OF PUBLIC, SEMI-PUBLIC AND PRIVATE INDOOR AND OUTDOOR FACILITIES AND SPACES

Name of Facility/Space	EXISTING SITE SIZE (ACRES)	INDOOR FACILITIES -- Gym	Swimming Pool	Multi-Purpose Room	Auditorium	Bleachers	Archery	Basketball	Badminton	Gymnastic Equipment	Track	Arts and Crafts	Library	Table Tennis	Handball/Racquetball	Other	OUTDOOR FACILITIES -- Playground Equipment (Permanent)	Playground Equipment (Portable)	Tot-Lot	Playfield (Unorganized)	Baseball/Softball Field	Swimming Pool	Swimming (Lake)	Ice Skating (Artificial)	Ice Skating (Natural)	Tennis Courts	Basketball	Golf Course	Football and Soccer Field	Spectator Facilities	Track and Field	Picnic Area	Wooded Leisure Trail	Nature Study Area	Shuffleboard	Lawn Bowling	Horseshoes	Shelter Bldg./Restrooms	Year Round Use	Snowmobile Trails	Bicycle Paths	Outdoor Theater	Skiing	Remarks
Public Schools																																												
Charlevoix Elementary	7.9	x											x			x		x		x																								
Charlevoix Middle	3.0	x	x	x									x			x		x		x																								
Charlevoix High	17.9	x		x									x			x		x		x	x			x		x			x														Lighted Fields
Public Parks and Recreation Areas																																												
Carpenter Street Playfield	4.0																			x	(2)																							Lighted Fields
Channel Walkways/Area	N/A																			x	x																							Scenic Lookout,Fishi
Charlevoix Golf Course	62.0																						x					x															Cross-Country Skiing
Depot Beach	4.0															x																											Boating,Parking Lot
East Park	4.7																	x														x	x										Boating/Scenic
Elm Street Park	0.5																								(4)	x																		Parking Area

TABLE 42

INVENTORY OF PUBLIC, SEMI-PUBLIC AND PRIVATE INDOOR AND OUTDOOR FACILITIES AND SPACES

Name of Facility/Space	EXISTING SITE SIZE (ACRES)	INDOOR FACILITIES -- Gym	Swimming Pool	Multi-Purpose Room	Auditorium	Bleachers	Archery	Basketball	Badminton	Gymnastic Equipment	Track	Arts and Crafts	Library	Table Tennis	Handball/Racquetball	Other	OUTDOOR FACILITIES -- Playground Equipment (Permanent)	Playground Equipment (Portable)	Tot-Lot	Playfield (Unorganized)	Baseball/Softball Field	Swimming Pool	Swimming (Lake)	Ice Skating (Artificial)	Ice Skating (Natural)	Tennis Courts	Basketball	Golf Course	Football and Soccer Field	Spectator Facilities	Track and Field	Picnic Area	Wooded Leisure Trail	Nature Study Area	Shuffleboard	Lawn Bowling	Horseshoes	Shelter Bldg./Restrooms	Year Round Use	Snowmobile Trails	Bicycle Paths	Outdoor Theater	Skiing	Remarks
Public Parks & Recreation Areas (continued)																																												
Ferry Beach Marina	4.0																						x																					Boating, Launch & Parking Lot
Grant Street Park	1.0																				x																						Parking Area
Michigan Beach	17.0																	x					x	x										x				x					Boating, Scenic & Fishing
Mt. McSauba	54.0																						x									x										Skiing(downhill & cross-country)
																																											Day Camp
Semi-Private, Private Spaces & Facilities																																											
American Legion Hall				x												x																											Receptions
Belvedere Club Property Property Owner Assoc.																										x					x	x											Beach, Cabanas

TABLE 42

INVENTORY OF PUBLIC, SEMI-PUBLIC AND PRIVATE INDOOR AND OUTDOOR FACILITIES AND SPACES

Name of Facility/Space	EXISTING SITE SIZE (ACRES)	INDOOR FACILITIES -- Gym	Swimming Pool	Multi-Purpose Room	Auditorium	Bleachers	Archery	Basketball	Badminton	Gymnastic Equipment	Track	Arts and Crafts	Library	Table Tennis	Handball/Racquetball	Other	OUTDOOR FACILITIES -- Playground Equipment (Permanent)	Playground Equipment (Portable)	Tot-Lot	Playfield (Unorganized)	Baseball/Softball Field	Swimming Pool	Swimming (Lake)	Ice Skating (Artificial)	Ice Skating (Natural)	Tennis Courts	Basketball	Golf Course	Football and Soccer Field	Spectator Facilities	Track and Field	Picnic Area	Wooded Leisure Trail	Nature Study Area	Shuffleboard	Lawn Bowling	Horseshoes	Shelter Bldg./Restrooms	Year Round Use	Snowmobile Trails	Bicycle Paths	Outdoor Theater	Skiing	Remarks
Semi-Private, Private Spaces & Facilities (continued)																																												
Bellinger Marina																																												Boating
Charlevoix Charter Service																																												Boating,Fishing
Chicago Resort Club																																												Beach, Cabanas
Great Lakes Charter Service																																												Boating,Fishing
Marine Charter Service																																												Boating,Fishing
Walker Marina																																												Boating
Historic Sites & Resources																																												
Ance House (private)																																												Historic Bldg., Const Circa 1900
Battle of Pine River																																													Battle between Mormon & original Charlevoix Settlers. State Register of Historic Sites.

TABLE 42

INVENTORY OF PUBLIC, SEMI-PUBLIC AND PRIVATE INDOOR AND OUTDOOR FACILITIES AND SPACES

Name of Facility/Space	EXISTING SITE SIZE (ACRES)	INDOOR FACILITIES --	Gym	Swimming Pool	Multi-Purpose Room	Auditorium	Bleachers	Archery	Basketball	Badminton	Gymnastic Equipment	Track	Arts and Crafts	Library	Table Tennis	Handball/Racquetball	Other	OUTDOOR FACILITIES --	Playground Equipment (Permanent)	Playground Equipment (Portable)	Tot-Lot	Playfield (Unorganized)	Baseball/Softball Field	Swimming Pool	Swimming (Lake)	Ice Skating (Artificial)	Ice Skating (Natural)	Tennis Courts	Basketball	Golf Course	Football and Soccer Field	Spectator Facilities	Track and Field	Picnic Area	Wooded Leisure Trail	Nature Study Area	Shuffleboard	Lawn Bowling	Horseshoes	Shelter Bldg./Restrooms	Year Round Use	Snowmobile Trails	Bicycle Paths	Outdoor Theater	Skiing	Remarks
Historic Sites & Resources (cont'd)																																														
Belvedere Club Summer Resort Assn.																																														Early settlement in Charlevoix, Est. 1870 Historic Bldg., const. 1892
C&O and B&O Railroad Station																																														Early settlement in Charlevoix, Est. 18[illegible] State Register of Historic Sites.
Chicago Summer Resort Assn.																																														Historic Bldg., const. 1894
Christ Episcopal Church																																														Historic Bldg., converted to restaurant, const. circa 1895
Grey Gables Inn																																														

