

# **ANCHORAGE BOWL COMPREHENSIVE DEVELOPMENT PLAN**

**Adopted September 28, 1982  
(Assembly Ordinance 82-85)**



**MUNICIPALITY OF ANCHORAGE**  
**Tony Knowles, Mayor**

# ANCHORAGE BOWL COMPREHENSIVE DEVELOPMENT PLAN

## Municipality of Anchorage

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To the Reader:

This is Anchorage's Comprehensive Plan; it is intended to serve as a practical guide for community development. It identifies the desired patterns of land use over the next 20-25 years and gives the desired densities of residential development within the various neighborhoods that make up our community. The Plan also contains recommendations on the following subjects: environmental, transportation, energy, and parks-open space. These are the basic support systems for residential, commercial, and industrial growth. They are meant to be complementary of the desired land use patterns, and should work to achieve the community's desired growth patterns. But most of all, the Plan is meant to be an expression of what the community desires regarding growth. It is an embodiment of the values, concerns, and aspirations of what the citizens of Anchorage want over the next 20 years in terms of development.

The Comprehensive Plan guides development but does not, by itself, actually control where and when growth shall and can occur. Other means are used to implement the Comprehensive Plan. Some of these methods are well known, and include zoning and the subdivision process. Other methods are sometimes used to control growth that are not as well known, however. These include such techniques as capital facility programming, growth management, and building codes. These tools can be organized into general categories depending on how directly they affect land development, whether they deal with the patterns of development or their timing; and if they involve the use of capital facilities to guide growth or deal with the regulations relating to land development. Page references relating the implementation tools to the recommendations contained in this plan are included, to assist the reader.

#### **Direct Land Use Controls**

These controls include subdivision reviews and zoning. Subdivision involves the conversion of raw land into some form of land use such as housing. Under subdivision regulations, the Municipality requires the dedica-

tion of streets; the inclusion of water, sewer, and storm drainage lines; and the satisfactory layout and design of lots. This review may also require adequate on-site septic and water systems, and the reservation of land for scenic easements and open space reserves. The Comprehensive Plan expands the use of the subdivision power to include the review of the effects of development and to require such mitigation measures as may be appropriate (pp 65-66).

Zoning regulates the use of land. It is specific to individual properties and regulates the use of property, the height and bulk of structures, establishes yard and street setback requirements, and specifies population limits. It is that device which is normally associated with land use planning.

The Comprehensive Plan is intended to guide future zoning. Because the Plan was developed around a lengthy planning process relating economic growth to the demand for land, and because the Assembly has endorsed this document as its basic guide to future development, future zonings are meant to generally coincide with the Plan's land use patterns and densities. However, the Plan is a guide to future rezonings; it does not actually establish the zoning pattern. The Plan describes how future rezonings are to be interpreted relative to the Plan (p. 75). The Plan, as applied to residential zonings, discourages rezonings from higher to lower density levels unless a clear neighborhood need exists (p. 75). It also recognizes that densities may be somewhat higher than those designated in the Plan at major development nodes and around neighborhood shopping centers or along principal transit corridors (pp. 75-76). Finally, the Plan states that there is a need for more flexible approaches to development and that certain of our current zoning devices need revision. These methods are described in the 'Residential, Short-Term Objectives' section (pp. 64-68).

#### **Controls Over Construction and Design Processes**

The previous controls deal with the general pattern of land uses and with the conversion of raw to developed land. They are meant to control the basic process of land development. Other controls exist to affect the design

and construction process. These are oftentimes referred to as construction codes, design criteria, and administrative Municipal procedures. With the exception of buffering and design criteria standards, these methods are not directly affected by this Plan, although they are designed to further its goals and purposes. Specifically, building codes are meant to ensure adequate, safe dwellings. This corresponds to the housing goal and its intent to provide satisfactory housing to all Municipal citizens. These tools are tied to the Plan in an indirect way. They relate to zoning and subdivision codes or to design criteria for public facilities that are, in turn, derived from the recommendations of this Plan. The reader is referred to the Anchorage Municipal Code, Title 21, for a fuller description of these ordinances and regulations. A discussion of buffering and design standards is included on pp 64-65.

#### **Controls over the Timing of Development**

Comprehensive plans, like this one, are meant to express the desired development patterns of the community. Usually these patterns are representative of land uses and residential densities that should or ought to exist 20-25 years in the future. This is not to say that these patterns and densities are not appropriate to, nor desirable for immediate time periods as well, for often they are. Nonetheless, contemporary planning theory has increasingly emphasized that if future, recommended patterns are to be achieved, there must be a clear and definite process established to realize these patterns. The 'Land Guidance System' section describes just such a process (pp. 69-74). It specifies areas for development, the general timing of development, and the types of tools to actually achieve the desired development patterns. This timing component (pp. 71-72) places heavy emphasis upon the use of major capital facilities, like water and sewer, to achieve the goal of properly timed growth. These facilities are financed and scheduled through the Municipal Capital Improvement Program. The Plan requires that the Program be consistent with this document's timing recommendations (p. 70). Finally the plan recommends the use of new design tools and zoning processes (p. 70) to better deal with the costs of housing development in environmentally sensitive areas-- of which Anchorage has many.

### **Consistency of Infrastructure of Development with Plan**

The desired urban forms, as well as the regulatory and design tools designed to implement them, are ultimately dependent upon what is termed as 'infrastructure' -- the systems of water, sewer, roads, parks, and similar urban amenities and essential services that are vital to urban life. These services must support the recommended land use patterns if the latter are to be achieved. Specifically, they must be consistent with and reinforce these patterns. The major infrastructure systems are described at length in the Plan under the chapter called 'Functional Element' (pp. 7-49). The Environmental System, concerned with environmental protection and enhancement, examines these subsystems at length and includes sections on water quality, air quality, and coastal zone management. The Transportation System, consisting of major roads, transit, and alternative mode programs, is described in pp. 26-32. Finally, the Parks and Open Space (pp 33-48) and Energy (pp. 49-54) Systems examine the required open space improvements and energy conservation/development programs necessary to provide a high quality of urban life and satisfactory energy utilization. Each of the components is intended to be compatible with the others, and with overall land use patterns.

### **Summary**

A plan does not, by itself, create the future. It points to a future and gives certain signposts and methods as to how the future may be achieved. For this future to be realized there must be commitment to the Plan but, perhaps to a larger degree, to the need to deal with potential future growth problems in the present. Problems are difficult and oftentimes impossible to reverse once an unwanted condition or action has begun. There must be, if this Plan is to succeed as a guide to development, a commitment to a type of problem solving that is creative, constructive, and balances short-term gains with long-term goals and objectives. Each and all of the implementation techniques the Municipality processes are not wholly satisfactory unless this attitude and approach is pursued in the daily activities of our Municipal life. If this approach is followed, our present activities will ultimately manifest themselves as an eventual urban form. This plan can help to achieve these growth objectives if this attitude exists and is practiced.



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# CHAPTER ONE

## AN OVERVIEW OF ANCHORAGE'S COMPREHENSIVE PLAN

### I.1 INTRODUCTION

Rapid growth in Southcentral Alaska and especially in the Anchorage metropolitan area has placed increasingly greater burdens upon the environmental, fiscal, and public facility systems that support and guide urban development. This growth has also required large amounts of land within the Anchorage Bowl to accommodate competing residential, industrial, and commercial land demands. Currently, 32,340 acres are developed; of this amount, some 13,500 acres are used for residential purposes, 1,300 acres for commercial, and 1,440 for industrial. Considerable land remains within the Anchorage Bowl, including, under current zoning, some 13,900 acres of residential, 1,140 acres of commercial, and 2,400 acres of industrial land. In addition, some 7,500 acres of land are zoned unrestricted but most likely will be available for residential use in the Potter and Little Rabbit Creek drainages in south Anchorage. It can be expected that increasing demographic change and economic growth over the next twenty years will place great demands upon the remaining land supply. Anchorage will be faced with the need to use wisely the last remaining land parcels while minimizing environmental and fiscal impacts.

This basic issue of growth—its proper pattern, density, and quality—is the central theme of the Comprehensive Plan. The following descriptions examine the current patterns of land development, the pressures placed upon the available land inventory from competing economic and social forces, and the recommended strategies to deal with these pressures.

A comprehensive plan is necessarily a representation of the attitudes and perceptions of the ways to deal with future growth at a particular time. It can be assumed that conditions, events, and attitudes will change over time, which requires the development of a method to deal with change. This Plan includes such a component. It is also concerned with providing methods to effectively respond to and guide the processes of development over time and space.



## 1.2 PURPOSE AND SCOPE

The 1981 Comprehensive Development Plan is intended to serve as a practical guide for community development. It is formulated around a series of key "functional" areas of urban planning concerned with the major public facilities and services designed to support urban development. These services also guide the location of urban development and apportion the density of that growth. Included in these descriptions are goals, objectives, and policies which support the development of these facilities and provide direction to the manner in which they are to be organized. Initially, these goals and objectives were a synthesis of the public participation process used in developing the 1976 Comprehensive Plan, but have since been augmented to include responses to new conditions and events which have taken place during the past five years. The Plan also includes implementation guidelines to be applied in conjunction with the land use maps. The latter allocate basic uses as appropriate to the needs of the community. Methods to direct this process over time are also identified. They provide the dimension of time to the maps of land uses. The Plan is necessarily general, to be further defined by appropriately detailed plans, by ordinances and other policy tools applied by the Assembly and Planning and Zoning Commission.

The Comprehensive Plan focuses upon the physical relationships and development patterns of the community. It is intended to deal with conditions and events expected over the next 20 years. This length of time is the usual limit of demographic and economic forecasting, and corresponds to the time period used in the design of most major public facilities. The Land Use and Residential Intensity Maps are geared to a somewhat longer time period, although the land patterns are generally the result of land acreage allocations to the design period (year 2000). These maps represent the preferred pattern of community development.

The Comprehensive Plan also focuses upon what is termed the "Anchorage Bowl". This is the area of major urbanization extending from the military bases in the north, to the Chugach State Park in the east, to the Knik and Turnagain Arms of Cook Inlet in the west, to the

Turnagain Arm and Chugach State Park in the south. The Plan recommendations and data analyses are confined to this area. The other urbanizing areas of the Municipality, including Eagle River-Chugiak-Eklutna and the Turnagain Arm, are covered by separate comprehensive plans. This is not to indicate that the several comprehensive plans are mutually exclusive. The land and public facility requirements, as well as the population allocations, are derived from demographic projections that treat each area as part of an integrated economic unit within Southcentral Alaska.

## 1.3 USES OF THE PLAN

The adopted Comprehensive Plan is a public declaration of the general policies which will guide but not bind, the actions of the legislative body. This declaration of policy is a reflection of community goals as expressed by the community and approved by their elected representatives.

Some of the benefits and purposes of the Comprehensive Plan and the planning process are outlined as follows:

- The Comprehensive Plan is designed to improve the physical, social, and economic environment of the community.
- The Comprehensive Plan serves as a source of information to the general public, as well as to government agencies having an impact upon physical development decisions.
- The Comprehensive Plan serves as a means of coordination between the private and public sectors, between different government agencies, and between the legislative body and its technical staff.
- The Comprehensive Plan serves as the best estimate of the future—an estimate that is guided by specific community goals. The plan reflects what is most likely to happen if the policies and programs in the plan are followed.
- The Comprehensive Plan serves as a declaration of public policy regarding physical development and clearly states the objectives and actions that the community intends to pursue to achieve the recommendations contained in the Plan.

- The Comprehensive Plan focuses attention upon the major issues confronting the community, and aids in resolving these through a discussion of the consequences of alternative courses of action.

The Comprehensive Plan and its attending planning process are intended to be instrumental in both guiding and influencing urban development. It is a method which helps to ensure that community resources will be used in the most efficient manner practicable to reaching community goals. In addition, it can serve as a vehicle for representing, to the public and private sectors, the likely future of the community and the means to be used to achieve that future.

## 1.4 PLAN DEVELOPMENT PROCESS

The process for revising the Anchorage Comprehensive Development Plan focused about six major research areas:

- Defining planning alternatives,
- Analyzing the land management alternatives necessary to implement particular land use densities and patterns,
- Researching efforts relating to land demand and supply,
- Developing policies and objectives relating to physical growth and urban form,
- Developing and synthesizing major functional planning activities, and
- Formulating major land use alternatives.

It is important to recognize that this planning effort is built upon the technical and citizen involvement efforts involved in preparing the 1976 Comprehensive Development Plan. Many of the goals and objectives developed during the public participation process in 1976 are retained in this Plan, and form much of the basis for the Plan's recommendations in its functional and land use sections. The more recent planning activities focus on an integration between land use and functional planning, the establishment of a management process to direct growth patterns, and changes to the Land Use and Residential Intensity Maps.

The research process involved in the revision of the Comprehensive Plan can best be described in terms of a sequence that focused on a broad development alternatives and then attempted to make these patterns more specific and operational. This process also tried to incorporate functional with developmental planning and to analyze the various constraints and opportunities for urban growth through a series of economic, demographic, and environmental studies.

#### 1.4.1 Alternative Land Use Study

The revision of the Comprehensive Development Plan began with an analysis of alternative growth patterns. The **Alternative Land Use Study** identified a series of alternative growth patterns and densities, and assessed the varying impacts of these forms. These impacts were measured in terms of social, economic, land use, and environmental indicators. Included among the approaches to urban form and growth were alternatives that:

- Concentrated urban growth in a more purposeful way through a pattern of extensive in-filling,
- Allowed metropolitan growth to continue to disperse, allowing a low-density metropolitan form to emerge,
- Fostered a gradual in-filling of urban lands, to achieve a moderate concentration of urban development,
- Dispersed urban growth to the Eagle River-Eklutna-Chugiak and the Matanuska-Susitna Borough areas, and
- Decreased urban growth, putting a "lid" on future community expansion.

Of the alternatives, that involving a progressive infilling of urban lands tended to be most cost-effective and produced the fewest environmental and social disruptions.

#### 1.4.2 MUNICIPAL LAND MANAGEMENT SYSTEM

Urban growth occurs over space and time. The 1976 Comprehensive Plan focused on the question of spatial relationships at a specific time in the future. **The Municipal Land Management System** study was designed to bridge the gap between the urban patterns we wish to create, and our desire and ability to use the management tools required to attain these forms. It analyzed the types of controls used to manage land and related these

to the alternate urban forms given in the Alternative Land Use Study. Different land management techniques are required to realize certain patterns of land uses. Management controls were selected for development that implemented a moderate in-filling pattern. These controls involved the further strengthening of the current zoning and subdivision regulations; the development of a systematic strategy for the sizing and installation of urban services, especially sewerage; and the establishment of programs involving land banking and capital facility programming. The most important of these strategies are related to the timing and phasing of capital facilities in south Anchorage. Because of their large influence over urban development, capital projects were found to be most effective of the various strategies in guiding the timing and density of growth.

#### 1.4.3 RESEARCH AND ANALYSIS: LAND INVENTORY, HOUSING, ECONOMIC PATTERNS

The previous alternative testing and land management analyses were designed to frame the scope and focus the direction of the Comprehensive Plan revision. They were intended to establish the general pattern and density of urban growth to the year 2000 and to indicate the types and mix of controls necessary to achieve those patterns. The analyses that followed focused directly on the revision of the Comprehensive Plan. The revised Comprehensive Plan includes three major sections--goals and objectives, major functional systems to support urban development, and the desired patterns of urban growth.