TABLE 42

INVENTORY OF PUBLIC, SEMI-PUBLIC AND PRIVATE INDOOR AND OUTDOOR FACILITIES AND SPACES

Name of Facility/Space	EXISTING SITE SIZE (ACRES)	INDOOR FACILITIES --	Gym	Swimming Pool	Multi-Purpose Room	Auditorium	Bleachers	Archery	Basketball	Badminton	Gymnastic Equipment	Track	Arts and Crafts	Library	Table Tennis	Handball/Racquetball	Other	OUTDOOR FACILITIES --	Playground Equipment (Permanent)	Playground Equipment (Portable)	Tot-Lot	Playfield (Unorganized)	Baseball/Softball Field	Swimming Pool	Swimming (Lake)	Ice Skating (Artificial)	Ice Skating (Natural)	Tennis Courts	Basketball	Golf Course	Football and Soccer Field	Spectator Facilities	Track and Field	Picnic Area	Wooded Leisure Trail	Nature Study Area	Shuffleboard	Lawn Bowling	Horseshoes	Shelter Bldg./Restrooms	Year Round Use	Snowmobile Trails	Bicycle Paths	Outdoor Theater	Skiing	Remarks
Historic Sites & Resources (cont'd)																																														
Kanaga House (private)																																														Historic Bldg., const. circa 1894
Peters House (private)																																														Historic Bldg., const. circa 1895
Saltonstall House (private)																																														Historic Bldg., const. 1910-1915
U.S. Coast Guard Station and Fish Hatchery																																														One of early hatcheries in State
Walker Marina																																														Historic Site, const. 1900
Wood House (private)																																														Historic Bldg. const. circa 1894

On the basis of the above, it is apparent that overall the City has sufficient land that offers recreation opportunities. By classification, it would appear that there is insufficient land in the neighborhood and community categories. On the other hand, it should be appreciated that the size of the City is so small that all spaces are readily accessible to all. Therefore, the apparent deficiency by classification should not be given any weight. This deficiency can in part be reduced by adding neighborhood facilities at the spaces defined as "major spaces". This would include playground equipment and other recreation apparatus and facilities that would serve the various age groups in the population. The Michigan Avenue, Depot Beach and Ferry Beach park areas are all close enough to the residential areas to provide year round recreation opportunities.

Geographically, recreation land is well distributed throughout the City. No residential area is more than a five minute walk from a recreation space.

Availability of Recreation Facilities and Programs -- Given the small population base of the City of Charlevoix, most capital intensive recreation facilities are not required. This is again based on a comparison with recommended standards (i.e. swimming pool, artificial skating rink, recreation center, etc.). With respect to certain facilities such as suffle board courts, tennis courts, lawn bowling, etc., these are privately provided in several instances thus reducing the impact on public facilities. Based on the analysis of existing facilities, it was determined that there was no critical deficiency.

Future Recreation Requirements

The City of Charlevoix presently exceeds the raw land area requirement for recreation space,based on national standards,when compared to population size. Similarly, the existing inventory of recreation and open space land exceeds what will be required in the future based on the projected size of the population. The City of Charlevoix is not typical of down state communities where there is little if any resort population and influence from tourism. Consequently, the real user population for recreation facilities is far greater than the permanent population, even though this is not a legal requirement on the part of the City. Recreation spaces and opportunities, unlike down state Michigan communities, have economic relationhsips to the City of Charlevoix. This is particularly true of Lake Michigan and Lake Charlevoix public beaches and marinas. Because of this economic relationship there is good justification for exceeding national standards.

Geographically, the City of Charlevoix is not large enough to be concerned with the hierarchy of recreation spaces (i.e. neighborhood versus community versus citywide parks). Essentially, every recreation space is close

enough for use by the total population. Therefore, the City's principle concern ought to be with the range of recreational activities made available at essentially citywide spaces.

This plan does not recommend the acquisition of any additional land through fee simple ownership. What is required is the acquisition of easement rights through private properties so as to guarantee pedestrian and/or non-motorized connections between certain major recreation spaces. This is important in order to increase more passive recreation opportunities involved in simply walking near the City's scenic resources. This is likely to be the form of recreation used by tourists. It is also important to the City's adult population, of which there is a larger proportion than is normal.

Recreation opportunities for residents of the City of Charlevoix which are typically provided by the public are excellent. Atypical of most cities the size of Charlevoix is the publicly owned golf course. The City has excellent swimming facilities on Lake Charlevoix and Lake Michigan. Boating opportunities are afforded to all City residents by virtue of the public marina and the boat launching facilities on Lake Charlevoix and public/private marinas on Round Lake. Winter recreation opportunities are provided at Mt. McSauba for the novice skiier, and cross-country skiing is provided at the golf course in the winter months. Other active recreation opportunities are available at the ball fields on Carpenter Road and at facilities available in conjunction with the public schools.

In summary, the City of Charlevoix has a wide range of recreational opportunities available for all age groups at its existing facilities, because of its proximity to nearby open spaces, and in addition to the City's natural endowments. These include:

- Swimming
- Tennis
- Shuffleboard
- Skiing
- Boating
- Ice Skating
- Outdoor Team Sports (Ball Fields, Soccer Fields, Football Fields)
- Leisure Recreation (Walking Opportunities within Environmentally Superior Areas)
- Indoor Facilities (at Schools)

In short, the City does not need to create any new opportunites by means of land acquisition. It will, however, have to maintain the spaces and facilities it presently has. Eventually, it will have to make them more capital intensive as the need demands. In particular, the restructuring and expansion of East Park is recommended. This area, due to its integral relationship to the downtown area, is the most significant recreational

resource with economic significance to the City. The City should also focus its efforts to project its inherent beauty attributable to its relationship to Round Lake and the topographical characteristics of the area. The East Park/Round Lake area should be the most dramatically impressive real estate in the City of Charlevoix. This can be achieved with an appropriate capital intensive development scheme. The development scheme should enhance its economic development potential, particularly with respect to its ability to increase and sustain a high level of tourism both from land and water originated tourism.

Of the total spaces within the City's Parks and Recreation program, only the Carpenter Road baseball playing fields may be unsuitably located when future requirements are considered. It appears that this land could be more suitably used for industrial purposes or uses closely related to the airport. The placement of these facilities in the township park on Waller Road would appear to be adequate for the communities of both the City of Charlevoix and Charlevoix Township. The loss of this land and the relocation of this activity to another public open space area will not affect the ability of the City to provide recreational opportunities to all of its permanent population.

Special Considerations for Waterfront Recreation Resources

As was previously indicated, the City of Charlevoix does not need to acquire more waterfront land. The City exercised a great deal of foresight when it acquired the substantial waterfront areas it now has. However, this is not to say that there would be anything wrong with acquiring additional land should this become possible at a reasonable cost. With the exception of the peak tourist months of July and August, the City's waterfront areas are not severly impacted. Furthermore, it is doubtful that these areas are so impacted at the present time that they discourage tourism and visitorship to the City of Charlevoix.

If any waterfront resource affecting the City's economic potential is in limited supply it would appear to be the potential for accommodating boaters. At the present time there are two public marinas. The public marina on Round Lake is very limited and is designed for larger private vessels. The second public marina which is on Lake Charlevoix is considerably larger, however its capacity is largely pre-empted by local useage. Private marinas do not provide transient berthing opportunities. There is every indication to support the proposition that additional marine facilities are needed for transient boaters. The best opportunity to accomplish this objective would appear to be on Round Lake. The waterfront development and management recommendations previously discussed propose the use of floating temporary docks in the area presently occupied by the U.S. Coast Guard vessel. It is recommended that this vessel be stationed at

the Coast Guard installation near the mouth of Lake Charlevoix. This action could result in creating many additional berthing opportunities depending upon the length of the finger docks.

Additional access points to Lake Michigan, Round Lake, and Lake Charlevoix are unnecessary. Adequate access is in place to allow potential users to gain access to public spaces. Nothing should be done to eliminate access points. Waterfront management recommendations call for the acquisition of easements along the south side of Round Lake to permit a continuous pedestrian walkway from Lake Michigan to Lake Charlevoix through the Pine River/Round Lake water system. This action would allow for a pleasant scenic-filled passive recreation opportunity. A specific development strategy with respect to each waterfront segment is addressed in the Waterfront Development and Management Strategy Plan section. This section compliments this Recreation Plan section.

Recreation Plan Map (Map #19)

The hierarchy of existing and approximate spaces by functional activity is shown on the Future Recreation Plan Map.

Bikeway Plan

The Bikeway Plan is seen as a transportation and recreation facility improvement. Today more people use bicycles as a recreational endeavor than as a transportation mode. For this reason, the Master Plan provides for this matter in the Open Space and Recreation Plan section. The bikeway route(Map 20)will also be shown on the Transportation Plan. Public Act 327 requires that counties, cities and villages receiving monies from the State Motor Vehicle Highway Fund spend a reasonable portion of their allocation to provide non-motorized transportation facilities. Furthermore, the provision of non-motorized transportation facilities must be considered when a highway, road, or street is proposed for construction, reconstruction, or relocation, subject to the provisions of Section 10 K, which states the following:

STATE OF MICHIGAN PUBLIC ACT 327 OF 1972

Section 10 K:

1. Highway purposes as provided in this act include provision for facilities for non-motorized transportation including bicycling.

2. The Department of State Highways, the counties, cities and villages receiving funds from the Motor Vehicle Highway Fund shall expend reasonable amounts of such funds for establishment and maintenance of lanes, paths and roads for non-motorized transportation.

3. Facilities for non-motorized transportation may be established in conjunction with already existing highways, roads and streets and shall be established when a highway, road or street is being constructed, reconstructed or relocated, unless;

   a. The cost of establishing the facilities would be disproportionate to the need or probable use.

   b. The establishment of the facilities would be contrary to public safety.

   c. Adequate facilities for non-motorized transportation which already exists in the area.

   d. Matching funds are not available through the Department of Natural Resources of other state, federal or local government sources.

   e. The previous expenditures and projected expenditures for non-motorized transportation facilities for the fiscal year exceed 1/2 of 1 percent of that unit's share of the Motor Vehicle Highway Fund in which case additional expenditures shall be discretionary.

Needs -- The State Recreation Plan of 1974, prepared by the Michigan Department of Natural Resources, identified a need for 2,732 miles (4,368 kilometers) of bikeway for 1974 and project a 1980 need for 2,910 miles (4,656 kilometers) of bikeway. These figures were based upon a 1966 Bureau of Outdoor Recreation (BOR) study which established a standard of twenty-five (25) miles (40 kilometers) of bikeway for every 50,000 participants in the population between the ages of 16 and 64. In the case of Charlevoix, one must take into account the impact of tourism and the fact that the geographic size of the City is so small. These facts would seem to encourage the use of bicycles if appropriate paths were provided.

TABLE 44

ESTIMATED BIKEWAY MILES PER POPULATION STANDARD

Year	Estimated Participating Population	No. of Miles of Bikeway Needed
1980	2,000	1.0
1990	3,000	1.5
2000	5,000	2.5

Bicycle Facility Types -- Bikeways have been divided into classes as follows:

Class I "Separated" Bikeways: A Class I "separated" bikeway is a bicycle route totally separated from the highway roadway. It may run along existing roadways in the highway's right-of-way or it may be physically separated and independent of motorized transportation corridors.

Class II "Restricted" Bikeways: A Class II "restricted" bikeway is a bicycle route which utilizes existing roadways with some form of separation restricting motor vehicle and bicycle intermixture. The separation may involve the striping of a line for exclusive bicycle use or the paving of shoulders, construction of a fence, barrier, curb, etc., between the bicycle lane and the motor vehicle lane.

Class III "Shared" Bikeways: A Class III "shared" bikeway is a bicycle route sharing the roadway with signs posted to designate the route. Bicycles and motorized transportation share the roadway with no form of separation restricting motor vehicle intermixture.

Sidewalk Bikeways: A sidewalk bikeway is a bicycle route which shares a pedestrian walk with pedestrians. Signs are posted to designate the route.

Generally, Class I and Class II standards are preferred.

Plan Strategy -- The strategy in determining the most appropriate bikeway routes was to provide access to the downtown area and to link various public spaces, including recreation spaces. To achieve these goals the pathways shown on the Recreation Plan Map should be eventually developed as Class I and Class II bikeways.