The basic research studies included the following:

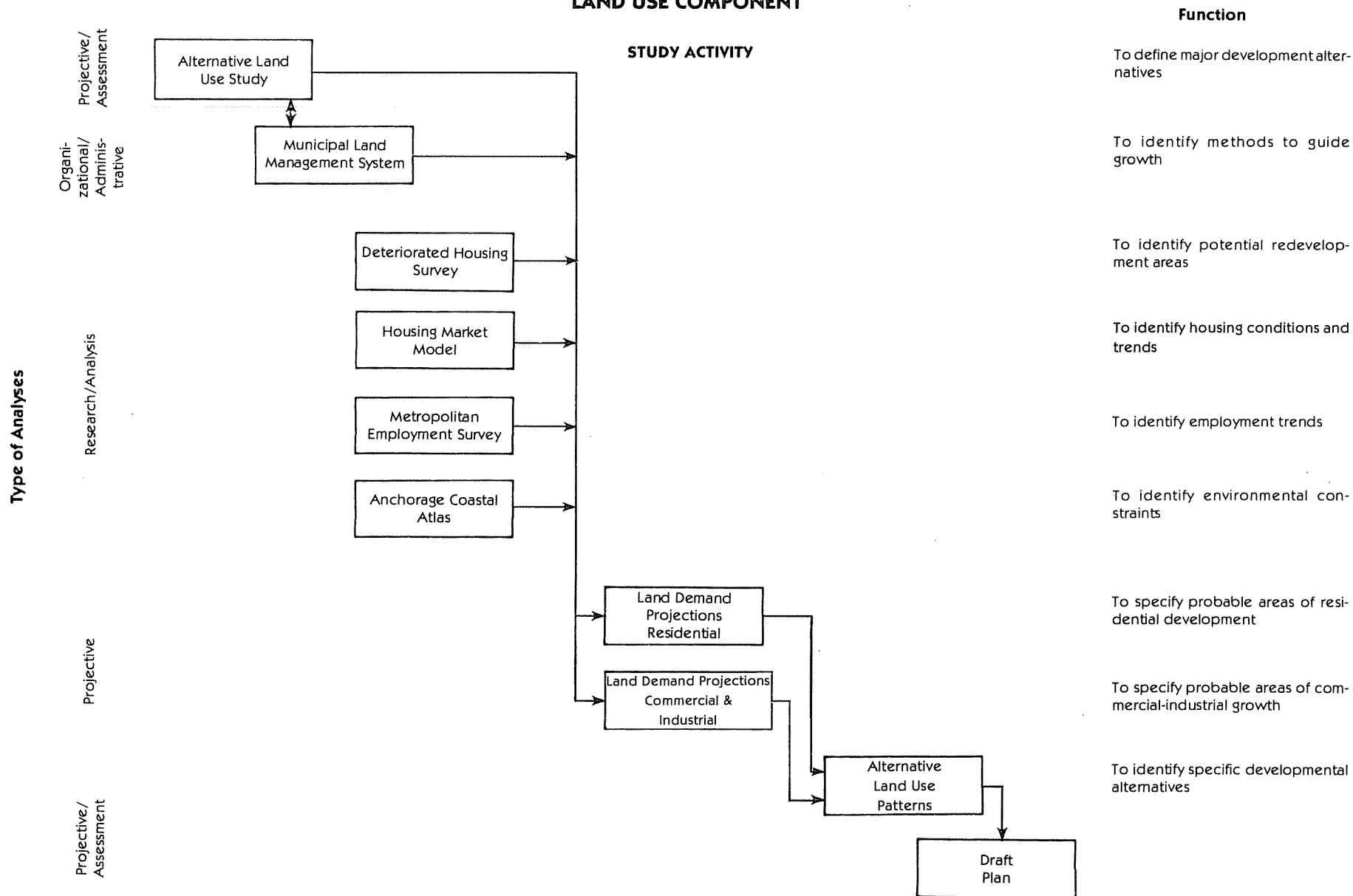
- Deteriorated Housing Survey
- Housing, Land Use, and Zoning Inventory
- Housing Market Model

- AMATS Metropolitan Employment Survey
- Anchorage Coastal Atlas
- Land Demand Projections: Commercial & Industrial
- Land Demand Projections: Residential

These analyses inventoried the basic constituents of development, assessed the probable future causes of and influences upon growth, and projected needs for the various land types and densities. In particular, the **Deteriorated Housing Survey** identified the main areas of substandard, deteriorating, and dilapidated housing. If centrally located and adjacent to major employment centers, such areas commonly experience redevelopment to higher densities. Several such areas exist near the downtown in Fairview and Mountain View. This conclusion is important due to the negligible amount of developable land remaining in the Anchorage Bowl and because of the community's policy of ensuring the effective use of public facilities. The **Housing, Land Use, and Zoning Inventory** served to identify the distribution and amount of the area's housing stock (single- and multi-



## PLAN DEVELOPMENT PROCESS: LAND USE COMPONENT



family, mobile home, and duplex), land use patterns (organized according to residential, commercial, industrial, and public lands), and zoning patterns (arranged by principle zoning categories). These data were separated into small geographic areas and were organized according to acreage amounts for undeveloped and developed land. These data were essential in determining where growth has occurred and how it was arranged, and where future growth might occur--on the basis of the vacant, developable land supply. The **AMATS Metropolitan Employment Survey** identified the amount of employment by place of employment in the Anchorage Bowl. Together, these reports described current economic, population, and land conditions within the Bowl. Environmental data were mapped at a common 1:25,000 scale in the **Anchorage Coastal Resource Atlas**. This document gives a detailed inventory of physical, biological and engineering data, to complement the socio-economic information provided by the other studies.

The inventory analyses were complemented by studies of future facility needs and land patterns. The **Housing**

**Market Model** analyzed the various trends affecting current and future housing conditions. It also projected the amount and distribution of single- and multi-family housing by small geographic areas. These forecasts were essential to later evaluations of land needs and to the development of housing redevelopment strategies in deteriorating areas.

A final analysis, **Commercial-Industrial Employment and Acreage Allocations**, specified future population, dwelling unit, and employment amounts. These data were then translated into acreage demand requirements, which formed much of the basis (along with the residential housing analyses), for the land use designations contained herein.

#### 1.4.4 FUNCTIONAL PLAN DEVELOPMENT

The revised Comprehensive Plan includes sections on the main public facility and environmental systems. Public facilities support and influence the pattern and density of growth, and maintain cultural and social systems.

The environmental systems act as constraints to growth as well as providing recreational, aesthetic, health, and open space values and opportunities. A series of studies, prepared since the period of initial plan development in 1976, form the basis for these functional, or infrastructural, elements.

The **Environmental Component** was based largely upon the following studies:

- Water Quality Management Plan
- Air Quality Plan (draft)
- Coastal Zone Management Plan
- Wetlands Management Plan (draft)

The **Transportation Component** was derived from the var-

ious analyses prepared by the Anchorage Metropolitan Area Transportation Study, and largely from the following:

- Long Range Element
- Transportation Systems Management Element
- Transit Development Program
- Light Rail Feasibility Study

The **Parks and Recreation Element** was largely based upon the following analyses:

- Areawide Parks and Open Space Plan (draft)
- Areawide Trails Plan
- Sub-area Parks Plans (various)

The **Energy Component** was based upon the following technical reports:

- Energy Crisis Contingency Plan
- Energy Element, Comprehensive Plan, Technical Report

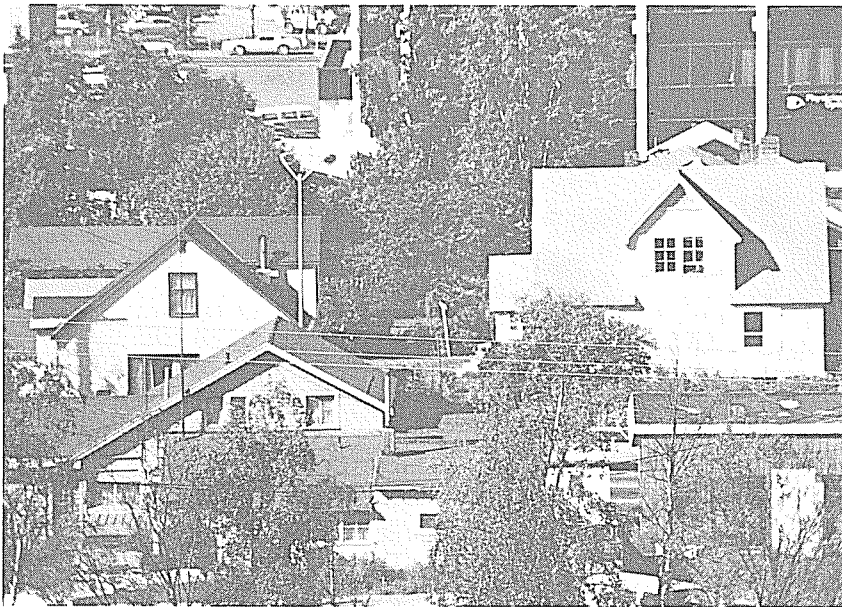
Each of these studies provided documentation as to the needs of the various components, and are to be discussed in more detail in Chapter Two.

#### 1.4.5 POLICY FORMULATION PROCESS

The plan development process also involved the formulation of community goals, objectives, and policies. This analysis identified goals, objectives, and policies for a variety of functional, or infrastructure, areas. Infrastructure is defined as those systems forming the basic foundation support mechanisms of the urban community. Goals and objectives were developed for the following elements:

- Land Use
- Environment
- Transportation
- Energy
- Parks, Recreation, Open Space

These goals were derived from literature reviews, the previous Comprehensive Plan, and from already adopted functional plans and studies of the Municipality. The importance of the Policy/Goal Component is to set the basic direction for community activities, indicate those policies and programs necessary to achieve those activities, and establish an interrelationship among the various socioeconomic forces and systems that affect the community's physical development and form.





## I.5 ORGANIZATION OF PLAN

This report is separated into four major sections:

- Introduction
- Functional Plan Components
- Land Use-Land Management Element
- Plan Implementation

The **Functional** component describes the approach to be used by the Municipality in the provision of important public services. It also sets Municipal policy regarding economic development and energy management. These components are essential to the creation of the urban forms and densities expressed in the Land Use Plan. The components are also interrelated, both to each other and to the desired urban form.

The **Land Use-Land Management** depicts the desired urban forms and densities, and indicates those management tools necessary to focus growth over time to achieve desired urban patterns. This component is, in turn, based upon the Plan's functional component and works to drive the implementation component.

The **Implementation Element** identifies those tools and methods necessary to carry out the recommendations of the Plan. Without a strong commitment to the mechanisms required to achieve desired urban forms and infrastructure systems, community goals cannot be fully realized.





## CHAPTER TWO

### FUNCTIONAL ELEMENT

#### 2.1 INTRODUCTION

The functional element of the Comprehensive Plan describes those major components of the planning process that support and affect physical development. These systems interact, influencing each other and, ultimately, the patterns of land uses and the quality of community life. Certain of these systems are strong determinants of growth while others act to constrain the amount and location of growth.

The functional systems described herein include:

- Environment
- Transportation
- Parks and Open Space
- Energy

Most of these systems are examined at length in separate studies and reports prepared by the Municipality. They are summarized in the Comprehensive Plan to provide an integration between land use patterns and these components, and between the various systems themselves. Detailed analyses of these systems are contained in the reports and studies from which they are derived.

#### 2.2 ENVIRONMENTAL COMPONENT

The environmental component consists of three sub-elements: coastal zone, water quality, and air quality management. The coastal zone program addresses the effective management of the nearshore area and the areas directly affected by or affecting this area. The air and water quality management programs are, however, areawide in scope within the Anchorage Bowl. Different strategy areas and environmental processes are also encompassed by the various programs. The coastal zone management program is concerned with all of the major processes affecting the nearshore area, including:

- surface waters
- wetlands
- marshes, tidal flats, and floodplains
- hazardous land
- anadromous streams
- marginal land

In contrast, the other programs are structured around the use of control strategies intended to improve air and

water quality. Coastal Zone Management is, then, considerably broader in scope than the other programs in terms of the types of land and environmental processes affected by its management controls. Coastal management incorporates natural resource management concerns into the urban planning process.

Each of the environmental programs attempts to reflect and implement a balanced use philosophy between development and environmental protection. This approach recognizes the trade-off inherent to all environmental programs. It attempts to maintain and enhance vital environmental processes while allowing residential growth and economic development to continue. Environmental resources, economic productivity, and livability are interdependent. Economic activities use environmental resources, and are maintained by the environmental resources they are dependent upon. Livability, in turn, is determined by the intangible values of resources, both natural and social. This interdependency is limited by the fragility and finite number and type of environmental resources. In order to maintain both economic and environmental resources, careful consideration must be given to achieving a proper balance between the competing demands of growth, generated by economic expansion, and of preservation, to maintain the sensitive character of ecosystems.

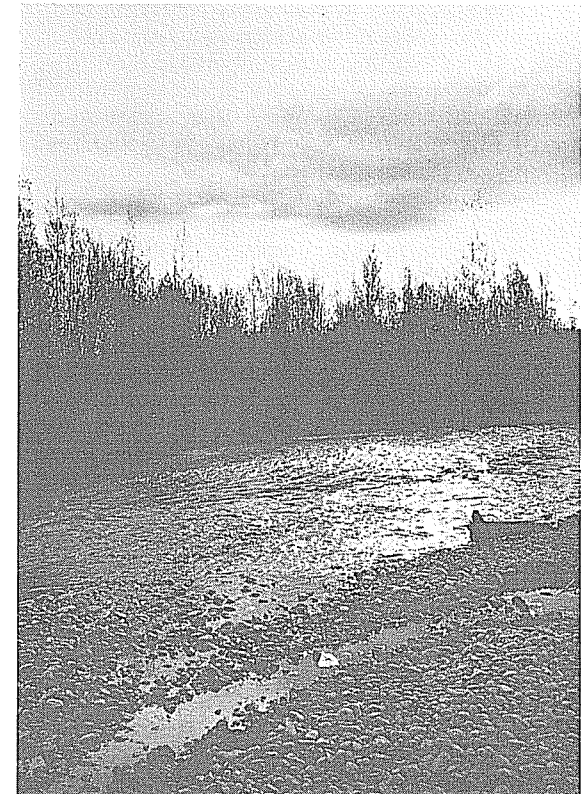
##### 2.2.1 COASTAL ZONE MANAGEMENT

###### Description of Program

Coastal Zone Management planning is a result of both the Federal Coastal Zone Management Act of 1972 and the Alaska Coastal Management Act of 1977. Both acts require that states use the nation's coastal resources and promote their wise and balanced use. The reassertion of the rightful responsibilities of local and state governments in regulating the use and development of their coastal resources is a major aspect of both acts.

The coastal zone management program must be consistent with Federal and State law and regulations. Such programs must include, but are not limited to, the following:

- a description of the land and water uses and activities subject to the district program, and a description of geophysical hazard areas, recreation, transportation



and utilities, energy facilities, and water-related activities.

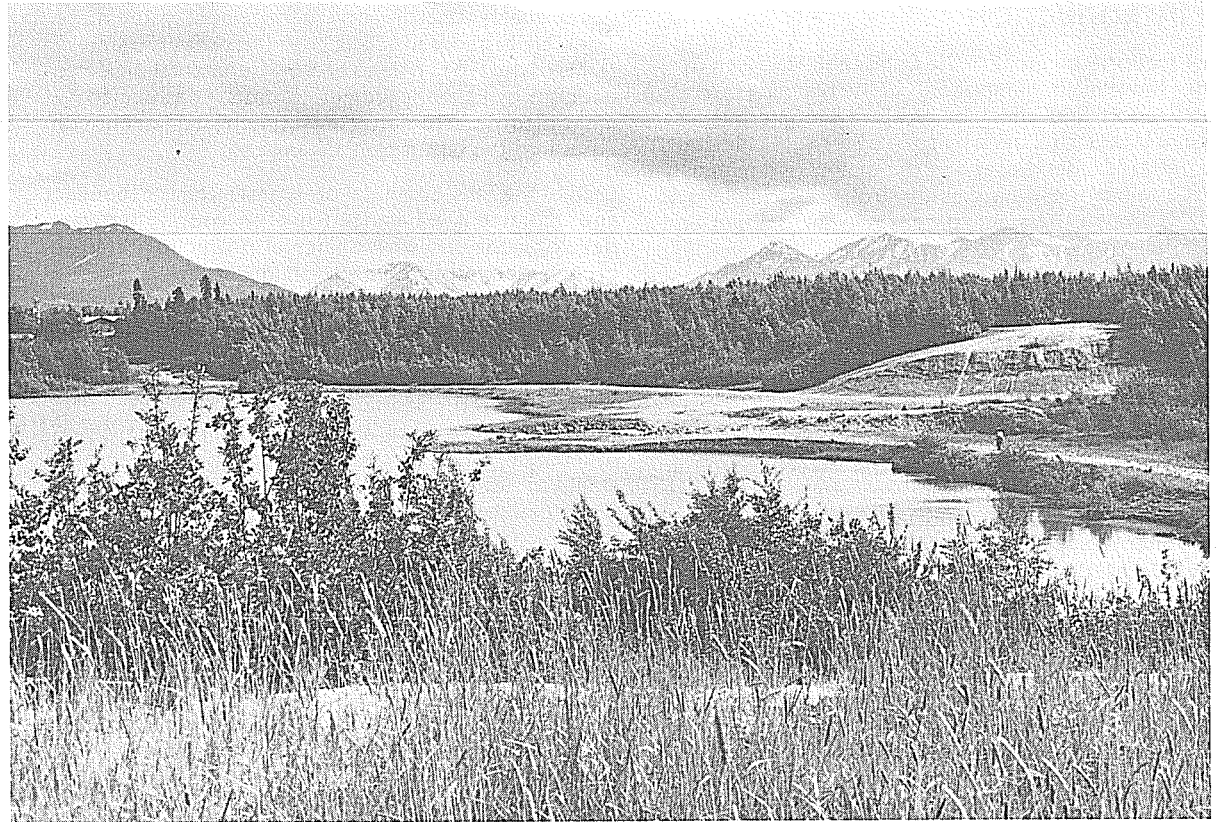
- a description of the uses and activities that will be considered proper and improper in the coastal area.
- a statement of the policies that will be applied to land and water uses and activities subject to the district program.

### Issues

The basic issue of coastal zone planning is to effectively manage coastal resources, while balancing the competing claims of environmental protection and urban growth. This is a particularly difficult task, given the proximity of the coastal zone to major areas of economic and urban expansion. Municipal growth is expected to reach over 338,000 inhabitants in the next twenty years, and the number of employees should increase from 65,000 to a over 150,000 over the same time period. Conflicts between various land uses are sure to arise. The thrust of Anchorage's coastal zone program is to devise and implement a rational process for resolving these conflicts. This process should maintain the delicate balance among the economic, environmental, and social forces that maintain human well-being; and it must be flexible enough to respond to new information and changing perceptions of human needs.

The resolution of this issue, in the Coastal Zone Management (CZM) Plan, occurs through a process which identifies the sub-units of the total landscape according to suitability of use. This process of land use suitability analysis makes it possible to identify dominant and subordinate units of the landscape based upon a biophysical-cultural delineation of the coastal area. In the Coastal Zone Management Plan, the concept of geographic segmentation is used. This involves a division of the coast into different landscape resource units, each representing a different type of environment, and each exhibiting its own unique characteristics. The terms used for the several land use suitability environments are: Preservation, Conservation, and Utilization.

**Preservation Environment:** This unit consists of geographic areas characterized by the presence of environmental and/or cultural features considered valuable in their undisturbed or original condition, and which are



relatively intolerant of intensive human use. Such areas should be essentially free from development, or be capable of being restored to their natural condition, and they should be large enough to protect the value of the resource. The emphasis in this classification is on preservation or restoration of natural systems, and on the prevention or regulation of uses and activities which would degrade or destroy the natural environment. See Map 2-1.

**Conservation Environment:** This area consists of those land and water areas having certain natural or institutional use limitations which require protection prior to their development. The purpose of this designation is to

protect areas for environmentally related purposes such as parks, food protection, and forestry management. It does not intend that the natural environment be maintained in a pure state; rather, that all activities and uses be carried out to produce minimal adverse impacts. The key factor in this classification is the management of uses and activities to maintain the natural quality of the site. See Map 2-2.