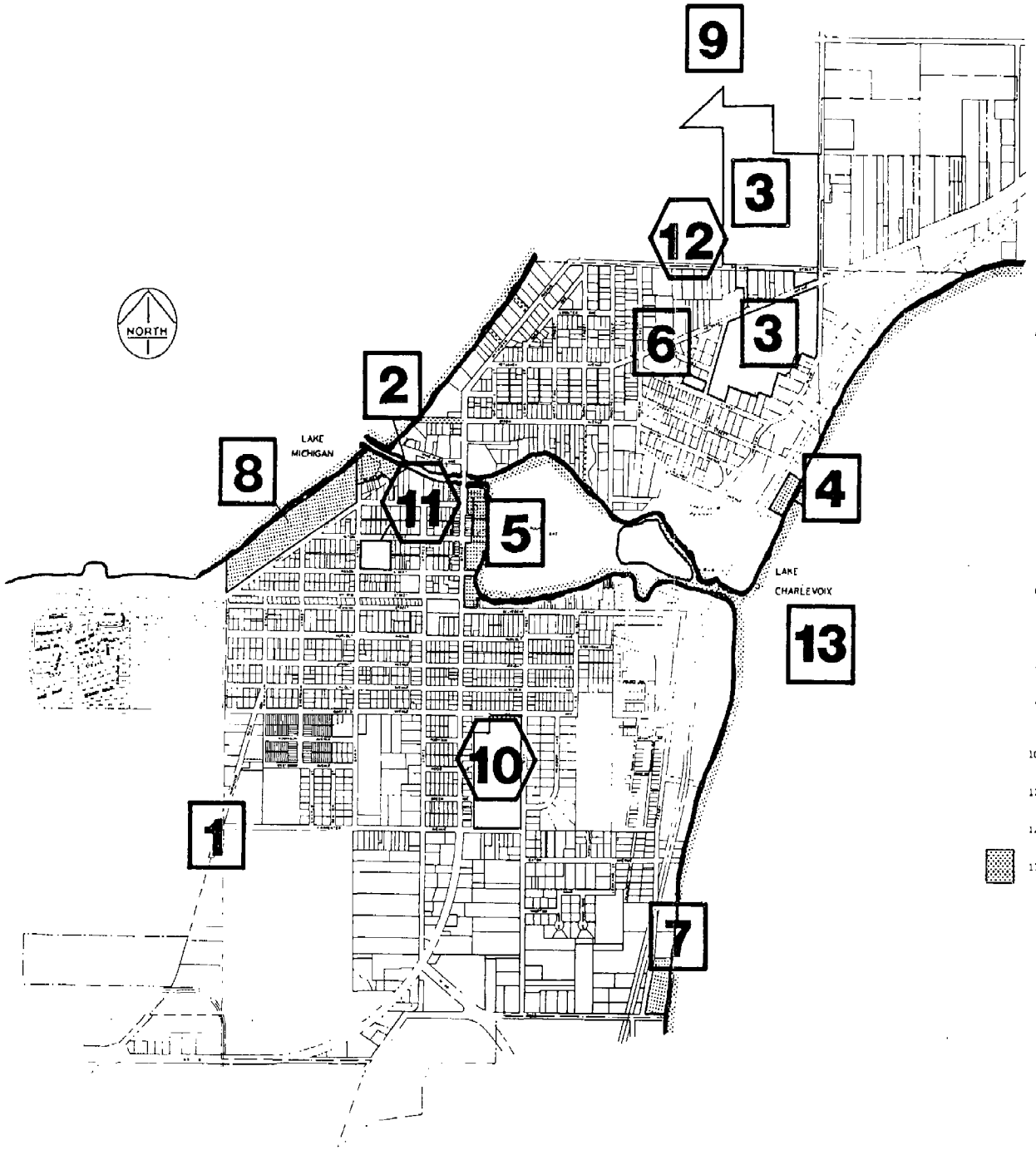
Financing

The principle source of financing local recreation development is through the Federal Department of the Interior, Heritage Conservation and Recreation Service (HCRS) program, formerly BOR/LCWF. The development of local recreation programs may receive an added stimulus if proposed state legislation attempting to capture a part of the bottle return revenues is diverted to the development of local recreation. Depending upon the demand for funds from the federal grant-in-aide program, local government can count on meeting up to fifty percent (50%) of the financial requirement for developing recreational opportunities. Applications for these funds have typically far exceeded the Michigan allocation. Local

financing normally is used to satisfy the remaining fifty percent (50%) requirement. This may be supplemented by donations and gifts either in the form of land or cash.

Financing Priorities -- Financing priorities should focus on more capital intensive uses of the existing spaces. The highest priortiy should include restructuring East Park and the area proposed for open space and beautification between the Pine River Channel and Belvedere Avenue. Some of these actions may qualify for financial aid through the Coastal Zone Management Program. Attention should be focused on improving the pedestrian link between Lake Michigan and Round Lake if funds permit, in addition to beautifying both sides of the Pine River navigation channel. This emphasis will project the theme of "Charlevoix the Beautiful" which is at the present time the City's strongest asset, and will have countless spin-off effects. Relatively minor improvements and additions are needed in other spaces.

RECREATION PLAN MAP 19



LEGEND

	NAME	CLASSIFICATION	FUNCTION Primary	FUNCTION Secondary	PRINCIPAL ACTIVITIES
1	Carpenter Road Playfield	Urban Recreation	Neighborhood Playground	Community Playfield	Ball Diamonds
2	Channel Walkways	Parkway/Scenic	Major Park	Regional Park	Passive
3	Charlevoix Golf Course & Contiguous Open Space	Urban Recreation	Major Park	Community Park	Golf/Cross-Country Skiing
4	Depot Beach	Urban Recreation/ Scenic	Major Park	Regional Park	Swimming/Games/ Passive
5	East Park/ Marina	Urban Recreation/ Scenic	Major Park	Regional Park	Passive/Boating
6	Elm Street Park	Urban Recreation	Neighborhood Playground	Community Playfield	Tennis
7	Ferry Beach/ Marina	Urban Recreation	Major Park	Regional Park	Swimming/Boating/ Passive
8	Michigan Beach	Urban Recreation/ Scenic	Major Park	Regional Park	Swimming/Games/ Passive
9	Mt. McSauba	Urban Recreation/ Scenic/Unique Natural Resource	Major Park	Regional Park	Swimming/Skiing/ Passive
10	Charlevoix High School	Urban Recreation	Community Playfields	Neighborhood Playground	Active Sports
11	Charlevoix Middle School	Urban Recreation	Neighborhood Playground	Community Playfield	Playground Facilities
12	Charlevoix Elementary School	Urban Recreation	Neighborhood Playground	Community Playfield	Playground Facilities
13	Waterfront Access	Scenic	Major Park	---	Passive

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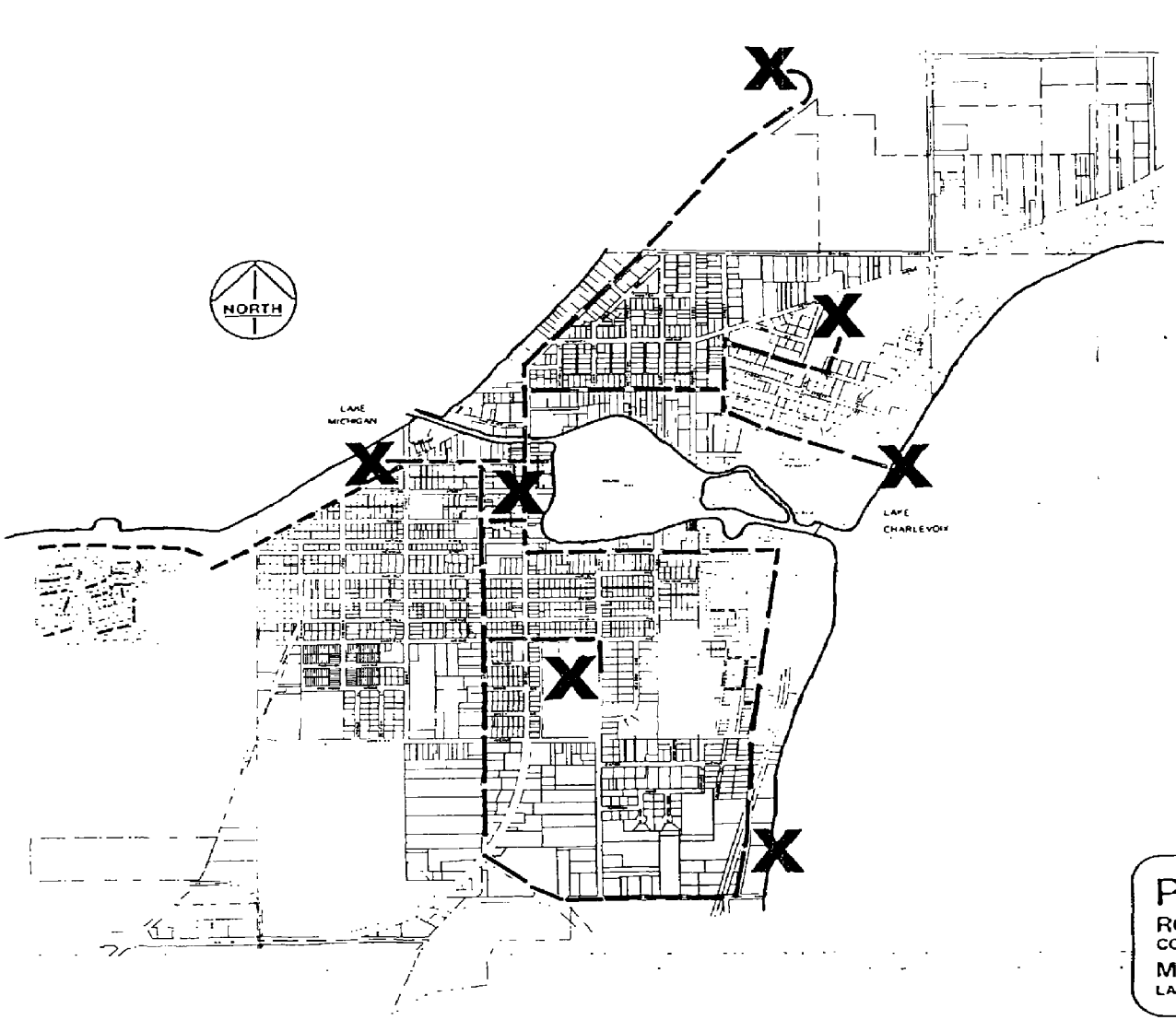
M. C. SMITH & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE · URBAN DESIGN