**Utilization Environment:** This designation relates to those land and water areas of the coastal district suitable for development. Areas designated for utilization have the fewest constraints to development. See Map 2-2.

The three categories of preservation, conservation, and utilization are interwoven in the Coastal Zone Management Plan. Geographically, a mixing of features actually exists, since a given area may have attributes that require preservation or conservation, and attributes that allow development. The CZM Plan establishes the processes whereby these competing uses and activities can be measured and judged, and a variety of management and engineering practices applied, to mitigate the impacts of urban pressures. The policies that are subsequently described focus upon the three management districts and establish the basic direction of Municipal action for each designation.

#### **Direction of Municipal Program**

The basic direction of the Municipal program regarding coastal zone management is described in the goals, objectives, and policies contained in the adopted Coastal Zone Management Plan. The plan itself basically provides an analytical framework which includes a data inventory, a method for resolving the competing claims of development and environmental preservation, and a listing of the goals and policies that are to guide the decision-making regarding this process. General policies have been developed for the three composite coastal environments and specific policies developed for each subunit contained within each environmental class. More detailed policies, goals, and objectives related to the actual geographic and biophysical processes of the coastal zone are given in Table 2-1.

#### **Preservation Environments**

1. Natural areas should remain free from all development which would adversely affect their natural character.
2. The intensity and type of uses permitted should be restricted in order to maintain the environmental systems and resources in their natural condition.
3. Uses which are consumptive of the physical and biological resources, or which may degrade the actual or potential value of the preservation environment, should be prohibited.
4. Uses and activities in locations adjacent to natural areas should be strictly regulated to ensure that the integrity of the preservation environment is not compromised.

#### **Conservation Environment**

1. New development should be restricted to those uses which are compatible with the natural and biophysical limitations of land and water.
2. Intensive commercial and industrial uses other than forestry, agriculture, energy facilities, fisheries, and mining should be discouraged.
3. Diverse recreational activities which are compatible with the conservation environment should be encouraged.
4. Development which would be of a hazard to public health, safety, or the general welfare, or would materially interfere with natural processes should not be allowed.
5. Residential development should be regulated to maintain an overall density based on the carrying capacity of the land, or should be high density cluster units with open space and buffer zones surrounding.
6. Within the flood hazard zone, regulations should be developed which apply to development within the floodplains. The primary objective should be to prevent further development that is not water - dependent in those floodplains.
7. In areas with poorly drained or marginal soils, development should not be allowed unless connected to sewers.
8. Developments should be regulated so as to minimize the following impacts: erosion or sedimentation; the adverse, direct, or significant impact on land and aquatic habitats; and degradation of the existing character of the conservation environment.
9. The Municipality should encourage sustained yield management of natural resources within the conservation environment.

#### **Utilization Environment**

1. Emphasis should be given to development within already developed areas.
2. Priority should be given to water-dependent and water-related uses over other uses. Uses which are neither water-related nor water-dependent shall be discouraged, except for residential.

3. Multiple use of the shoreline should be encouraged.
4. To enhance water related development and to ensure maximum public use, industrial and commercial facilities should be designed to permit pedestrian waterfront activities consistent with public safety and security.
5. Aesthetic considerations should be actively promoted by means of sign control regulations, architectural design standards, landscaping requirements, view shed requirements and other such means.
6. Development should not significantly degrade the quality of the environment, including water quality, nor create conditions which would accelerate erosion, drainage problems or other adverse impacts on adjacent environments.
7. Redevelopment and renovation of existing areas should be encouraged in order to accommodate future uses and to maximize the use of coastal resources.
8. New development in rural areas should reflect the character of the surrounding areas by limiting residential density (when Municipal policy is to maintain a rural, low density environment), by providing permanent open space, and by maintaining adequate building setbacks from coastal and inland waters.
9. Recreational access to coastal areas should be encouraged. Recreational facilities should be located and designed to minimize conflicts with other uses, activities, and user groups not compatible with recreational uses.
10. To preserve and enhance the quality of residential development, priority should be given to the development of storm drain systems, including on-site systems required to provide adequate drainage for subdivisions and structures.

## 2.2.2 Water Quality Management

### Description of Program

The Water Quality Management Plan is concerned with water quality problems in the Anchorage area created by non-point source pollution. Non-point source pollution in an urban area consists of street runoff, erosion from construction sites, runoff from snow disposal sites, and similar types of wastewater that do not originate from a single source.

Water Quality Management planning is a result of Section 208 of the Water Pollution Control Act Amendments of 1972. Under Section 208, state governors can designate urban-industrial areas where there is a concern for existing and future water quality. These areas are then required to develop plans to control non-point source pollution. These plans must contain strategies to meet the July, 1983, legislative deadline for achieving a national interim water quality goal pertaining to the production and propagation for fish, shellfish, and wildlife, and providing for recreation in and on the nation's waters. This interim goal, commonly referred to as the fishable/swimmable goal, is the primary objective of the Municipality's Water Quality Management program.

The State of Alaska Water Quality Standards reinforce the goal set by the Pollution Control Act by specifying criteria or pollutant levels for each water use. All Anchorage creeks are classified for all uses, including water supply for drinking, water recreation, and the growth and propagation of fish and wildlife.

### Issues

The purpose of the Water Quality Management Plan is to develop a coordinated set of areawide management controls over pollutant sources to prevent the degradation of water quality. The basic issues addressed by the Plan include relating urbanization to pollutant levels, and establishing the proper kind and mix of controls to satisfy state and national pollution abatement standards. The current level of water quality in the Municipality is quite high and most of the area's creeks are within existing water quality standards of the State and Federal government. However, certain violations do occur. Fecal coliform, suspended solids, oil and grease, and heavy



metals are defined as current water quality problems under these standards. Analyses of the distribution of these violations indicate that water quality decreases with progression downstream. These analyses have also indicated that the water quality problems in areas undergoing urbanization are solely caused by non-point sources.

Although the current level of water quality is generally satisfactory, major increases in urbanization are expected to greatly affect these levels. Over the next 20 years, about 8,000 additional acres are anticipated to be

urbanized. The sediments generated during construction and the pollutants derived from the runoff of built-up, impermeable surfaces will have to be controlled to meet water quality standards. In addition, future pollutant sources are expected to parallel existing sources, with the greatest loadings being contributed from commercial, industrial, and high-density residential land. It is expected that major increases in pollutant loads will result without proper control measures being utilized, resulting in the State and Federal standards for fecal coliform, suspended solids, and oil and grease being exceeded.

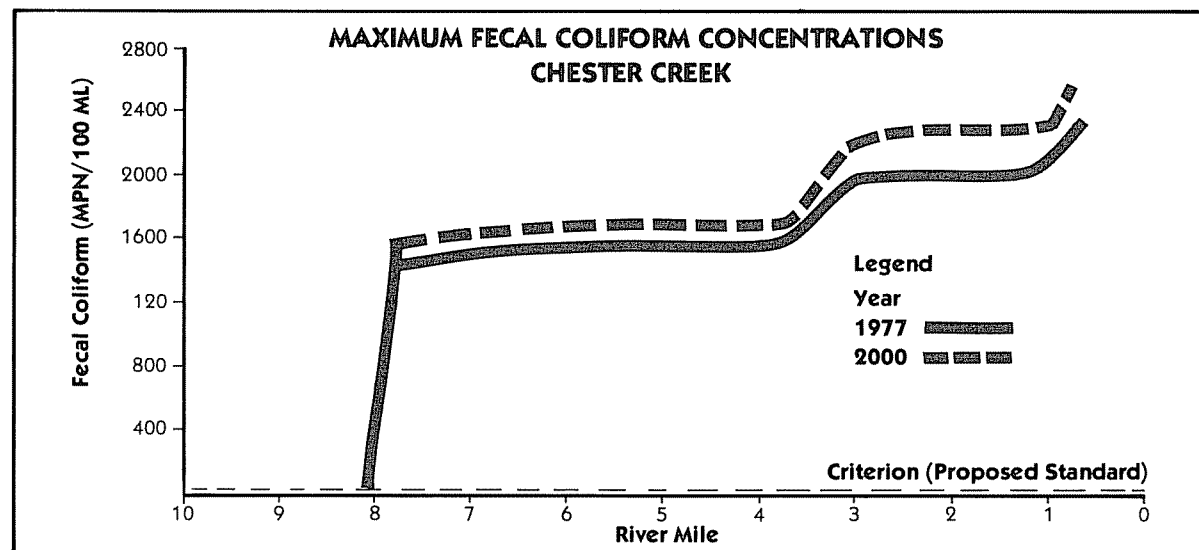
### Direction of Municipal Program

The Water Quality Management Plan, in its preparation, identified three alternative levels of non-point source pollution controls to prevent the further degradation of Anchorage's creeks and improve future stream quality to meet water quality standards and criteria. The three control levels were designed to match three water quality goals: a very high level of water quality sufficient to preserve streams for drinking water supply (Level 3); and intermediate quality level to achieve the federal requirements of fishable/swimmable waters (Level 2); and a lower, less expensive water quality level reflecting the continuation of existing control efforts (Level 1).

The first level involved the then existing program of controls to prevent stream degradation. This current program, although not specifically oriented to the protection of water quality, still represented an attempt at improving stream water quality. But studies of present and projected water quality indicated that water uses would be impaired in the future without additional corrective actions. Level 1 controls were **not** found to meet State and Federal legal requirements for water quality, nor would they protect on-going water uses.

The controls utilized under Level 2 were based on a strengthening of Municipal practices designed to reduce non-point source pollution. Level 2 controls basically expanded upon the existing subdivision, zoning, and floodplain controls, and attempted to gear these measures to the protection of water quality in a more satisfactory fashion. Restructured, these controls were found to result in water quality levels sufficient to protect all existing uses of area streams, but not to satisfy all of the requirements of State Water Quality Standards. The uses that would be protected under this level of control included secondary contact recreation and the growth and propagation of fish and wildlife.

The strategies involved under Level 3 centered on developing an interceptor storm sewer system parallel to area creeks. This would have the affect of diverting most urban runoff into Cook Inlet, thereby greatly reducing pollutant loads to area streams. This strategy would also include certain controls under Level 2 such as limiting the stockpiling of petroleum supplies near creeks and prohibiting the direct discharge of wastewater to



streams. Level 3 actions would probably not improve water quality sufficiently to allow use of the streams for drinking water supply, although it could improve it sufficiently to meet primary contact recreation standards. Nonetheless, the improvement in water quality using the control strategies of this approach would be the greatest of all the alternatives.

The approach selected by the Municipality in its adoption of the Water Quality Management Plan focused on Level 2 strategies, which involved the current set of regulatory controls restructured to better protect water quality. This approach applies control strategies related to each of the pollutant generating conditions associated with increased urbanization. These include non-point pollution from urban runoff, runoff associated with erosion from construction sites, runoff and percolation from snow disposal sites, and both surface and groundwater contamination resulting from the failure of on-site waste disposal systems. This approach was found to be the most cost-effective of the various alternatives. It was determined to be effective in protecting the current uses and users of various streams; in minimizing environmental and social impacts otherwise associated with

major construction activity; and in reducing cost requirements for water quality protection measures, to both the public and private sectors. While these techniques were intended to focus on the individual sources of non-point source pollution, they were procedurally linked to an overall implementation strategy. Certain of the strategies were effective in reducing non-point pollution sources from several activities and functions. The current implementation program of the Municipality retains and reinforces this linkage between strategy areas.

### Municipal Policies Regarding Water Quality Management

The manner by which the Municipality focuses the Water Quality Management program about the Level 2 approach is expressed through two sets of strategies. The first is represented through specific control methods that affect building design and construction and the manner in which land is developed. The second is expressed through goals and policies relating to urban development and construction practices. The goals, policies, and objectives that are described in Table 2-1 indicate the overall direction used by the Municipality in achieving water quality standards for area streams.



### 2.2.3 AIR QUALITY MANAGEMENT

#### Description of Program

Following the occurrence of several violations of the ambient standards for carbon monoxide concentrations, the Municipality was designated by the Environmental Protection Agency as a nonattainment area. This designation necessitates the development and implementation of an air quality control plan which would lead to attainment of these standards.

The primary goal of the Air Quality Plan has been and will continue to be the attainment of the national ambient standards for carbon monoxide concentrations. This is to be achieved, however, while maintaining compatibility with other community goals.

#### Scope of the Problems

The Clean Air Act Amendments of 1977 directed the EPA to establish air quality standards for air pollutants. The standards set by the EPA for carbon monoxide allowed an area to exceed not more than once in a given year a concentration level of 9 parts of carbon monoxide per million parts of ambient air measured over an eight hour period.

A special monitoring study conducted in 1978 revealed that the air quality problem associated with carbon monoxide was relatively widespread throughout the urbanized area of the Anchorage bowl. The monitors revealed that those areas with high levels of traffic and congestion, primarily in the downtown and the midtown areas, tended to show the highest concentrations of carbon monoxide.

This inventory determined that 93 percent of the total emissions were transportation related, primarily from automobiles and light trucks. About 5.1 percent of the pollutants were from small industrial sources, such as electrical generating plants and aircraft operations. Commercial and large industrial sources contributed .7 percent, and residential fuel consumption was responsible for less than one half of one percent of the pollutants. In terms of the geographic distribution, the inventory revealed that those areas which would be expected to have high levels of traffic volume, would also be the areas of highest pollutant emissions. Both the downtown and the midtown areas were identified as either having,



or exhibiting the potential for having, high carbon monoxide concentrations. Large employment centers which attract high traffic volumes, tend to suffer most from air quality problems. As congestion increases, average speeds decrease, and pollutants increase.

The large number of employees in these areas adds to the overall pollution load due to the "cold start" phenomenon. Cold weather substantially increases motor vehicle carbon monoxide emissions. The maintenance of vehicles is more difficult during cold periods and engines take much longer to reach the proper operating temperatures of the pollution control equipment. Consequently, carbon monoxide emissions during the initial stage of engine operation are typically much higher, and may account for more than 90 percent of the total

vehicle trip emissions. Because of the large number of commuter automobiles within the commercial and retail areas and other employment centers, the phenomenon is more pronounced at the end of an average work day, as these vehicles are started cold for the trip home.

Although the Federal air pollution control program is designed to limit automobile emissions, it is not expected that air quality standards will be met in Anchorage until the early 1990's. Population growth will continue to reduce most of the advantages to be gained from the motor vehicle pollution control program. In addition, once the standards have been met, average pollutant concentrations are again expected to increase with continued increases in population and automobile use.

### Direction of Municipal Program

In order to reduce carbon monoxide concentrations to acceptable levels, it will be necessary to implement a number of air quality control strategies. A balanced approach between air quality improvements, public and institutional acceptability, and cost is to be incorporated into the Air Quality Control Plan. It will also be necessary to ensure that the various strategies are clearly interrelated. Often, the implementation of any one strategy will also require the implementation of another strategy to be fully effective.

Because of the complexity of the air quality problem in the Anchorage area caused by the cold start phenomenon, it is not known whether conventional transportation control measures will be totally effective in reducing pollution levels. The full extent of the contribution of cold start to carbon monoxide emissions is not yet known. To achieve the necessary reductions for attainment of the carbon monoxide standards, cold start strategies will need to be developed, in addition to the more conventional transportation control measures. Strategies which are being considered for inclusion in the Air Quality Plan may include all of the following:

- Pedestrian facilities improvements
- Inspection and maintenance programs
- Cold start strategies
- Public transit improvements
- Parking management
- Variable work hour programs
- Traffic improvements (high and low cost)

The goals and objectives to be used by the Municipality in the air quality efforts are given in Table 2-1.