BIKEWAY PLAN MAP 20



major activity node

bike path

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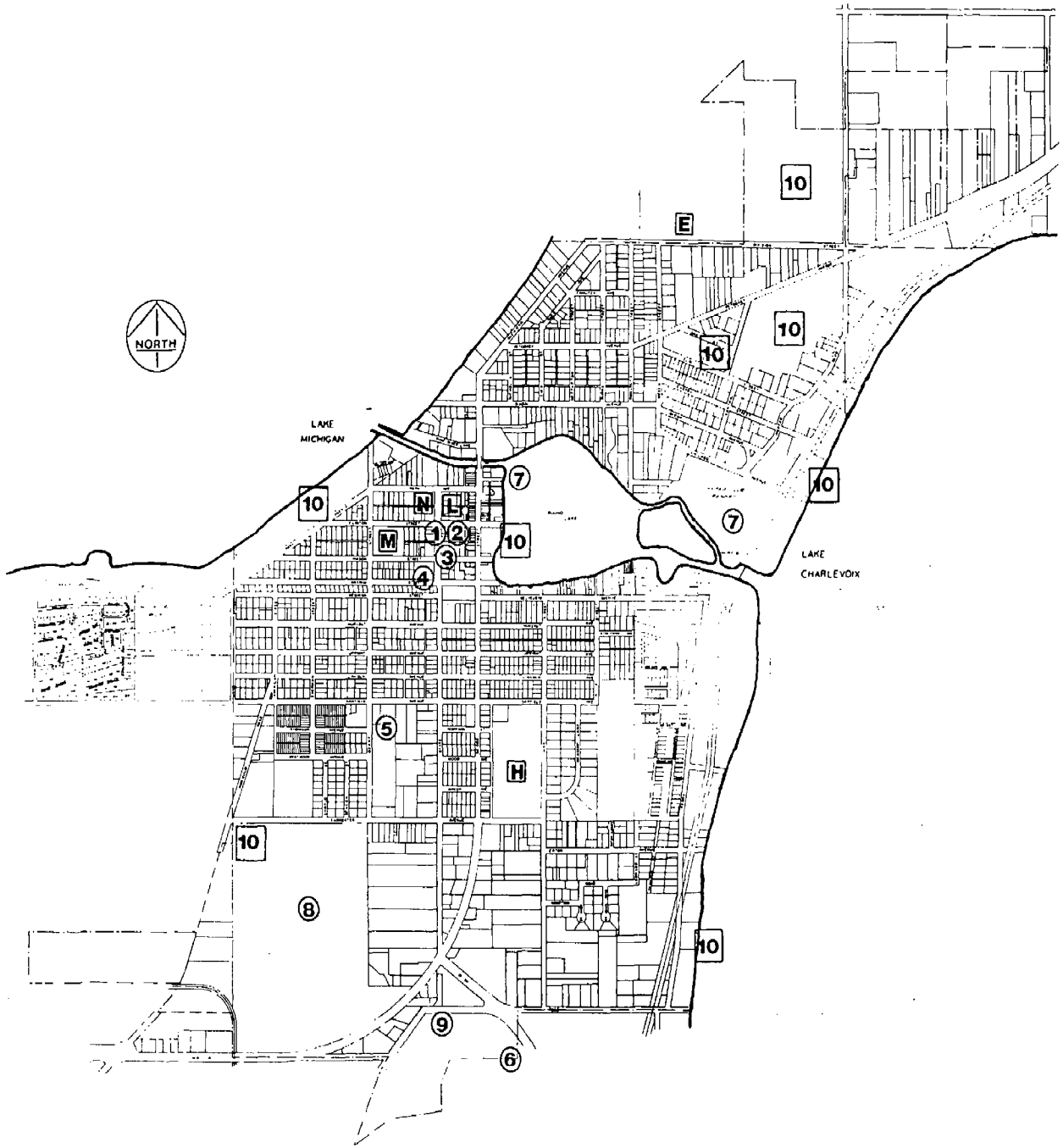
Community Facilities Plan and Map #21

The Community Facilities Plan is a summary of all of the previous public utilities, community services, and open space and recreation plan discussions. The inventory and facility placement recommendations are graphically illustrated on the Community Facilities Plan Map #21.

COMMUNITY FACILITIES PLAN MAP 21



- E elementary
- M middle
- H high
- L library
- (1) city hall
- (2) fire
- (3) police
- (4) county
- (5) sherriff jail
- (6) state
- (7) federal
- (8) airport
- (9) cemetary
- 10 parks & recreation

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TRANSPORTATION PLAN

INTRODUCTION

The purpose of the Transportation Plan element of the Comprehensive Development Plan document is to establish an appropriate hierarchy of street importance. The Plan will also identify related services and improvements that will, over a period of time, be desirable to allow the appropriate movement of people and goods in and through the City of Charlevoix.

MAJOR STREET PLAN

Existing Characteristics

Highways -- U.S. route 31 connects the City of Charlevoix with the State's freeway and highway system. In the City of Charlevoix U.S. route 31 adjoins Bridge Street, Michigan Avenue (in part), and Petoskey Avenue. State route 66 merges with U.S. route 31 on the south side of the Charlevoix area. Highway congestion in the City of Charlevoix is present during the summer months, especially during the months of July and August when tourism and persons taking advantage of vacation homes reaches its peak. This problem is largely limited to U.S. route 31 as it runs through the City of Charlevoix. Relevant traffic counts are as follows:

TABLE 45

TRAFFIC COUNTS US-31 AND M-66
CITY OF CHARLEVOIX

Route	Station	Location	High 24-Hour Count	Date	High Hour Count	Time
	3608	100 Feet SW of State Street	8,600	6/19/81(Fri)	900	3-4 PM
	3612	100 Feet NE of State Street	12,000	6/20/81(Sat)	920	1-2 PM
	18	3 Feet South of River Street	14,500	6/19/81(Fri)	1,080	3-4 PM
	3620	100 Feet East of Michigan Avenue	12,730	6/19/81(Fri)	1,000	3-4 PM 4-5 PM
	3	0.2 Miles NE of Mercer Road	10,470	8/14/81(Fri)	990	4-5 PM
M-66	3612	0.1 Miles SE of Stover Road	5,420	6/19/81(Fri)	860	12PM-1 PM 6/20/81(Sat)
	3616	100 Feet SE of Bridge Street	7,400	6/19/81(Fri)	580	2-3 PM 4-5 PM

Officials of the State Highway Planning Division advise that the above noted traffic counts are more likely to be twenty percent (20%) higher for the same Friday and Saturday counts in August. The effect of this on traffic

south of the Round Lake outlet bridge, for example, is that volumes may approach 17,000 vehicles a day, with the high hour count approaching 1,200 to 1,300 vehicles per hour. It should be appreciated that through the City of Charlevoix U.S. route 31 is a two lane facility. Under these volume conditions traffic is extremely congested, and is largely in a stop-and-go mode.

As a result of visits to the City during the past twelve months it was concluded that outside of the July and August time period there is no traffic congestion on streets in the City of Charlevoix. All local streets are paved, however many streets lack curbs and gutters which tend to give a neater appearance to the neighborhood. In a few cases the surfaces are in need of repairs.

State Street has a greater right-of-way than all the other streets in Charlevoix and is capable of four-lane useage plus parallel parking. On the other hand, due to the available right-of-way width Bridge Street (i.e. south of the Channel) is not capable of handling four lanes of moving traffic unless the existing parallel parking is removed.