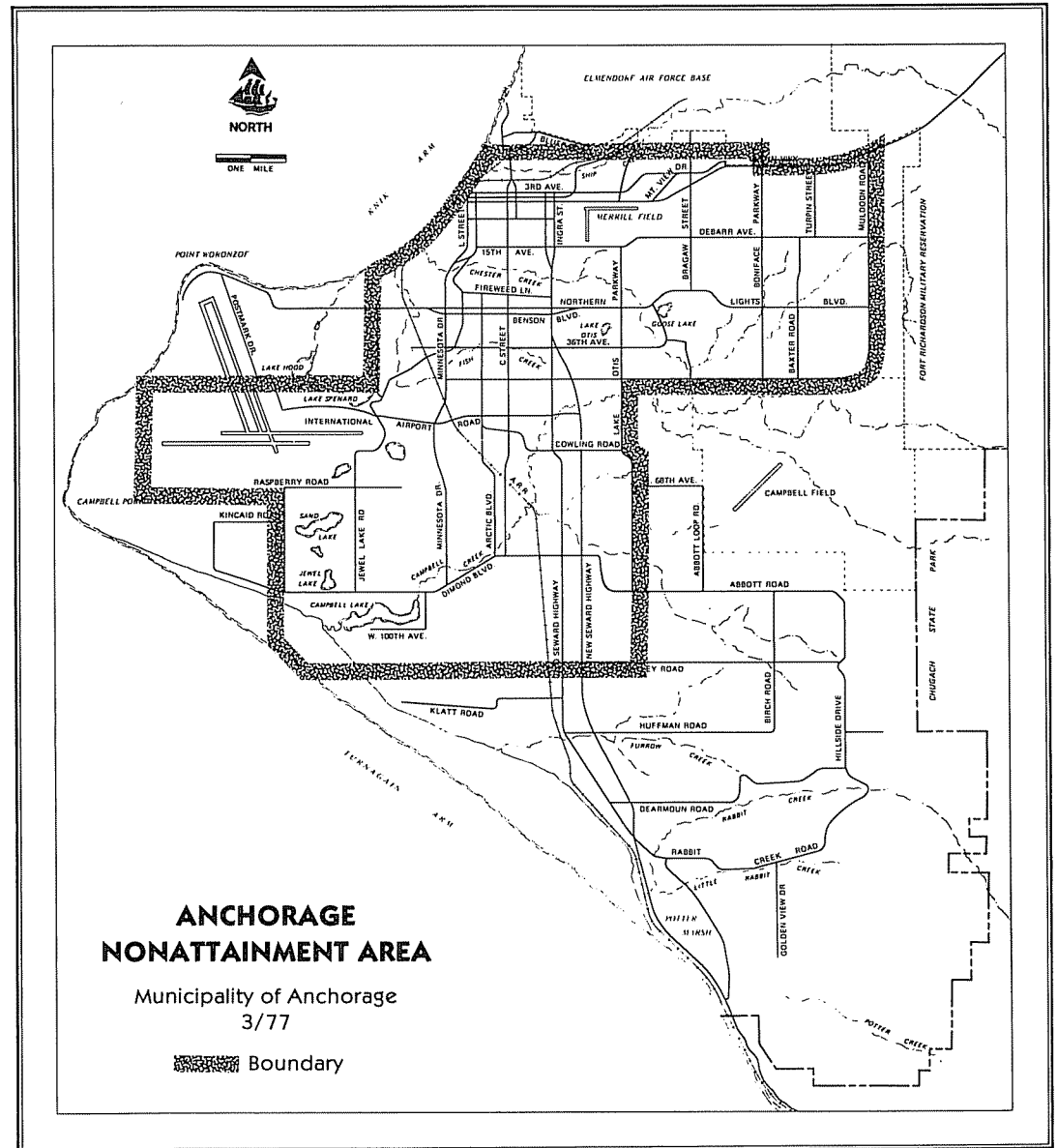


TABLE 2-1

## GOALS, POLICIES, OBJECTIVES: ENVIRONMENTAL COMPONENT

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
Environmental	To ensure that the natural environment is enhanced, maintained, and protected by establishing standards for the protection of soil, vegetation, air, sound, and sight with appropriate surveillance and enforcement to these standards.			
Freshwater Marshes Wetlands, and Coastal Marshes	To protect the basic natural functions served by coastal marshes, freshwater marshes and wetlands.			<p>Planning, programming and construction activities of the Municipality shall recognize and consider the natural functions and values of freshwater marshes and wetlands as delineated in the Anchorage Wetlands Management Plan.</p> <p>In wetlands identified for development, appropriate mitigation techniques, as specified in the Anchorage Wetlands Management Plan, shall be used to the maximum extent practicable.</p> <p>All public works activities such as transportation projects, utilities, sewers and drainage activities shall avoid or minimize any identified adverse impacts upon freshwater marshes and wetlands to the maximum extent practicable.</p>
Tidal Creeks and Flats	<ol style="list-style-type: none"> <li>1. To protect the basic natural functions served by tidal creeks and mud flats.</li> <li>2. To protect estuarine beaches for the purpose of public access and recreation.</li> <li>3. To prevent public liabilities associated with development in these areas.</li> </ol>			<p>Freshwater marshes and wetlands of major significance as defined in the Anchorage Wetlands Management Plan shall be regulated to ensure maintenance of protected natural functions and values.</p> <p>Discourage development in tidal flats, estuaries beaches and tidal creeks except in areas identified in the Coastal Zone Management Plan for water dependent uses. Such activities that are allowed shall, to the extent practicable, avoid or minimize adverse impacts.</p>



TABLE 2-1

## GOALS, POLICIES, OBJECTIVES: ENVIRONMENTAL COMPONENT

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
Coastal Habitats	<p>To protect the natural environment of critical urban and rural coastal habitats.</p> <p>To restrict, and where necessary, prohibit development in these areas.</p> <p>To permit recreational uses that are not ecologically disruptive.</p>			<p>Preserve important coastal habitats in their natural state, and preclude any development in these areas in order to provide buffers around these areas.</p> <ol style="list-style-type: none"> <li>1. No commercial, industrial, or residential users shall be permitted.</li> <li>2. Public use of these areas shall be limited to hiking, sightseeing, nature study and research to the extent compatible with the purpose for which critical habitat areas are established</li> <li>3. Ensure that development adjacent to or affecting coastal habitats have effective measures to minimize adverse effects on these environments and to mitigate those effects that do occur.</li> </ol>
Cliffs and Bluffs	<p>To protect coastal bluffs from erosion caused by indiscriminate construction</p> <p>To provide public access and viewing opportunities to the public.</p> <p>To protect the public safety and welfare.</p>			<p>Prevent new construction that would threaten the stability of the coastal bluff environment.</p> <p>Maintain vegetation in its natural state to prevent slope degradation.</p> <p>Provide for construction setbacks from coastal bluffs.</p>
Hazardous Lands	<p>To assure, through appropriate land use regulation, that development in areas designated as hazardous land occurs in a manner consistent with State Geophysical Standards in order to protect human life and the public safety and welfare.</p>		<p>In the absence of state geophysical standard, the Municipality shall develop proper hazard mitigation codes related to engineering, architecture, and land use.</p>	<p>Discourage development in high hazard areas; require the use of central sewage systems and engineering specifications sufficient to mitigate the potential loss of life and property.</p>
Historic, Prehistoric and Natural Areas	<p>To preserve, restore, protect and, where appropriate, allow public access and display of sites important to Alaska history and archaeology.</p> <p>To preserve and protect unique environmental areas and features not otherwise protected as natural areas.</p>			<p>These areas should be protected where possible through the application of local zoning, tax incentives, purchase, easements, or other appropriate means.</p> <p>Any development in "natural areas" should incorporate special precautions and design criteria to avoid damaging the character of the feature.</p>

TABLE 2-1

## GOALS, POLICIES, OBJECTIVES: ENVIRONMENTAL COMPONENT

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
Coastal Flood Zone	To ensure the continuation of natural features and systems in coastal flood zones, and establish management plans for their utilization.			<p>Prohibit development within the coastal flood zone except for those uses that are water dependent. Uses that meet the above criteria are identified in the Urban Environmental classification of the Coastal Zone Management Plan.</p> <p>All residential uses shall be prohibited in the coastal flood zone.</p> <p>No uses, other than passive recreation, sight-seeing, hiking, and viewing, or other uses and activities that will not alter, endanger, or destroy fish and wildlife species or habitat shall be permitted in the coastal flood zone identified by the State Department of Fish and Game as "Critical Coastal Habitat."</p>
River Floodplains	<p>To minimize unnecessary flood losses caused by unwise development in areas subject to flooding (100 year statistical floodplain).</p> <p>To enhance, restore and preserve the values of floodplains.</p>			<p>Development of the 100 year floodplain shall be discouraged in order to avoid the need for later attempts to protect such investments through the construction of flood control structures at public expense, except those uses which require water access.</p> <p>Channel improvement projects intended to provide flood protection shall be considered only after it has been determined by appropriate Federal, State, and Municipal agencies that land treatment and all feasible floodwater retarding structures will not provide an adequate level of flood protection.</p>

TABLE 2-1

## GOALS, POLICIES, OBJECTIVES: ENVIRONMENTAL COMPONENT

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
Marginal Lands	To assure that development in areas defined as marginal adequately consider the physical limitations involved and do not result in direct or indirect consequences harmful to the public health, safety and welfare.			<p>Careful site design and planning shall be required before development occurs in marginal lands.</p> <p>Subdivision and zoning controls shall identify, recognize, and address marginal lands to assure that future growth is not injurious to the public health, safety and welfare.</p> <p>Development in marginal lands shall, where feasible, utilize central sewage collection and treatment facilities and where not feasible, on-site facilities shall be designed so as not to cause conditions that will pollute rivers, lakes, and other water bodies including the ground water supply.</p>
Surface Water	<p>To preserve and improve the quality of water resources.</p> <p>To use natural water courses for surface runoff control.</p> <p>To restore and preserve the natural balance between ground water replenishment and surface water runoff.</p> <p>To ensure the wise use of the area's water resources; to maintain the quality of these waters at a level suitable for recreational purposes and for the propagation of fish and wildlife.</p>			<p>Runoff control and delayed release measures shall be encouraged to release storm waters at a natural rate to the storm drainage system, filter out pollutants and sediments, and replenish ground water resources.</p> <p>To the extent possible, natural water courses shall be utilized for surface water runoff.</p> <p>In new development, emphasis shall be placed on the retention of ground cover, minimization of impermeable areas, and maintenance of water intake areas. Such measures shall especially be stressed in aquifer recharge areas.</p> <p>Development projects shall include provision for precipitation to be returned to the soil at natural rates and near as possible to the point where it falls.</p>

TABLE 2-1

## GOALS, POLICIES, OBJECTIVES: ENVIRONMENTAL COMPONENT

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
Vegetation	To retain natural vegetation in order to preserve scenic beauty, prevent the erosion of topsoil, protect against flood hazards and landslides, reduce the costs of stormwater systems and decrease the impact of urban development.	Develop and maintain a continuing street tree landscaping planting and maintenance program.	Prepare & Implement a street tree landscaping plan that applies to the arterial street system and provides the basis for Municipal policy on high-way landscaping.	Development applications of over 20 acres shall include a description of the existing vegetation and an inventory of specimen trees in the area to be developed; measures shall be considered to minimize or reduce vegetation losses.  Retention and re-establishment of vegetation shall be considered in the development review process.  Special care shall be exercised to preserve vegetation in steep slope, wetland, and water-course bank areas in order to prevent soil erosion.
Steep Slopes (greater than 25%)	To protect soils, water courses, and life and property by preventing serious erosion and increased runoff on steep slopes	To protect from adverse developmental impacts areas of or greater than 25% slopes	Prepare and implement the R-10 Alpine Slope Ordinance.	Development on steep slopes shall include the consideration of factors such as site coverage, gradient, soil type, hydrology, substrata, and vegetation.
	To protect life and property on slide-prone sections of steep slopes.		Prepare and implement a snow avalanche hazards/ impact mitigation study.	Development shall be permitted if significant impacts can be mitigated. Applications for development on steep slopes shall be accompanied by sufficient information to permit an assessment of impact on slope and adjacent properties.
	To preserve steep slopes as open space.		The Municipality shall develop and implement flexible and bonus point ordinances that allow the reservation of open space through easements, dedications, and acquisition.	Any development of steep slope area shall, during all phases of construction, incorporate control measures to prevent flooding, minimize erosion, and prevent eroded material from entering established drainage systems or natural water courses.  Development of severe slide hazard areas or identified avalanche impact areas shall be prohibited. The Municipality shall seek to preserve open space in steep slope areas through planning, subdivision, flexible and cluster zoning, and planned unit developments.

TABLE 2-1

## GOALS, POLICIES, OBJECTIVES: ENVIRONMENTAL COMPONENT

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
Wetlands	<p>To preserve life and property from flooding hazard, and to enable wetlands to perform their natural function as recipients of floodwaters.</p> <p>To retain in their natural state those wetlands having value for water retention, wildlife habitat, and open space, especially those wetlands contributing significant water flow to a principal stream system.</p> <p>Wetlands that are disturbed by current development, that do not perform essential hydrologic, habitat, or stormwater retention functions, or that are required for other urban purposes, shall be considered for development.</p>		<p>To develop and implement a Wetlands Management Plan that will establish Municipal policy regarding the development, conservation, and preservation of wetlands.</p> <p>To prepare and implement a Wetlands Mitigation Manual that specifies alternative mitigation techniques for building design and construction in wetlands designated for conservation or development.</p> <p>To prepare and implement flexible and cluster zoning ordinances that allow the reservation of critical wetland areas while permitting continued urban development.</p> <p>To prepare and/or revise Master Plans affecting the Turnagain Bog area (controlled by the State Department of Transportation), the Far North Bicentennial Park, and the University Hospital Complex. These analyses shall evaluate the needs for public facility expansion with Federal requirement to protect and preserve critical wetlands areas.</p>	<p>Wetlands shall be preserved in their natural state as identified in the Wetlands Management Plan if they perform essential hydrologic, habitat or stormwater detention functions.</p> <p>Wetlands shall be allowed to be developed as identified in the Wetlands Management Plan if they do not perform essential natural functions and are required for urban uses and activities. Mitigation measures shall be considered and, if appropriate, applied in areas undergoing development.</p> <p>New development on wetlands shall use construction and design methods that will minimize construction impacts and retain natural hydraulic functions to the extent practicable.</p> <p>Storm drainage facilities shall be developed to maintain natural hydraulic functions and continue established base flow patterns to adjacent streams and lakes.</p> <p>The Municipality shall minimize alterations in the quantity and quality of the natural flow of water supplying the wetlands and shall protect critical wetlands from adverse dredging or fill activities, from toxic materials resulting from seepage and from situation resulting from construction activities.</p> <p>Landfills in wetlands areas shall be controlled to minimize alteration in natural storage and flow characteristics.</p> <p>Sewer, water and storm drainage projects shall be limited to areas designated as developable in the Wetlands Management Plan unless overriding cost/health conditions exist.</p>

TABLE 2-1

## GOALS, POLICIES, OBJECTIVES: ENVIRONMENTAL COMPONENT

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
Noise Pollution	To reduce or control transportation-related noise.		<p>The Municipality shall prepare noise impact and sensitive noise areas maps for the arterial and heavily traveled collector systems.</p> <p>The Municipality shall prepare and adopt building and design requirements for residential construction and adjoining sensitive, noise impacted areas.</p>	<p>Future residential development shall include traffic noise abatement construction techniques to minimize sound impacts from arterials.</p> <p>The Municipality shall establish and implement standards for noise abatement.</p>
Water Pollution	<p>To maintain existing beneficial water uses in area streams.</p> <p>To achieve water quality levels sufficient to provide fishable, swimmable conditions.</p>	<p>Modify state water quality standards for urban areas to recognize the effects of urbanization.</p> <p>Improve street-sweeping and catchbasin maintenance in those areas without curbs and gutters and having high urban densities.</p>	<p>Continue and expand the water quality monitoring program in areas of expected rapid, dense urban growth.</p> <p>Re-evaluate the Water Quality Management Plan by 1986.</p> <p>Expand the existing water quality monitoring program to include a more comprehensive ground water and surface water quality monitoring component.</p>	<p>Continue the stream corridor protection program by acquiring park land and park easements and by protecting existing vegetated strips along streams.</p> <p>Sufficient land shall be preserved for snow disposal sites in newly developing areas based upon the recommendations of the Water Quality Management Plan, and analyses shall be prepared periodically to assess snow site disposal requirements.</p> <p>Through the use of storm-water detention facilities, ensure that the quality and quantity of urban runoff is within 60% of natural levels.</p> <p>Prohibit point source discharges to area creeks and lakes.</p>

TABLE 2-1

## GOALS, POLICIES, OBJECTIVES: ENVIRONMENTAL COMPONENT

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
Air Quality	<p>To attain the national ambient air quality standards for carbon monoxide within the Anchorage nonattainment area.</p> <p>To prevent any significant deterioration of air quality for pollutant standards for which Anchorage has been designated as being in attainment.</p> <p>To achieve the above goals while maintaining compatibility with other community goals as identified in the Anchorage Comprehensive Plan.</p>	<p>To develop a heightened public awareness of the air quality problems in Anchorage, as well as the costs and benefits of achieving attainment of the standards.</p>	<p>Expand the Department of Public Works design criteria to include more emphasis on storm water detention and water quality protection.</p> <p>Prepare and implement an on-site wastewater management plan for the Hillside area of the community that identifies service areas of sewerage and on-site facilities, establishes a program of on-site system inspection and maintenance, and defines areas suitable for the operation of alternative on-site and community systems.</p> <p>Develop an Air Quality Control Plan for the Anchorage area, which, when implemented, will lead to the attainment of air quality standards.</p> <p>Continue to monitor pollution levels to ensure that improvements are being achieved and to prevent deterioration of those pollutant levels which are currently within allowable limits.</p>	<p>To develop transportation control strategies which are effective in reducing pollution levels and yet are balanced against cost and adverse social impacts.</p> <p>To carefully evaluate proposed programs and projects which may adversely affect air quality within Anchorage. This evaluation should determine conformity to the Air Quality Plan and offer alternatives if needed.</p>

## 2.3 TRANSPORTATION COMPONENT

### 2.3.1 Description of Program

The transportation system is directly related to the patterns and densities of land uses in the community. The function of this system is to connect the activity areas associated with particular patterns of land uses. It allows human interaction to occur through the movement of people and goods.

Besides the function of reducing the barriers of time and distance, the transportation system performs several additional services. All of these require the consideration of transportation, within the context of economic and land patterns. Transportation, along with water and sewer facilities, serves as a principle determiner of land use patterns and densities. The accessibility provided by transportation creates and fosters land development. For this reason, transportation is an essential element of all land guidance programs -- such as the program stipulated in this Plan. It also provides a strong support function to land use development by allowing economic and human interaction to occur on a convenient, economical basis. Its ability to influence the rate and pattern of overall economic development is highly significant. The importance of transportation in this regard cannot be overstated, particularly in providing access to major industrial facilities and to the major regional shopping centers of the Downtown and Midtown.

The relationship between transportation and land use planning is eminently critical because of the important spatial, physical development orientation of the Comprehensive Plan. The land use patterns identified herein represent desired Municipal policy regarding urban development patterns and densities. Because Transportation forms a necessary link to the creation of these patterns, it is perhaps the most important of all urban infrastructure elements affecting land development.

### 2.3.2 Issues

The transportation system is confronted with increasing service demands, derived from expected increases in both population and economic growth. The rate and level of growth actuate the requirements for an ever-increasing transportation network. The central issues of

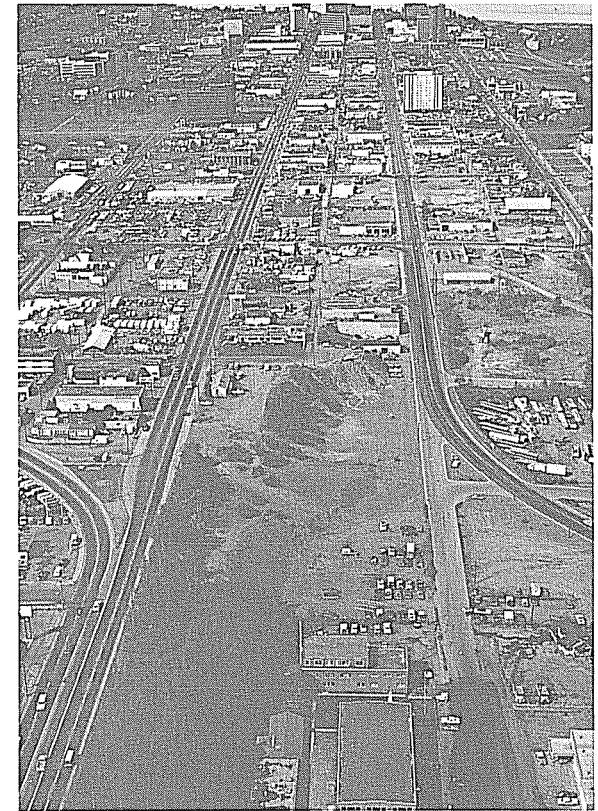
transportation planning concern how and to what extent transportation services can be developed to accommodate these expected increases in urbanization.

The projected volume of trips generated between activities indicates the expected demand for increased transportation services. The Anchorage Metropolitan Area Transportation Study estimated that 802,000 trips were made in 1970. In contrast, by the 1995 design year of the Long Range Element Plan, nearly 1,451,000 such trips are projected. If these estimates are realized, and the increase in person-trips over the last ten years seems to indicate the likelihood of this, major increases in the level and kind of transportation facilities and services must be provided. A basic consideration in transportation system expansion is the level of modal split. This level indicates the amount, as a percent, of the total number of person-trips made using transit. Presently, only 1.5 percent of all such trips are made by transit. Nonetheless, it is expected that, by the year 2000, ten percent of all person-trips will be made using transit. Whether this level of diversion, from the private single-occupant automobile to the more energy-efficient modes of transit and carpooling, can and will be made is a major variable in developing the transportation system.

Certain secondary issues are created through transportation improvements. These impacts are generated by the expected growth of the system, and include considerations of energy utilization, the impact on air quality as vehicle emissions grow, and the financial costs of system development.

### Energy Utilization

As the number of vehicle trips increases, gasoline consumption tends to increase proportionally. As described in the energy component of the Comprehensive Plan, the scarcity and cost of gasoline and other petroleum products are expected to rise over the next several decades. Therefore, the development of an energy-efficient transportation system must be a main consideration to continued community mobility. Transportation planning must focus upon the necessary modifications in cultural attitudes and behavior patterns, the creation of mechanisms to ensure the provisions of transportation



services under reduced petroleum supplies, and the ability of the transit system to accommodate expected rises in ridership.

### Air Quality

Similar to the impacts upon energy consumption, the increasing number of vehicle trips projected by the year 2000 should markedly impact levels of carbon monoxide emission in the metropolitan area. Anchorage is currently designated as a carbon monoxide non-attainment area by the U.S. Environmental Protection Agency, and significant increases in the level of carbon monoxide in this area are discouraged. These levels are especially high at intersections in the Midtown and Downtown



areas, which accommodate large volumes of vehicular traffic, especially during the peak-hour periods. It will be necessary to develop both an improved transit system and increased use of alternative transportation modes, such as vanpools and carpools, to effectively reduce carbon monoxide emissions to amounts consistent with both Federal and State standards. Some form of vehicle inspection-maintenance program may also be necessary.

### Financial Resources

The need for improved transportation are reflected in the costs to develop such a system. These costs exist for both roadway and transit improvements, and total 1,357 million dollars in 1978 prices. The costs of the roadway

system alone are expected to reach \$765 million, while that of the transit system could be \$592 million. The revenue projected to be available for these facilities only approach \$841 million. The ability of the Municipality to derive additional funds, re-allocate funds from other activities to transportation, or reduce transportation expenditures, are all issues facing the Municipality over the next 10-20 years.

### 2.3.3 DIRECTION OF MUNICIPAL PROGRAM

The policy of the Municipality is to develop a integrated, multi-modal transportation system that balances improvements in transit and highways. The rationale for a balanced development approach is derived from the

previously described issues. Because of increasing petroleum costs, escalating operating and construction costs of both facilities and vehicles, and impacts on air quality caused by a rapidly increasing vehicle fleet, it is essential that passenger-efficient transportation modes be developed. Emphasis must continue in developing a transit system and alternative modes program, that is increasing aggressive in its attempts to divert trips from single-occupant vehicles.

Roadway improvements necessary to accommodate projected single-occupant vehicle volumes are identified in the Anchorage Metropolitan Area Transportation Study Long Range Element Transportation Plan. See Map 2-3. The Transportation Plan tries to use existing rights-of-way for highway improvements and, in the few instances where new roadways are projected, to phase these improvements in response to incremental increases in volume. Much of the expected traffic volume carried by the roadway network should be funneled within the three major corridors of the Glenn Highway, the New Seward Highway, and the Minnesota Bypass. These facilities should accommodate most of the intra-urban trips that have trip destinations of over five miles.

The provision of transit facilities is an essential aspect of the Long Range Transportation Plan, and will be required to relieve overcrowded road systems, as well as allow added mobility. A modal split level of 10 percent is assumed in the Plan. This will require a major expansion of fleet size, to a fleet of 540 by the year 2000. Currently there are 31 buses on 14 routes in the Anchorage Bowl. Bus system development will concentrate on using a grid route system which tends to be more effective in providing accessibility under patterns of higher urban densities. Feeder routes with coordinated transfers are being designed for the low density areas where transit services will be provided. It will also concentrate upon the development of express bus facilities from outlying residential areas to inlying employment centers, especially at the Midtown and Downtown. The Transportation Plan recognizes the potential for light rail development and high occupancy vehicle lanes along primary transit corridors. Two primary transit corridors are to be established: the more central portions of western and eastern



Northern Lights and the C Street corridor extending to south Anchorage. It is Municipal policy to concentrate transit system improvements in these corridors, and to establish and encourage land use patterns that create the higher densities required for line-haul express bus systems.

Lastly, the Transportation Plan deals with developing an alternative modes program, and with providing the support facilities designed for pedestrian and bicycle forms of transportation. The pedestrian and bikeway forms of transportation are intended to be integral parts of the overall transportation system, and are identified at length in the **Areawide Trails Plans**. The alternative modes program concentrates on the increased use of carpooling and vanpooling, and the establishment of a management system which emphasizes the staged development of transit facilities and alternative modes strategies. The systems of walkways and bikeways are intended to provide access to and within residential areas, to connect residential areas with schools and major activity centers, and to form an access pattern to major recreational and open space resources and to transit corridors.

Although discussed separately, each transportation mode is intended to provide an important link in the way in which people are transported within Anchorage. Municipal policy is to encourage an expanded use of the transit system, and to make more efficient use of roadways through the increased use of alternative modes programs. This should balance roadway construction with the development of the other, more efficient transportation modes.

#### **2.3.4 TRANSPORTATION POLICIES AND GOALS**

The transportation policies and goals of the Municipality, given in Table 2-2, reinforce the previous recommendations to develop a balanced, multi-modal transportation network. These goals and policies have been derived from previous transportation studies (particularly the Long Range Transportation Plan) and from the public participation process associated with the development of the 1976 Comprehensive Development Plan. They are meant to be consistent with the Comprehensive Plan, and are designed to reinforce the desired land use patterns and densities given in Maps 3-1 and 3-2.

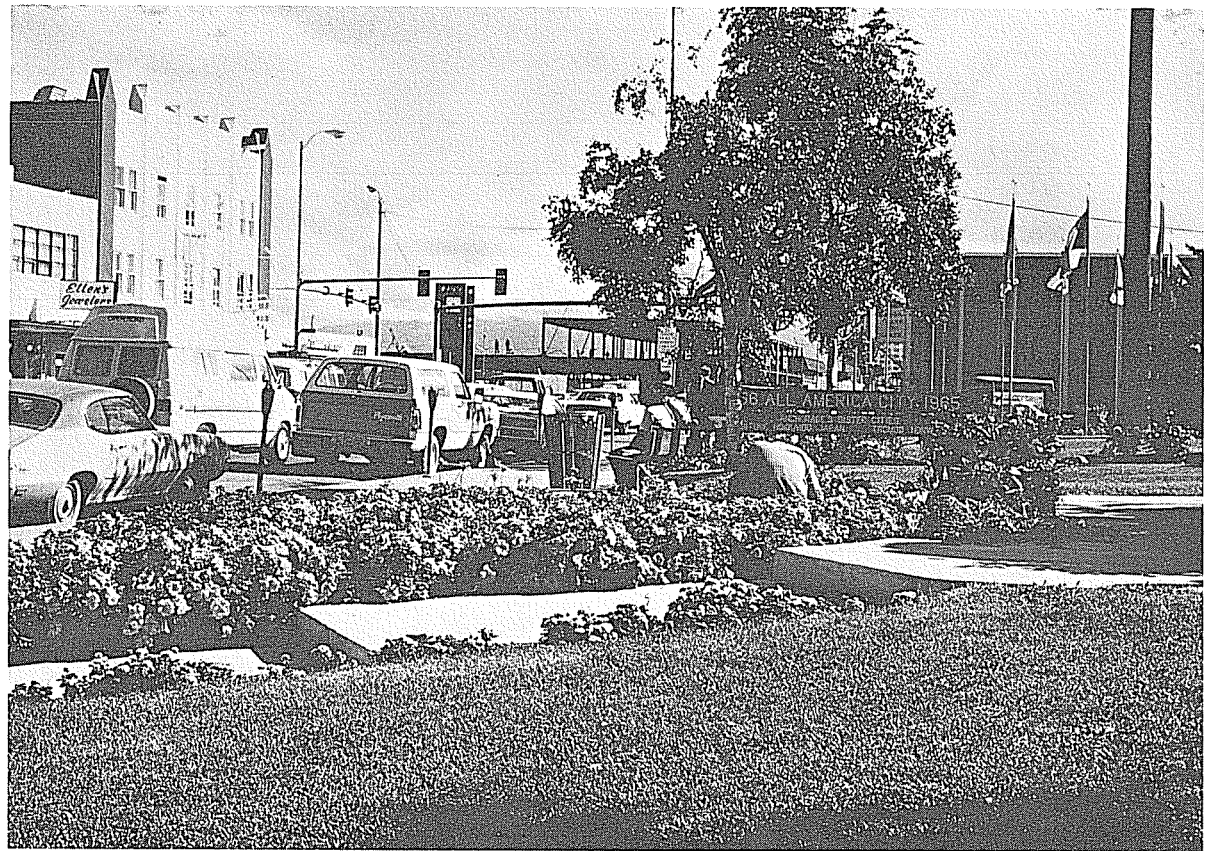


TABLE 2-2

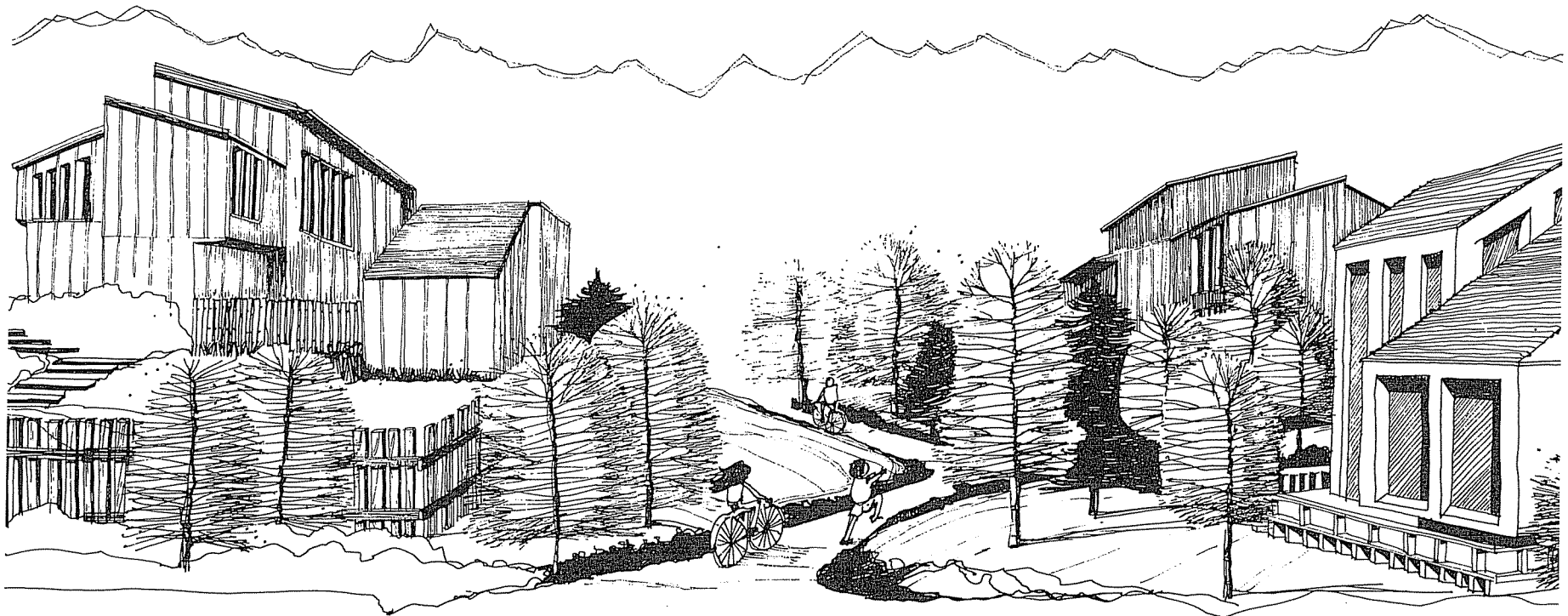
## GOALS, POLICIES, OBJECTIVES: TRANSPORTATION COMPONENT

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
Transportation	To develop and maintain a transportation system that provides a minimum level of service to essential private and public services, maximizes safety, minimizes environmental impacts, and provides alternate modal uses	To develop a plan that promotes and enhances the quality of the environment.	Develop and adopt the Street Tree Landscape Plan as the basis for Municipal policy on arterial landscaping.	Streets that have major visual impacts on the community shall be enhanced with landscaping
			Prepare and implement an Areawide Air Quality Management Plan.	Air quality standards shall be achieved as stipulated in the State Implementation Plan.
			Adopt acoustical standards for new multi-family construction adjacent to major arterials.	Energy consumption from the use and maintenance of the transportation system shall be minimized.
		To reduce dependency on the automobile.	The ongoing alternative modes and transit development programs shall be expanded.	Noise pollution shall be minimized. Reductions in automobile dependency shall be encouraged through staggered work hours and car/van pooling programs.
			A six-year transit expansion plan shall be prepared to provide the basis for routing and scheduling of the bus system, and for capital facility programming.	Transit mode usage should be maximized and encouraged. Transit headways should be minimized in high density developed areas.
		To develop a transportation network that promotes and supports planned land use patterns as reflected in the Anchorage Comprehensive Plan.	The Official Streets and Highways Plan and AMATS Long Range Element shall be reevaluated to minimize potential vehicular impacts upon neighborhoods, to conform to the Comprehensive Plan's development recommendations, and to reflect an achievable 15 year modal split level.	The development of bikeways and landscaping shall be required as component parts of a highway improvement project if either are identified on adopted plans and are determined to be feasible.
				The need for additional capacity in the roadway network shall be accommodated, to the maximum extent possible, by widening existing rights-of-way and by providing additional transit service. Use of new rights-of-way should be minimized.