Highway Classification

Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Basic to this process is the recognition that individual roads and streets do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads. It becomes necessary then to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a highway network.

Functional classification of streets is important to state and federal aid formulas and for fiscal planning. It also helps determine jurisdictional responsibility and maintenance priorities.

The classification system and procedures developed from the National Highway Functional Classification and Needs Study Manual (1970 to 1990)[1] will be used to classify the street system for Charlevoix.

Functional Systems In Urbanized Areas -- The four functional systems for urbanized areas are; (1) urban principal arterials, (2) minor arterial streets, (3) collector streets, and (4) local streets.

---

[1] Department of Transportation National Transportation Planning Study, Manual B, February 1970.

Urban Principal Arterial System -- In every urban environment there exists a system of streets and highways which can be identified as unusually significant to the area in which it lies in terms of the nature and composition of travel it serves. This system of streets and highways, called here the urban principal arterial system, should serve the major centers of activity, the highest traffic volume corridors, and the longest trip desires, and should carry a high proportion of the total urban area travel on a minimum of mileage. The system should be integrated, both internally and between major rural connections.

The principal arterial system should carry the major portion of trips entering and leaving the urban area. Frequently the principal arterial system will carry important intraurban as well as intercity bus routes. Finally, this system in urbanized areas should provide continuity for all rural arterials which intercept the urban boundary.

Urban Minor Arterial Street System -- The minor arterial street system should interconnect with and augment the urban principal arterial system and provide service to trips of moderate length at a somewhat lower level of travel mobility than major arterials. This system also distributes travel to geographic areas smaller than those identified with the higher system.

The minor arterial street system includes all arterials not classified as principal and contains facilities that place more emphasis on land access than the higher system, and offers a lower level of traffic mobility. Such facilities may carry local bus routes and provide intracommunity continuity, but ideally should not penetrate identifiable neighborhoods.

Urban Collector Street System -- The collector street system provides both land access service and traffic circulation within residential neighborhoods, commercial and industrial areas. It differs from the arterial system in that facilities on the collector system may penetrate residential neighborhoods, distributing trips from the arterials through the area to the ultimate destination. Conversely, the collector street also collects traffic from local streets in residential neighborhoods and channels it into the arterial system. In the central business district, and in other areas of like development and traffic density, the collector system may include the street grid which forms a logical entity for traffic circulation.

Urban Local Street System -- The local street system comprises all facilities not on one of the higher systems. It serve primarily to provide direct access to abutting land and access to the higher order

systems. It offers the lowest level of mobility and usually contains no bus routes. Service to through traffic movement usually is deliberately discouraged.

Extent of Mileage, Travel and Right-of-Way on Urban Systems

The following table contains guideline ranges for travel volume (VMT), mileage, and rights-of-way for each of the four functional systems for urbanized areas.

TABLE 46

GUIDELINES ON EXTENT OF URBAN FUNCTIONAL SYSTEMS

System	Range (Percent) VMT	Range (Percent) Miles	Planned Right-of-Way (In Feet)
Principal arterial system	40 - 65	5 - 10	100 - 120
Principal arterial plus minor arterial street systems	65 - 80	15 - 25	80 - 100
Collector street system	5 - 10	5 - 10	66 - 80
Local street system	10 - 30	65 - 80	50 - 66

Major Street Plan

Utilizing the above classification standards a major street plan was devised. The classification of streets according to their future order of importance within the highway system is illustrated in the Transportation Plan and Major Streets Plan Map #21.

Major street improvements recommended include making Bridge Street a one-way street northbound from Antrim Street to Park Street, and making Park Street a one-way street westbound from Bridge Street to State Street. No other alternative except the no action alternative is available to relieve the July and August bottleneck on Bridge Street.

Eventually it may be desirable to make State Street into a one-way street southbound from Park Street to Antrim Street. However, this does not appear to be an immediate necessity.

Traffic conditions on Bridge Street from the M-66/State Road intersection to the downtown area could be improved if a greater effort was made to encourage the use of State State as an arterial street from Park Street to the U.S. 31/ Bridge Street intersection. If this condition is achieved then State Street should be improved and resurfaced from Hurlbut to its U.S. 31 connection. It would appear to be inevitable that State Street will have to function as an arterial road in the future. The probable major land uses along State Street are unlikely to be low density residential uses. Therefore, the use of State Street in this manner will not have an adverse impact on residences.

No other substantial improvements were considered necessary or possible given the existing conditions relative to available rights-of-way. Petoskey Road is now a four lane street and provides a good level of service. Nearly all street problems are south of the Pine River and can be ameliorated by the previously described actions.

OTHER TRANSPORTATION PLAN ELEMENTS

Railways

The existing railway which traverses the City of Charlevoix along the shore of Lake Charlevoix, was not considered essential to the City of Charlevoix's economic well being. Therefore, it is recommended that the railway be abandoned and that the right-of-way be acquired by the City of Charlevoix. The recommendation for abandonment is consistent with the State of Michigan Railway Plan.

Acquisition of the right-of-way by the City of Charlevoix is necessary to give the City the ability to affect its integration into adjoining parcels of land. It will also give the City leverage in regards to the way the land is used. Abandonment of rail services through the City of Charlevoix does not mean that rail service to Charlevoix is foreclosed. The railway line to the north and south of the City limits, should it remain, would provide the City with rail service, however the prospects of this are unlikely. Limited service is now available for rail transhippment on the Petoskey to Charlevoix line.

The railway presently separates the City from Lake Charlevoix and has a negative visual impact on Lake Charlevoix. It also contributes to the marginal use of valuable waterfront land. Its abandonment and subsequent use would be a positive contribution to the City's tax base while making the lake more accessible.

Charlevoix Airport

Master plans for the expansion and development of the Charlevoix Airport are in place. The airport is a general utility airport. It provides service for recreational aviation, charter flights, and private aviation in connection with the area's businesses and industry. Retention and expansion of the airport could be of economic importance to the City of Charlevoix. The airport provides an important and speedy means of transportation for the area's business and industry executives. Consequently, it is important to the City's economic growth goals.

The location of the airport is suitable, although additional land acquisition is necessary to permit the planned development of a cross-wind runway.

Waterways

The City of Charlevoix has a natural harbor (Round Lake) which could function for commercial shipping. Nevertheless, the City has decided that Round Lake serves the City better as a scenic resource and for pleasure craft use. Substantial tourism is created by the availability of Round Lake for pleasure craft and therefore its economic advantages may be as great as if it were used for commercial shipping.

A recent example of the use of both Round Lake and Lake Charlevoix that promotes tourism is the operation of the Bay Queen craft on Lake Charlevoix as an entertainment and sight seeing facility.

Commercial shipping for package freight and bulk cargo is technically possible from the wharfage available at the Medusa Cement Company.

Both the City and Charlevoix County should consider some formal arrangement with the Medusa Cement Company to expand the useage of the docks by permitting other users. The City and County can enhance their economic development promotion efforts if such an arrangement is possible. Should federal or state financial assistance become available for waterway transportation improvements, the City of Charlevoix or Charlevoix County could be the recipients of such assistance, and could apply these funds to an essentially private/public commercial port.

Public Transit (i.e. Buses)

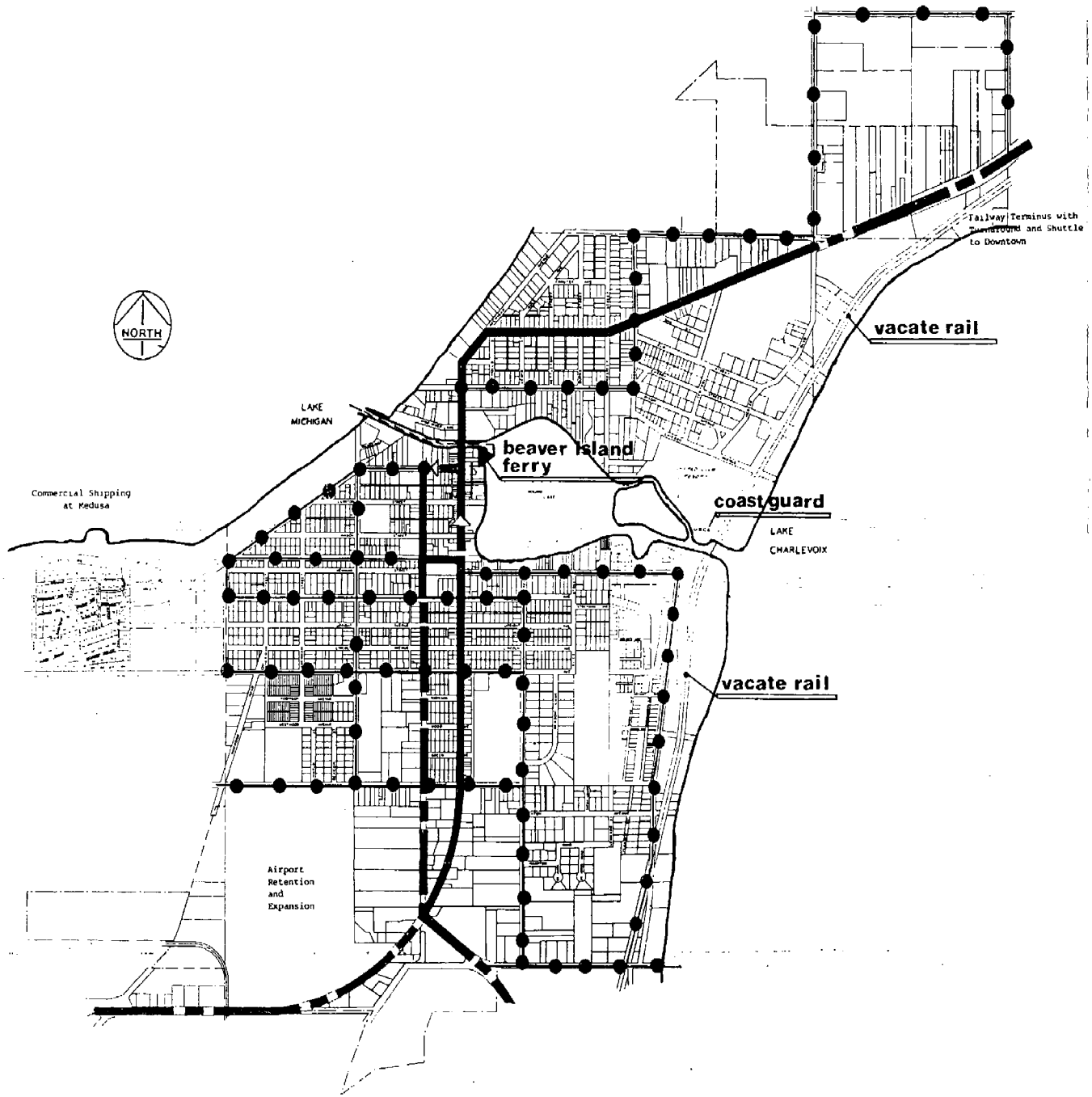
Charlevoix County operates a countywide bus system. Its depot is located in Boyne City.

The system includes seven (7) vehicles, of which four (4) are lift equipped. Each vehicle has a passenger capacity of twenty (20) persons. There are no fixed routes because the bus service is provided door to door as a result of placing a call for service. This is technically referred to as a demand/response system. Two (2) buses are stationed in Charlevoix. They serve the City of Charlevoix and its surrounding area.

Financial support for the operation of the system, now approximately $280,000.00 annually, is provided by the State, fare box revenues, and other local sources. It is noted that the City does not provide funds for this service.

Unquestionably, it is in the City's best economic interest to have the public transit service available to it. The City's economic enhancement goals, particularly those for the downtown area, are clearly supported by a public transit system. A public transit system in the County essentially improves the opportunities for retail businesses and services in the City of Charlevoix to attract customers from outside of the City. The City would be well advised to financially support the system if this becomes necessary for its continued existence.

TRANSPORTATION PLAN MAP 22



- Principal arterial
- minor arterial
- collector street
- local street
- one-way

PLANNING TEAM
RONALD F. NINO & ASSOCIATES
COMMUNITY PLANNING AND DEVELOPMENT
M. C. SMITH & ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE · URBAN DESIGN

IV. IMPLEMENTATION GUIDELINES

COMPREHENSIVE GENERAL DEVELOPMENT AND WATERFRONT PLANNING AND MANAGEMENT STRATEGIES PLAN

INTRODUCTION

The Waterfront Areas Management and City Master Plan is a composite of all of the individual study elements and subsequent plans which evolved out of the master planning process. It includes the background studies, and goals, objectives report, which together form the basis for planning decisions for land use, community facilities, and transportation. Background studies on natural and physical features, population, economy, and housing, established a framework for determining how the land should be used, and for priorities in land use, reflecting a growth management posture. Finally, specific plans for land use, community facilities, and transportation were formulated with each set of decisions reflected by a plan map and text, all building upon each other and supportive of one another. All of the preceeding work collectively becomes the Comprehensive General Development and Waterfront Planning and Management Strategies Plan and, in graphic form, is represented by Plan Map #23. The map is a composite of the Future Land Use Plan, Community Facilities Plan, and Transportation Plan Maps.

USE OF THE COMPREHENSIVE PLAN

Optimum use of the Plan requires more than simply a look at the plan map each time a land use issue has to be resolved. The plan map does not convey the entirety of the total Development Plan. The text is as important as any of the Plan maps in the Plan document and the application of the text to development decisions is very important.

It is important that members of the City Planning Commission be completely familiar with the contents of the Plan document. New appointees to the Planning Commission should receive a copy of the document as part of the package of materials they receive when assuming the duties of a Planning Commissioner. Desirably, a continuing relationship with a professional planner should be maintained because this will facilitate indoctrinating new Planning Commissioners to the Plan's content and relating the Plan to day-to-day decisions.

All too often, Section 9 and 10 of Act 285, Public Acts of 1931, Municipal Planning Commission Act, are ignored in government decision making. Sections 9 and 10 read as follows:

> "Whenever the commission shall have adopted the master plan of the municipality or of one or more major sections or districts thereof, no street, square, park, or other public way, ground, or open space, or public building or structure, shall be constructed or authorized in the municipality or in such planned section and district until the

location, character, and extent thereof shall have been submitted to and approved by the commission: Provided, that in case of disapproval the commission shall communicate its reasons to council, which shall have the power to overrule such disapproval by a recorded vote of not less than 2/3 of its entire membership: Provided, however, that if the public way, ground, space, building, structure, or utility be one,the authorization or financing of which does not under the law or charter provisions governing same,fall within the province of the municipal council, then the submission to the planning commission shall be by the board, commission, or body having such jurisdiction, and the planning commission's disapproval may be overruled by said board, commission or body by a vote of not less than 2/3 of its membership. The failure of the commission to act within 60 days from and after the date of official submission to the commission shall be deemed approval. For the purpose of furthering the desirable future development of the municipality under the master plan the city planning commission, after the commission shall have adopted a master plan, shall prepare coordinated and comprehensive programs of public structures and improvements. The Commission shall annually prepare such a program for the ensuing 6 years, which program shall show those public structures and improvements, in the general order of their priority, which in the commission's judgement will be needed or desirable and can be undertaken within the 6 year period. The above comprehensive coordinated programs shall be based upon the requirements of the community for all types of public improvements, and, to that end, each agency or department or such municipality concerned with such improvements shall upon request furnish the commission with lists, plans, and estimates of the time and cost of public structures and improvements within the purview of such department."