TABLE 2-2

## GOALS, POLICIES, OBJECTIVES: TRANSPORTATION COMPONENT

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
		<p>To integrate elderly and disabled transportation planning with the other forms of transportation planning, and develop an elderly and handicapped transportation facilities plan as a component part of the overall transportation system.</p>	<p>Changes in zoning and setbacks shall be prepared to preserve necessary rights-of-way along primary transit corridors.</p>	<p>The transportation system should provide adequate access to employment, cultural, recreational, commercial and residential centers. The cohesiveness of neighborhoods shall be preserved.</p> <p>There shall be special provisions for the transportation of the elderly and handicapped.</p> <p>The roadway network shall be designed to provide a minimum level of service "D" during the weekday peak hours.</p> <p>Proposed transportation projects shall be consistent with the use/land density recommendations of the Comprehensive Plan and shall attempt to reinforce those patterns.</p> <p>The scheduling of projects in the Municipal and AMATS improvement programs shall correspond to the time-phasing recommendations of the Comprehensive Development Plan.</p> <p>Transportation improvement projects shall be scheduled to provide as much system continuity as possible.</p>
		<p>To provide the community with a balanced multi-modal system that provides for the safe and efficient movement of people and goods.</p>		



## 2.4 PARKS, RECREATION, AND OPEN SPACE COMPONENT

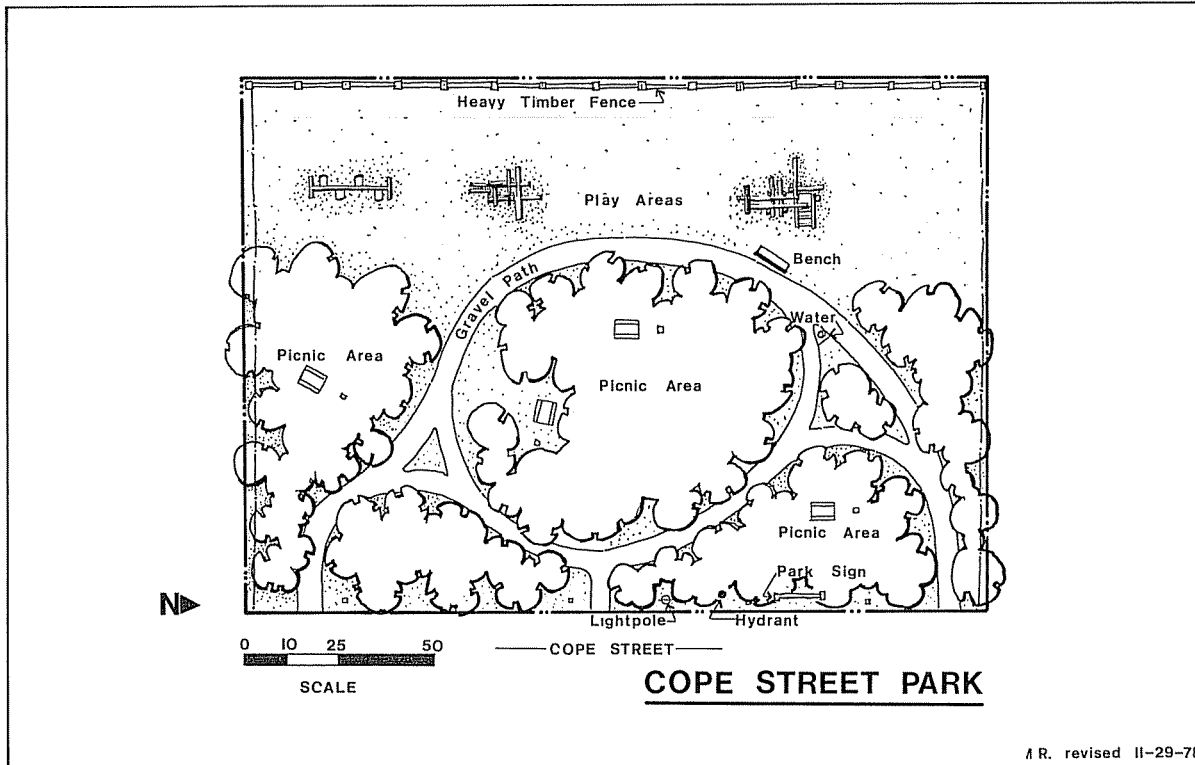
### 2.4.1 INTRODUCTION

The Comprehensive Plan is intended to provide guidance and direction to land usage patterns and densities, and physical development. Whereas other components of the Plan focus on such basic human needs as shelter, work, and mobility, the Parks, Trails, and Open Space component focuses on another basic need -- community well being. The function of a parks and open

space system within Anchorage is to provide space for a range of leisure activities, and to retain a dimension of the natural environment as a part of the overall design of the community landscape.

Population pressures and availability of leisure time have brought needs for recreational space and facilities. They have also brought an intangible psychological need for visual refreshment, and mental exercise away from routine home and work environments. Population pressures resulting from a rapidly growing community have also brought a need for establishing pride, personality and stability to the surrounding environment. The establish-

ment of a functional parks, trails, and open space system is key to meeting these community needs in Anchorage. Anchorage has a finite amount of land available upon which to accommodate future population growth and economic expansion. Competition for land for residential subdivision, industry, shopping, schools, and many other uses will continue. It is important that appropriate lands to be dedicated for parks, trails, and open space. The Parks, Trails, and Open Space component of the Comprehensive Plan addresses the land needs, geographic distribution and spatial relationships of parks, trails, and open space to other land uses within the Anchorage Bowl.



The Parks, Trails, and Open Space component contains a system consisting of three inter-related elements:

- Parks
- Trails
- Greenbelts and Other Open Space

Detailed descriptions and analyses of these elements are contained in the **Areawide Trails Plan** and (draft) **Parks, Recreation, and Open Space Plan**. As proposed in these plans, the parks and open space are largely unified into a system with trails and greenbelts (or natural corridors) forming links among the major parks and educational facilities. When these plans are implemented, most Anchorage residents will be able to have recreation opportunities close to home and connections to parks throughout the Anchorage Bowl.

Methods by which park, trail, and open space land allocations and acquisitions are made will vary. Parks -- whether serving neighborhoods or greater segments of population--are planned according to a series of standards. The acreage allocations for parks are directly related to the population of an area. However, the open space system allocations are based on environmental, social, and recreational values which are not necessarily tied to population. These values include protection of such natural areas as stream corridors, wetlands, and woodlands.

Acquisition of park, trail, and open space lands vary, from fee simple purchase to dedication of easements through the platting process. Map 2-4 graphically depicts those park, open space, and related public uses that are components of this program. This plan, and its spatial expres-

sion in Map 2-4, is meant to provide a general direction to the development of the Municipality's open space and park programs in terms of acquisition, development, and related land use decision-making. Neither this plan nor Map 2-4 are meant to specifically exclude compatible uses in areas identified as parks and open space nor do they constitute a dedication of these areas for park uses as specified in the Municipal Charter.

#### 2.4.2 PARKS

##### Description of Program

Traditionally viewed as passive nature-oriented areas, many parks today also serve a major function of providing active recreational opportunities for people of all ages. Thus, urban parks systems are composed for properties that vary in size, location, function, service area, and development.

Parkland need is primarily based upon a series of recreation area standards. The acreage allocations for parks are directly related to the population of an area. Standards for parks were developed in the early 1970's by the National Recreation and Park Association. Anchorage has employed these standards in park acquisition and facility development during the past decade. The analyses and projections of future park land needs are based upon these standards.

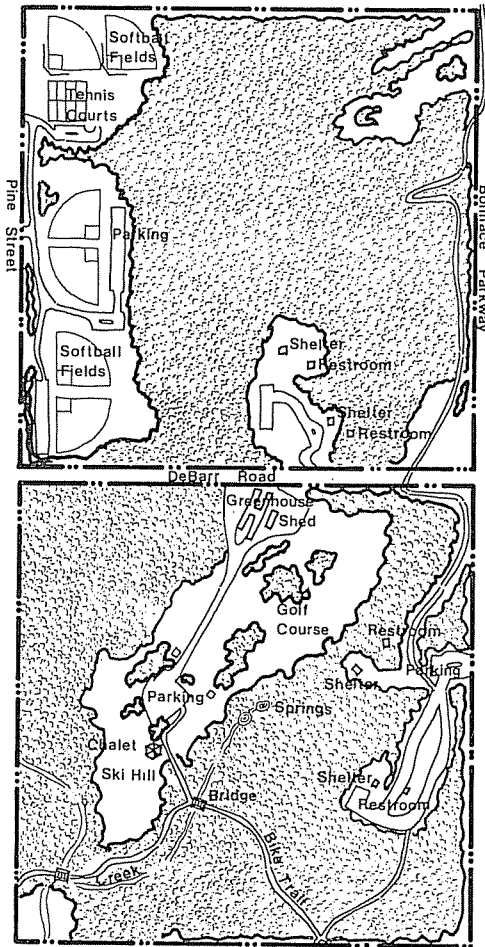
The standards divide parks into three groups based on the areas that they serve: (1) those that serve one neighborhood, which would include playlots, vest pocket parks, and neighborhood parks; (2) those which serve several neighborhoods of a community, which would include community parks; (3) those that serve a large section of the Anchorage area or entire metropolitan area, which includes large urban and regional parks. (See Table 2-3 for a listing of the park standards utilized in Anchorage). Following is a brief description of each park type:

**Playlots:** Small areas intended for preschool and elementary school children, with provisions for adult attendants. Greatest need in areas of high density where backyard play opportunities are not available.

**Vest Pocket Parks:** Intended to serve specific groups depending on character and needs of immediate neighborhood. May serve children, senior citizens, or all age groups. These are usually vacant lots converted to recreation use.



## Russian Jack Springs Park



MR 2 - 13 - 79

**Neighborhood Parks:** Intended to provide areas for both passive and active recreation for people of all ages. Usually serve about a square mile of urban area and population ranging from 2,000 to 10,000. Size ranges from 5-20 acres. Location next to elementary schools are preferred.

**Community Parks:** Intended to supplement neighborhood parks in providing near-at-hand recreation areas. They provide space for those recreational activities which can not be accommodated within a single neighborhood park. Intended to serve 10,000 - 50,000 people. Size ranges from 20 - 100 acres. Locations next to secondary schools are preferred.

**Large Urban Parks:** Intended to serve all residents within Anchorage Bowl. At least 100 acres in size, these parks generally have a mixture of natural areas and developed special facilities. Such facilities may be golf course, trails, nature center, boating, swimming or picnic areas.

**Regional Parks:** Basically large land preserves with natural orientation. Development limited and oriented to outdoor activities incidental to maximum enjoyment of nature and natural scenery. Should be located within one hour drive of urban area.

The value of using these standards are threefold:

- Standards provide a systematic means to approach park acquisition and development;
- Application of standards help to promote the equal distribution of park land and recreation facilities from one community to another; and
- Standards help to maintain a balanced system of parks, providing a wide range of recreation opportunities.

### Issues

In total acreage, Anchorage would at first appear to have a substantial amount of park acreage with which to accommodate future population needs. However, it is very important to note the location and function of most of the park land.

Currently, Anchorage has over 6,600 acres in Municipal parks and open space. By far, the greatest portion of that acreage is in the ten large urban and regional parks -- of which two are located in the Eagle River/Chugiak/Eklutka area, and one at Bird Creek along Turnagain Arm.

Following is a summary of Anchorage municipal parks and open space by type:

Vest Pocket and Neighborhood Parks	227.45 acres
Community Parks	475.87 acres
Large Urban and Regional Parks	5,932.70 acres

Although they comprise the least amount of acreage in the parks and open space inventory, vest pocket and neighborhood parks are the most numerous, totalling 65. Community parks total 11, and large urban and regional parks total 10 (including Section 16 and Pt. Campbell Military Reservation).

In regard to land acreage needs, and relative geographic distribution, there is an ample amount of large urban and regional park land to meet current and future population needs. This is particularly so if Chugach State Park (495,000 acres) and Campbell Airstrip Tract (4,000 acres) are also considered.

The foundation of a good park system, however, is at the neighborhood and community park level. Current and future needs for playlots, vest pocket, neighborhood, and community park lands vary within the Anchorage Bowl. By using the park land standards, current and projected park land needs are identified for each of the sub-areas, or communities, within the Anchorage Bowl. Priorities are established in order to focus near-term park land acquisition in areas where current needs are greatest.

### Direction of Municipal Program

The direction of the Municipal park program is toward further park land acquisition and development commensurate with current and projected population growth. The focus of park land acquisition will be at the neighborhood and community level. Unlike large urban and regional parks which were originally public lands, community, neighborhood, and vest pocket parks have primarily been privately owned lands requiring acquisition, in most instances, by fee simple purchase. This circumstance is not likely to change. Higher acquisition cost will require thorough evaluations of sites to be considered for additional park land. A number of strategies will be employed. Most notable are:

Table 2-3

**STANDARD FOR PARKS BY CLASSIFICATION AND POPULATION RATIO  
Municipality of Anchorage**

<b>Classification</b>	<b>Acres/ 1000 People</b>	<b>Size Range</b>	<b>Population Served</b>	<b>Service Area</b>
Playlots	*	2,500 sq. ft. to 1 acre	500-2,500	Sub-neighborhood
Vest Pocket Parks	* ●	5,000 sq. ft. to 1 acre	500-2,500	Sub-neighborhood
Neighborhood Parks	2.5	5-20 acres	2,000-10,000	¼ - ½ mile radius
Community Parks	2.5	20-100 acres	10,000-50,000	½ - 3 mile radius
Large Urban Parks	5.0	100 + acres	one per 50,000	Within ½ hour driving time
Regional Parks	20.0	160 + acres	Entire population in smaller communities; need distribution throughout larger metro areas	Within 1 hour driving time
Special Areas & Facilities	*	Includes parkways, beaches, plazas, historical sites, floodplains, downtown malls, small parks, tree lawns, etc. No standard is applicable.		

\*Not applicable

Adapted from: National Park, Recreation and Open Space Standards.



- Use of portions of greenbelts and public open space areas for recreational facilities where environmentally suitable and appropriately located,
- Certain portions of large urban park lands assisting in meeting neighborhood and community recreational needs, but without unduly compromising the integrity of the large urban parks,
- Playlots, and vest pocket parks to a limited extent, obtained through public dedication in the platting process, and
- Utilization of space standards in school site acquisitions for joint park-school uses.

An additional strategy that is recommended is the establishment of a Municipal land bank of surplus property. Revenues derived from the sale of surplus Municipal lands would be appropriated for acquisition of neighborhood or community park land where needs are greatest and land availability through other means more scarce.

Use of these strategies will result in a well-balanced, equitably distributed park system that will provide recreation opportunities accessible for all age groups to enjoy.

### 2.4.3 TRAILS

#### Description of Program

Trails serve a dual function in Anchorage. They are a recreational facility from which a variety of leisure time enjoyment is derived. In addition, they are also an integral part of the total transportation system, thus providing mobility and accessibility to areas and facilities by various modes of travel.

Details of the Municipal trails program are contained with the adoption **Arcawide Trails Plan**. The trails plan is intended to be the basic policy document for development of trails in the Anchorage area. As such, it serves as the basis for establishing and maintaining access routes and use areas as they relate to community centers and recreational activities.

The Trails Plan identifies trails that serve a variety of modes for travelling safely and enjoyable without automobiles or other large motor vehicles. The trails are intended for bicyclists, pedestrians, equestrians, dog mushers, cross-country skiers, snowmobilers, joggers, handicapped persons, and to a lesser extent, motorcyclists. The Trails Plan identifies the general location for trails development and the types of uses associated with the development.

#### Issues

Anchorage is a community of outdoor enthusiasts with a wide variety of summer and winter-time trails interests. Some uses are compatible on the same trail facility (jogging and bicycling), while others are not (horseback riding and motorcycling). Some trails require special facilities for a specific group of users (handicapped persons trails), while other trails must be located in very specific site areas (dirt bike trails). Because trails serve a variety of users, they vary in design, locational, and aesthetic characteristics. Major issues center on specific route or site selections, impacts on surrounding area, and the joint use of facilities.

#### Direction of Municipal Program

The **Arcawide Trails Program** identifies the general location of the various types of trails. In so doing, it has separated the non-compatible trail users. It has also identified certain design requirements and administrative procedures necessary to implement the proposed non-motorized trail system and motorized use areas.

The major emphasis of the Municipal trail program concerns the further refinement of the recommended trail corridors and implementation. The **Trail Plan** specified general corridor locations for trail development but did not identify particular route locations. These more specific locations are required for the reservation of easement as part of subdivision plats. Implementation of the trail corridors is to occur through the development of the area's overall transportation system and through the

use of available -- and future -- utility and roadway right-of-way. It is the policy of the Municipality, expressed through the adoption of the Trails Plan, to treat bikeways and the other various forms of non-motorized transport as important elements of the overall transportation system. As such, these non-motorized circulation systems are to be incorporated where feasible, as part of highway improvements and major new road projects. It is intended that this general policy will be expressed in multi-modal transportation projects; the development of an integrated system of non-motorized circulation forms providing access to principal trip generation centers, including schools; and in the establishment of multi-use transportation corridors.

The continued application of this multi-use concept in transportation system development will eventually result in the establishment of an integrated trail-highway circulation system serving major trip origins and destinations. In addition, Municipal policy shall also continue to focus on the development of motorized use areas that do not conflict with residential areas and established non-motorized uses. In practice, implementation of this policy will require the increased cooperative use and management of nearby State and Federal lands. Motorized uses are largely incompatible with most urban activities and require large, open spaces only available in adjacent State and Federal lands.

### 2.4.4. GREENBELTS AND CONSERVATION AREAS

#### Description of Program

The greenbelts of Anchorage area a vitally important system. They are natural landscape corridors that link neighborhoods, parks and schools, and act as buffers between different land uses. They help define the physical form of the city by contributing to its memorable character and creating unique neighborhoods.