"Whenever the council or legislative body of any municipality shall have ordered the opening, widening or extension of any street, avenue or boulevard, or whenever the council or other legislative body shall have ordered that proceedings be instituted for the acquisition or enlargement of any park, playground,playfield or other public open space, such resolution shall not be rescinded until after the matter has been referred to the city planning commission for a report and until after a public hearing shall have been held. The council shall have power to overrule the recommendation of the city planning comission by a vote of not less than 2/3 of its entire membership."

IMPLEMENTING THE COMPREHENSIVE PLAN

Disseminating The Plan and Education

The Municipal Planning Commission Act is very specific in charging the planning commission with informing the public as to the contents of the plan and employing other means at its disposal to promote good planning concepts. Specifically, Section 11 of the Act provides as follows:

"The commission shall have the power to promote public interest in and understanding of the plan and to that end may publish and distribute copies of the plan or of any report and may employ such other means of publicity and education as it may determine. Members of the commission, when duly authorized by the commission, may attend city planning conferences or meetings of city planning institutes, or hearings upon pending city planning legislation, and the commission may, by resolution spread upon its minutes, pay the reasonable traveling expenses incident to such attendance. The commission shall, from time to time, recommend to the appropriate public officials, programs for public structures and improvements and for the financing thereof. It shall be part of its duties to consult and advise with public officials and agencies, public utility companies, civic, educational, professional, and other organizations, and with citizens with relation to the protecting or carrying out the plan. The commission shall have the right to accept and use gifts for the exercise of its functions. All public officials shall, upon request, furnish to the commission, within a reasonable time, such available information as it may require for its work. The commission, its members, officers, and employees, in the performance of their functions, may enter upon any land and make examinations and surveys and plans and maintain necessary monuments, and marks thereon. In general, the commission shall have such powers as may be necessary to enable it to fulfill its functions, promote municipal planning, or carry out the purposes of this act."

The Commission should review the Plan annually at a public session so as to reaquaint itself and the public with the Plan and to determine if any changes should be made to the Plan in view of the events of the previous year. Through this annual review process the Plan will remain a living document, clearly in step with the goals of the community and able to respond to growth and development pressures.

Zoning Ordinance

The zoning ordinance is a key tool that local governments have at their disposal to require land to be developed in a manner conceptualized by the Comprehensive General Development and Waterfront Planning and Management Strategies Plan. A well structured zoning ordinance can be an invaluable vehicle to bring about development that is aesthetically pleasing. Zoning should do more than simply create enclaves of like development, a singular purpose seen by too many local units of govenment. More flexibility and greater performance controls can bring about higher standards of development.

The City of Charlevoix Zoning Ordinance is typical of zoning ordinances designed in the past decade, due to its reliance on a great number of zoning districts and relatively few opportunities for variable use districts based on performance standards. Such an ordinance can be counterproductive to creating an environment that is more responsive to market place conditions, particularly in an urban setting. Ordinance revisions which establish incentives for developers to create quality developments are in order as well as in investigation of the possibility of reducing the number of zoning districts

in favor of greater use mixture under controlled conditions. Generally, greater performance standards should be introduced into the zoning ordinance to emphasize a higher standard and greater diversity in development while recognizing the economic dictates of the market place. Minimal changes to the zoning map will likely be necessary as a result of the recommended Future Land Use Plan. Some reduction in medium to high density housing is advised in view of the housing distribution goal. The text and map changes should improve the ability of the zoning mechanism to carry out the mandate of the Plan.

Capital Improvements Planning

The Municipal Planning Commission Act, Act 285 of the Public Acts of 1931, charges the planning commission (see above) with preparing a coordinated and comprehensive program of future development of public structures and improvements. Annually,the commission is charged with preparing a six (6) year plan of required capital improvements. The Capital Improvements Plan is but another vehicle for carrying out the development and growth strategy devised in the Comprehensive General Development adn Waterfront Planning and Management Strategies Plan.

Subdivision Control Ordinance

The Subdivision Control Ordinance should be reviewed and updated where necessary to insure that the development standards established in the Plan will be achieved. This is particularly important in terms of preserving open space and meeting neighborhood recreation standards.

Environmental Codes

A total package of environmental codes is necessary to maintain the high standards of environmental quality provided for in the Plan. These include the following codes: advertising, signs, abandoned and junk material, housing standards of maintenance and occupancy, waste disposal, and earth removal.

Institutional Mechanisms

It is often necessary to influence market forces to assure a more balanced level of community development. Special authorities can be created to encourage economic development and achieve housing distribution goals. These institutional mechanisms include a Housing Authority, Economic Development Corporation (EDC), and Downtown Development Authority (DDA).

The City does have the ability through these institutional mechanisms, to clearly influence the type and rate of development that can occur in the City. The rewards are clearly there in terms of encouraging a tax base with a more equitable ratio between residential and commercial and industrial evaluation.

Extensive market analysis shows that the City of Charlevoix is greatly underdeveloped for commercial purposes and that this condition is largely attributable to environmental forces. The City can clear away these negative forces while at the same time utilizing a Downtown Development Authority mechanism to create incentives for new private investment.

The following actions should be initiated shortly to implement this Plan:

1. A new comprehensive zoning ordinance document and map should be prepared. This document should reflect the kind of regulations required to implement land use and specific development strategies described in the Plan. A zoning ordinance should specifically set out regulations for the use of surface water near the shoreline and shoreline land itself to prevent erosion.

2. The Charlevoix Downtown Development Authority should consider adopting the Downtown Development Plan portion of the overall Master Plan as a general guide to how the land in the downtown area should be used.

3. The Charlevoix Downtown Development Authority should also initiate refinements to the Plan. These refinements should be in sufficient detail to permit cost estimating and the taking of bids. This level of plan development is also essential to the preparation of a financing scheme.

4. The City should review all of its environmental codes to ensure that they can achieve the standards described in the Master Plan. It is important that the City act to adopt a housing code (i.e. minimum standards of housing and housing occupancy), in addition to miscellaneous ordinances to control blighted land uses, junk-yards, etc. Additional and appropriate environmental regulations include a Subdivision Control Ordinance. This ordinance should address the problems of dividing existing recorded lots. Concurrent with these actions, the City should expand its staff resources to adequately administer these codes.

5. The City should act expeditiously to adopt both a short range and a long range capital improvements program. This would be based on facilitating the infrastructure requirements of the various areas described as having development potential. This is essential to achieving growth balancing goals. Priorities should include the extension of sewers, water lines and the complimentary improvement of roads for the land between Mercer and Martin lying north of Petoskey (U.S. 31). The area should be qualified as a Class A Industrial Park as quickly as possible.

6. The City Council is encouraged to use all incentive measures at its disposal to encourage environmentally sound development. Because Charlevoix has had a strong Council posture with a record of fiscal conservativeness, it will be necessary for the Council to take a leadership role.

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