Following the east to west flow of Chester and Campbell Creeks, the best of the greenbelts remind us of Anchorage's dramatic sea and mountain landscape. In the greenbelts, Anchorage residents and visitors can walk, run, ski and ride from the Chugach foothills to Cook Inlet

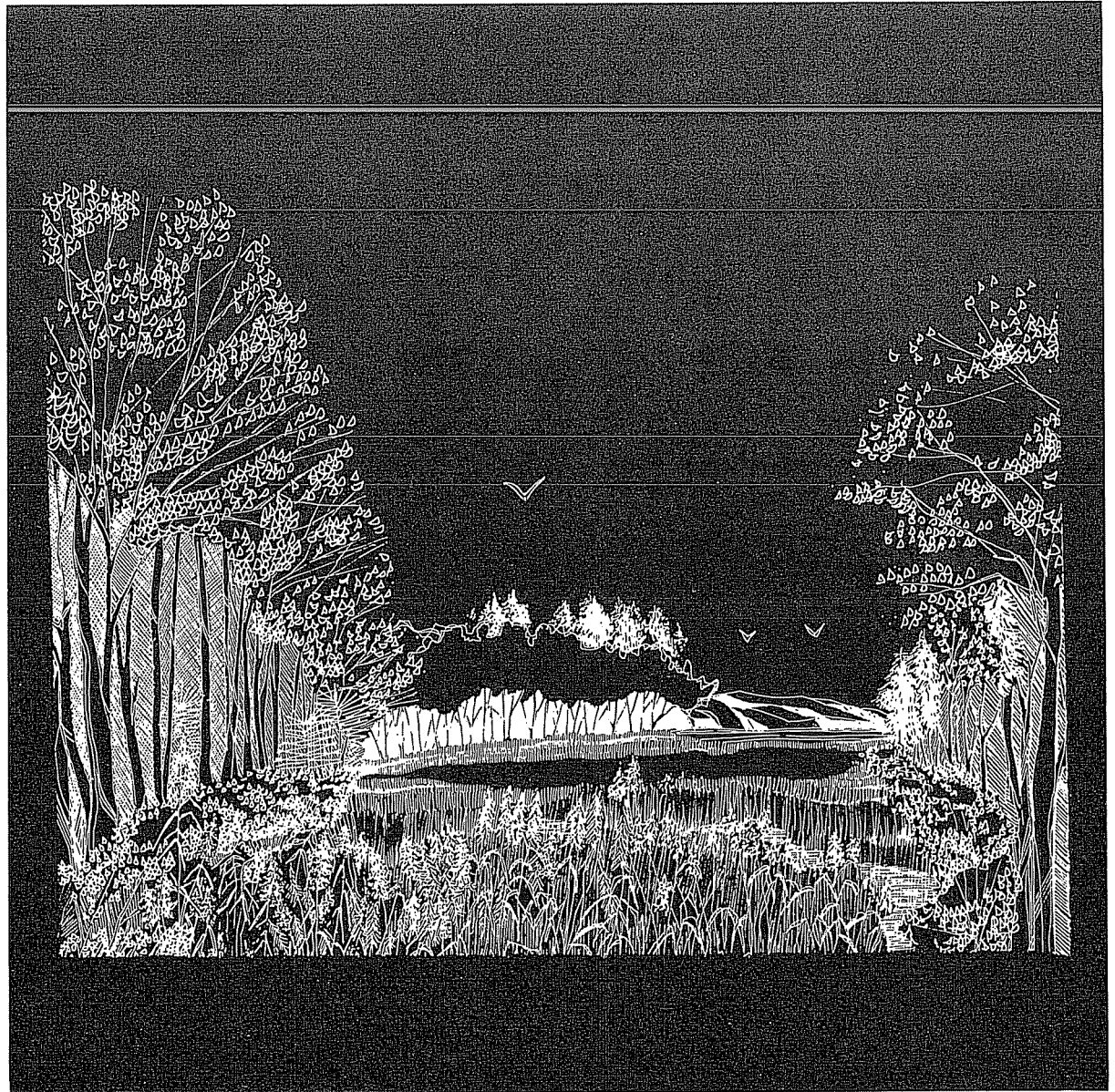
without conflicts with vehicular traffic, and free from city noise and congestion. The greenbelts link many outstanding city parks and their diverse facilities into a continuous recreation system. They provide the opportunity to preserve special places - quiet woods, wetlands and wildlife habitats - for public enjoyment in their natural state. Greenbelts contribute the most amenity when they are easily accessible to residential neighborhoods. Residents of adjacent housing developments can take advantage of increased recreation opportunity and transportation alternatives. A major objective of this plan is to join neighborhoods to park land through open space corridors. The greenbelt element of the Parks and Open Space Plan is designed to complement the overall land use plan. Corridors are identified:

- to conserve natural features of land;
- to serve as buffers between different types of land use;
- to lend definition to neighborhood areas;
- to provide links between residential areas, education facilities and existing park lands; and
- to provide recreation opportunities close-to-home, minimizing time and barriers to participation.

#### Issues

Three growth-related issues form the context of the proposed additions to Anchorage's greenbelt system. The recommendations include both the development of already adopted greenbelts and the adoption of new ones to complement the system. These greenbelt proposal plans are made with considerable urgency: Anchorage is at a critical point in its urban development. Heretofore, private undeveloped land was easily accessible for casual recreation use. That option is rapidly disappearing, particularly for linear trail activities. People find that their usual dog mushing, horseback riding and skiing trails are blocked by new residential subdivisions. Suitable recreation land should be reserved before presently vacant land is fully developed.

Greenbelt proposals address a set of water-related issues. The urbanization of the Anchorage Bowl has strained the area's hydrologic system by increasing demand for water, changing ground water flow patterns,



and increasing surface runoff. The protection of stream courses and wetlands is necessary to preserve water quality. Recreation is often the only appropriate use of stream corridors and wetlands that are unsuitable for other land uses. Anchorage has a policy of establishing stream corridor open space, i.e., Chester and Campbell Creek greenbelts. The new greenbelts proposed by this plan continue this policy. In addition, the plan proposes reserving certain highly valuable wetlands as dedicated open space, with residential development planned for surrounding land.

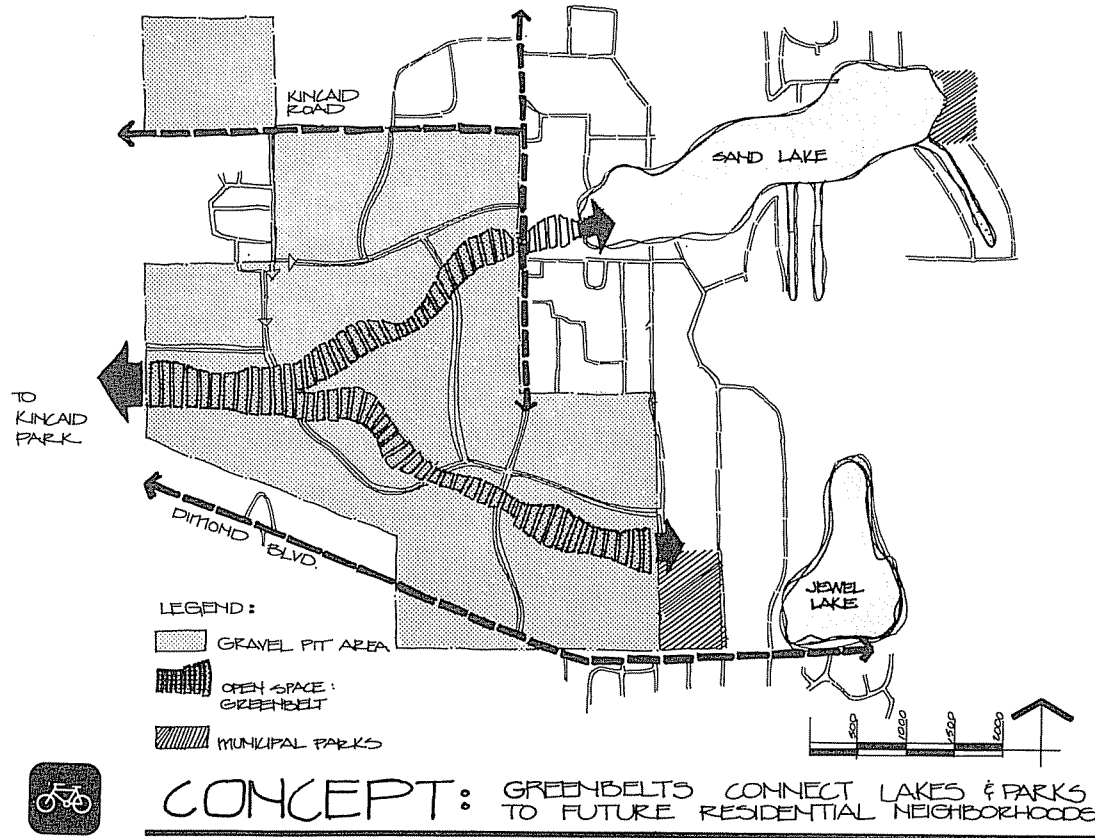
The third issue affecting greenbelt concerns the opportunity for the restoration of former gravel extraction sites. Through careful design and landscape reconstruction, these sites will be able to accommodate future housing which reserving greenbelts as an integral part of the development.

### Greenbelts and Other Open Space

The current Municipal greenbelt system has two categories of greenbelts, distinguished by different levels of development. The two most completely established greenbelts are Chester Creek and Campbell Creek Greenbelts. They constitute one of Anchorage's most important urban recreation resources. The Municipal Assembly has also adopted, but not developed fully, Fish Creek and Rabbit Creek Greenbelts. Other undevelopable tracts supplement the system, and are reserved as natural open spaces.

This Parks and Open Space Plan proposed the following greenbelt and open space additions (see map) to the present system:

- Sand Lake Gravel Pit Restoration
- Sand Lake, Sundi Lake and Jewel Lake Open Space
- South Fork of Chester Creek Greenbelt
- Klatt Bog-Connors Bog Greenbelt and Connors Lake Open Space
- Nunaka Valley/Cheney Lake Greenbelt
- West Turnagain Greenbelt
- University-Muldoon Area
- Muldoon to Merrill Field Greenbelt
- Furrow Creek - O'Malley Greenbelt



- Little Campbell Creek Greenbelt
- Birch Road - Hillside Drive Greenbelt
- Little Rabbit Creek Greenbelt
- Potter Creek Greenbelt and Johnson Trail Corridor
- North and South Forks of Campbell Creek Open Space
- Fish Creek Estuary Open Space

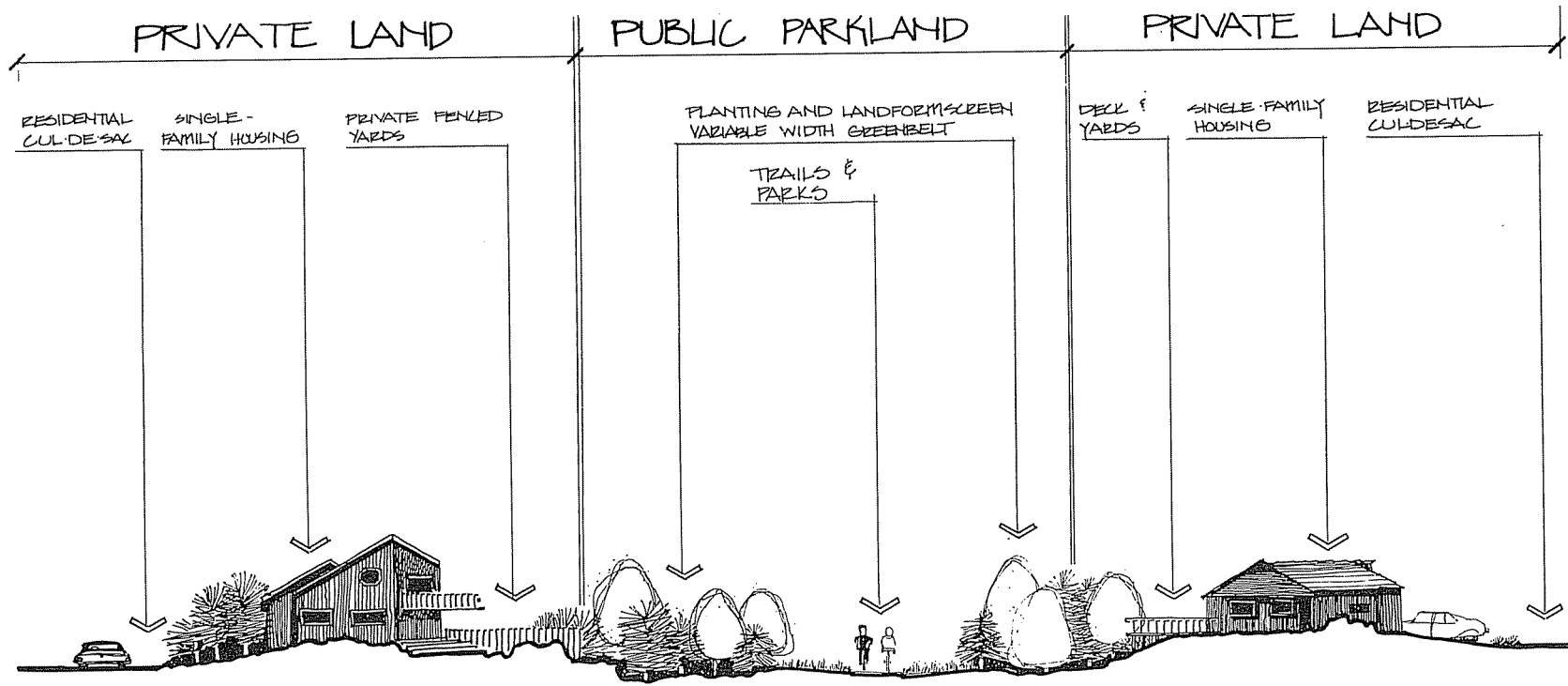
The proposed additions are based on the premise that greenbelts should be reserved before areas are developed, thereby avoiding costly and difficult acquisitions in built up areas. When new residential developments,

parks, and greenbelts are planned at the same time, neighborhood residents are able to get the most advantage from well-located and cost-effective outdoor recreation facilities. Highlights of these additions illustrate this integrated planning approach.

The Rabbit Creek Greenbelt is considered a "Special Study Greenbelt" within the context of this Plan. The concepts are: 1) to provide creek maintenance provisions along the creek from Buffalo Street to the west, and 2) to provide both creek maintenance and public access along a linear park from Buffalo Street to the east. The "special study" will be carried out as part of the Park, Greenbelt and Recreation Facilities Plan.

● Sand Lake Greenbelt

The Sand Lake gravel pits can be restored to accommodate residential development. A unified restoration/development plan should provide housing at variable densities, and reserve greenbelts through housing areas. The public greenbelts would be bounded on both sides by private land. Variable width corridors could link tot lots and neighborhood parks, and provide trail connections to Sand Lake, Jewel Lake, Jade Park and Kincaid Park.



SECTION : GREENBELT THROUGH RESIDENTIAL NEIGHBORHOODS IN RESTORED SAND LAKE GRAVEL PITS

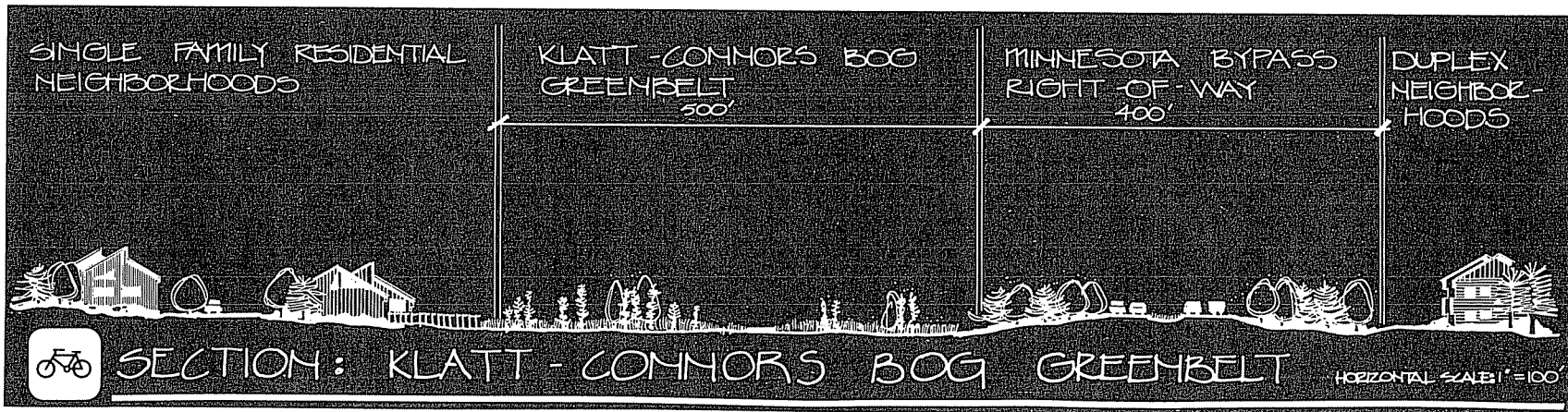
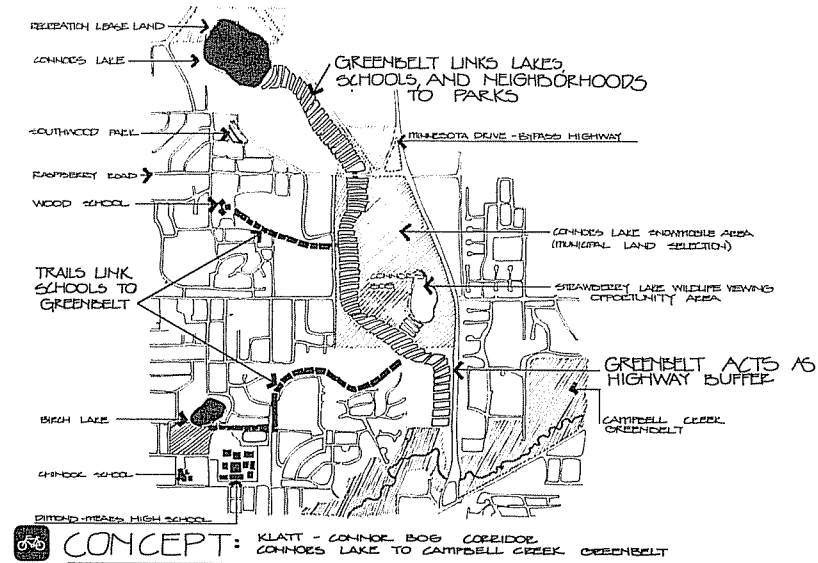
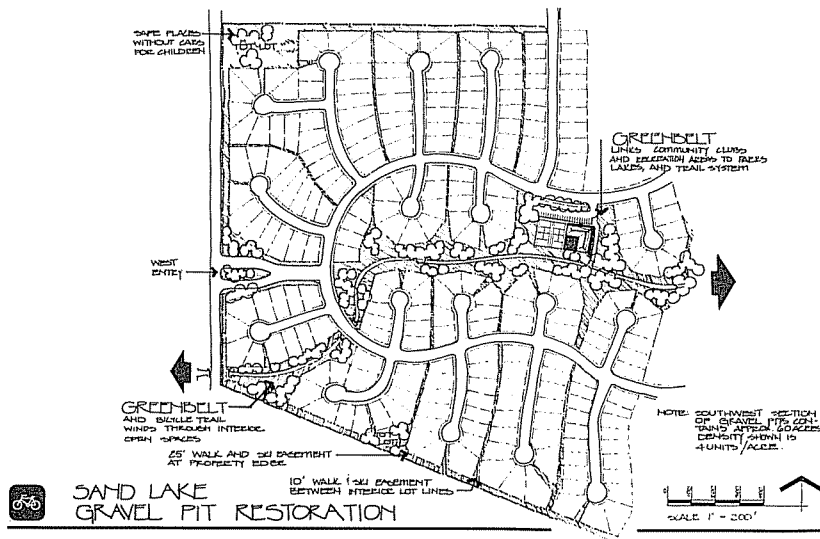
NO SCALE

● Klatt-Connors Bog Greenbelt

A major north/south open space and recreation corridor is needed in the Anchorage Bowl. Through the bog

the corridor should be 200' in width. Adjacent to the Minnesota by-pass a 500' corridor will serve to buffer nearby residential areas. This corridor would link people

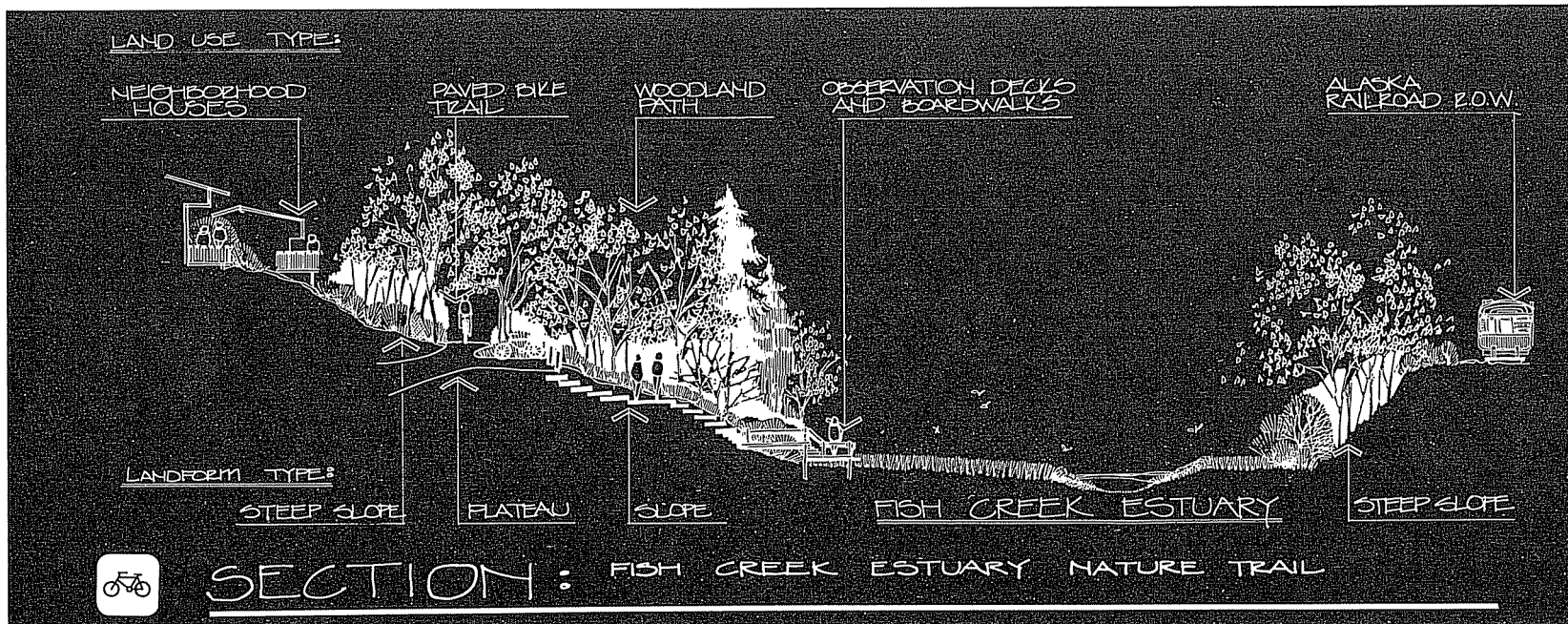
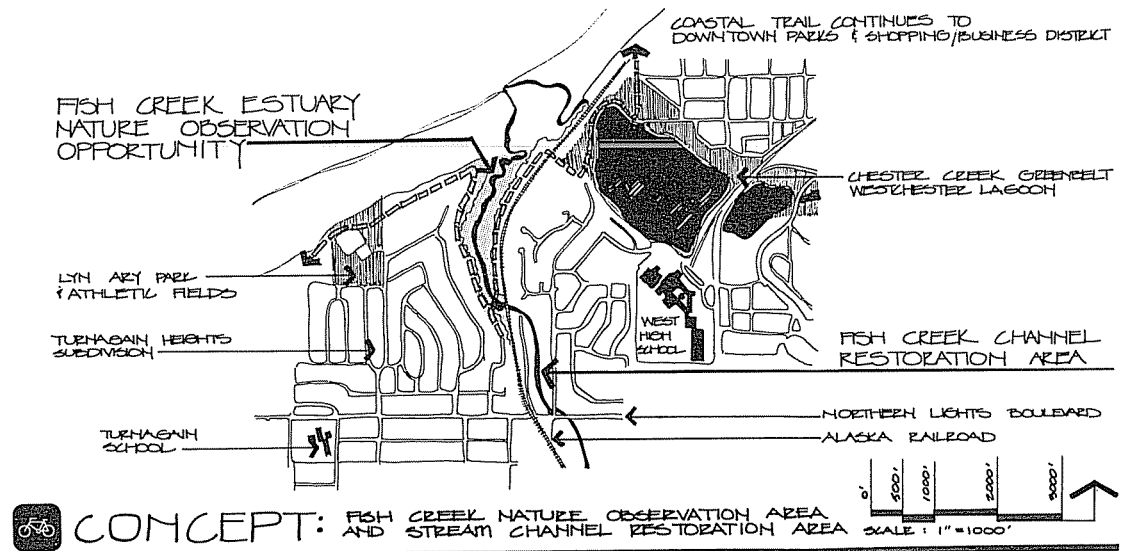
in residential communities of Bayshore, Oceanview, Klatt, Sand Lake and Spenard with Campbell Creek Greenbelt, Connor's Lake, and Coastal Trail.





### Fish Creek Estuary Open Space

Fish Creek estuary is a rich wildlife habitat with outstanding scenic views, near schools, residential neighborhoods and the downtown business district. It has been identified through the Anchorage Coastal Management Program as an Area Meriting Special Attention. The resultant management plan suggests development as a handicapped-accessible nature study area, to be linked with the Coastal Access Trail.



● Furrow Creek-O'Malley Greenbelt

A series of birch-spruce woodlands and wetlands offer a significant opportunity to provide an open space system throughout the lower Hillside, providing access to Service High School, Hillside Park, and Section 16 trails. Horseback riding and bicycling trails can be accommodated within the greenbelt.

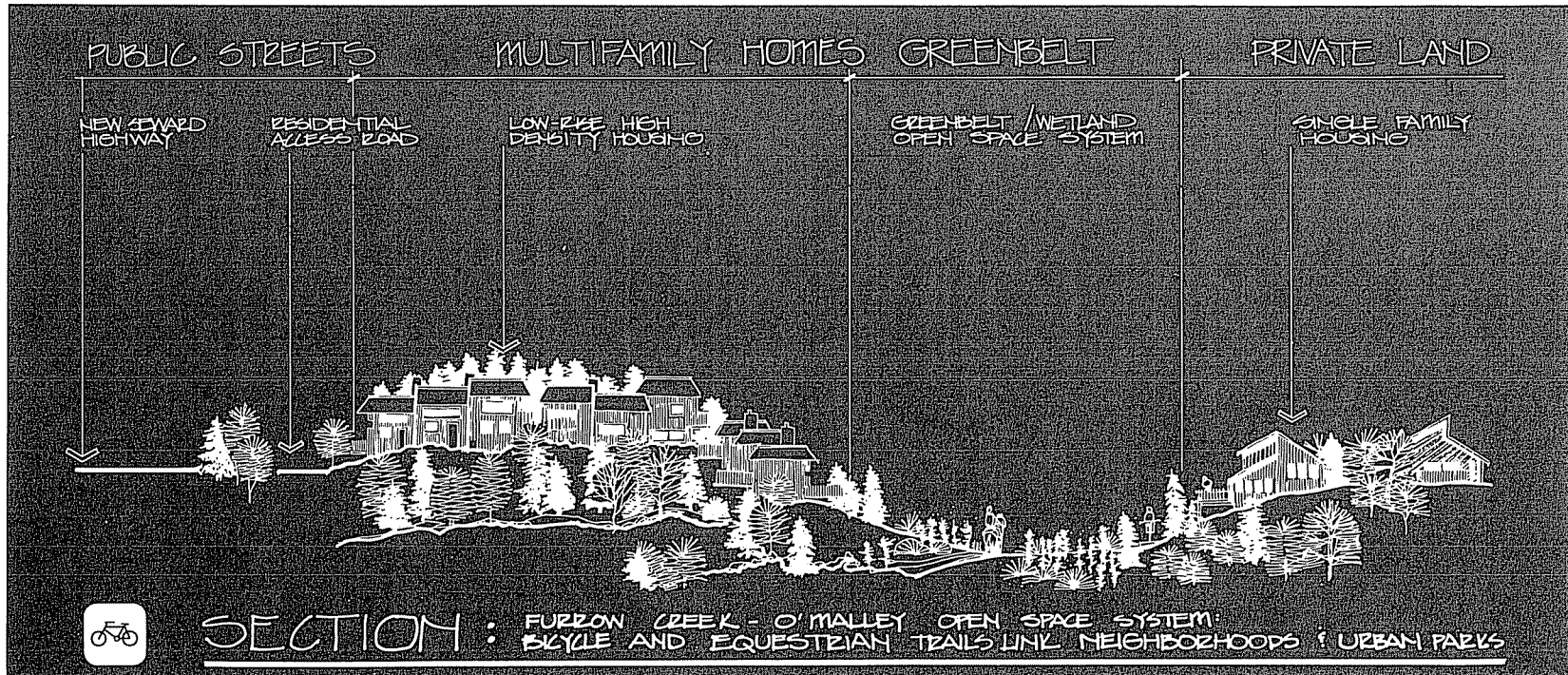
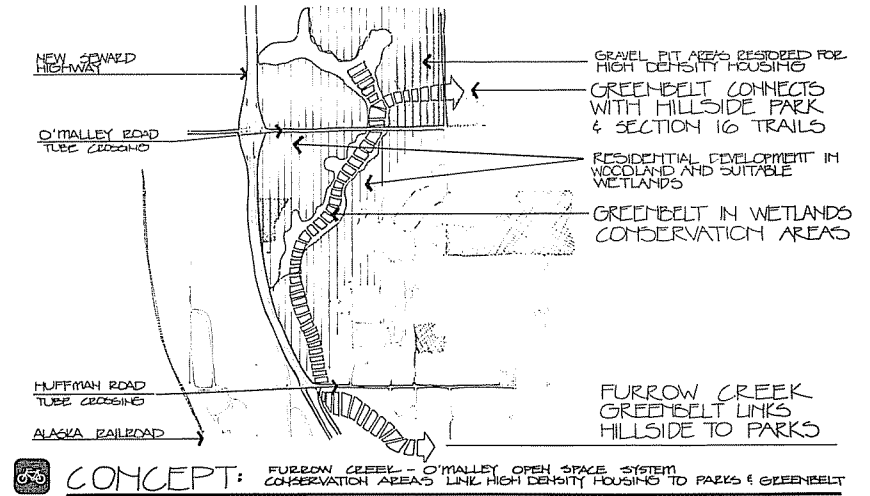




TABLE 2-4

# GOALS, POLICIES, OBJECTIVES: PARKS, TRAILS, AND OPEN SPACE COMPONENT

GOALS	LONG-TERM OBJECTIVES 5 - 15 Years	SHORT-TERM OBJECTIVES 0 - 5 Years	POLICIES
<p><b>Parks, Trails, Greenbelts and Open Space</b> To provide a wide range of recreational opportunities to all segments of the community.</p>	<p><b>General</b> To provide usable, publicly owned open space.</p>	<p><b>General</b> To develop conceptual Master Plans for all parkland as it is acquired.</p>	<p><b>General</b> The Anchorage Municipality will establish, develop, manage and maintain a balanced system of parks, greenbelts, and trails for year-round utilization and enjoyment by all citizens of the community.</p>
<p>To establish an integrated open space network throughout the community based upon existing open space patterns and lands which are ecologically valuable and least suitable for development.</p>	<p>To establish greenbelts along the major streams in the Municipality.</p>	<p>To develop neighborhood and community parks with facilities to meet the needs of the citizens.</p>	<p>The Anchorage Municipality shall adopt standards for parks, greenbelts and trails.</p>
<p>To create a pedestrian-oriented system of parks and greenways linking open spaces and residential neighborhoods and existing and proposed parklands and school sites.</p>	<p>To combine park, recreation and community facilities with school sites in order best to serve residents of the area and reduce costs.</p>		<p>Neighborhood and community parkland will be acquired in anticipation of population growth and community development.</p>
<p>To establish waterfront and water course preservation areas for the protection of unique land and water relationships and vistas.</p>	<p>To encourage the implementation of active recreation programs within publicly owned lands and facilities.</p>		<p>The Municipality and School District shall to the extent practicable, develop joint park/school facility areas in order to provide both educational and recreation services to the adjacent population in a convenient and efficient manner.</p>
	<p>To provide separate use areas for mechanized and non-mechanized recreational pursuits.</p>		
	<p>To promote use of geologic hazard areas and marginal land for parks, recreation and open space.</p>		

TABLE 2-4

# GOALS, POLICIES, OBJECTIVES: PARKS, TRAILS, AND OPEN SPACE COMPONENT

GOALS	LONG-TERM OBJECTIVES 5 - 15 Years	SHORT-TERM OBJECTIVES 0 - 5 Years	POLICIES
<p><b>Parks</b> To establish a system of parks, from the neighborhood to regional level, to serve all segments of the Anchorage community.</p>	<p>A balanced distribution of neighborhood and community parks will be developed throughout Anchorage.</p> <p>Neighborhood parks will be acquire within walking distance of residential areas.</p> <p>Connections between parks especially regional, large urban and community parks, will be established via the greenbelt open space system.</p>	<p>To establish and begin development of the Far North Bicentennial Park.</p> <p>To develop Section 16 in South Anchorage as a large urban park.</p> <p>To reduce or eliminate deficiencies in meeting neighborhood and community park standards.</p>	<p>Development of parklands shall proceed as rapidly as possible within the constraints of capital budgeting and maintenance.</p> <p>If standard size neighborhood parks cannot be acquired, school playground, tot-lots, and vest pocket parks will be developed to meet neighborhood needs. Small park-type facilities, as tot-lot and vest pocket parks, are to be primarily concentrated within high density residential areas.</p>
<p><b>Trails</b> To provide for full and rapid implementation of the <b>Areawide Trail Plan</b>.</p>	<p>To establish a community wide system of trails to permit travel by several means other than automobile.</p>	<p>To begin the acquisition and development of the Little Campbell Creek Trail.</p> <p>To expand and continue the bike trail system, especially to South Anchorage.</p> <p>To revise the <b>Areawide Trails Plan</b> to reflect the newly adopted greenbelt and open space system additions.</p> <p>To plan and begin the development of the Pt. Campbell-Pt. Woronzof public lands, to incorporate park, open space, and other compatible facilities.</p>	<p>The trail system will be developed in conjunction with road improvements whenever appropriate, and through easement acquisition and dedication of trail right-of-way. Construction of trails will follow as rapidly as possible.</p>

TABLE 2-4

# GOALS, POLICIES, OBJECTIVES: PARKS, TRAILS, AND OPEN SPACE COMPONENT

GOALS	LONG-TERM OBJECTIVES 5 - 15 Years	SHORT-TERM OBJECTIVES 0 - 5 Years	POLICIES
<b>Greenbelts and Open Spaces</b>			
<p>The greenbelt system will be established for the following purposes:</p>	<p>To acquire land on both sides of all of the streams within the Municipality, as it becomes available.</p>	<p>To revise the Areawide Trails Plan to reflect plans for the open space-greenbelt system.</p>	<p>Greenbelts and open spaces will be designated to provide a continuous bicycle, pedestrian, and where possible, equestrian access system to schools, parks, and residential neighborhoods.</p>
<p>a. To accommodate trails and recreation facilities;</p>	<p>To set aside critical habitats and wetlands as open space.</p>	<p>To provide for Coastal access through a coastal trail system.</p>	<p>Greenbelts and open spaces should be planned in an integral process with new housing and commercial development.</p>
<p>b. To protect streams and natural areas;</p>		<p>To establish an open space network in the Minnesota Drive extension corridor.</p>	<p>Greenbelts and open spaces should be equally available to all Anchorage citizens.</p>
<p>c. To provide public access to the coast;</p>		<p>To establish the Ship Creek greenbelt.</p>	
<p>d. To lend identity to communities and provide buffers between incompatible land use.</p>		<p>To establish an open space network from Turpin Road to Merrill Field.</p>	
<p>e. To provide linkages between residential areas, parks, schools, and major areas of public activity.</p>		<p>To establish a nature center at Potter Marsh, including trails and viewing areas.</p>	
<p>f. To protect wetlands and other environmentally sensitive areas.</p>			

## 2.5 ENERGY COMPONENT

### 2.5.1 DESCRIPTION

As a result of the actual, as well as potential, reduction of petroleum supplies, and because of the increasing cost of such supplies, energy has become an essential planning activity. The concern for energy usage originated primarily from the oil embargo of 1973-1974. Since that time, energy supplies, and their allocation, have been a continuing concern to this country, and to Alaska specifically. It is safe to assume that this concern will continue well into the foreseeable future. The supply and cost of petroleum greatly affect lifestyle, customs, and behavior. The fact that energy has become a significant, long-term problem requires that it receive consideration in comprehensive planning. This Plan element provides a general framework for energy planning and specifies potential energy programs for use by the Municipality.

This element is not, however, an overall energy development and management plan for the Municipality. Such plans are more intensive, encompassing energy conservation measures for such activities as industrial processes, transportation, public utilities, Municipal services, buildings, and government operations and procurement. Energy management plans assess the systematic pattern of energy flows, and develop an integrated program to ensure the effective linkage of these patterns. This report element is intended to form a relationship between land use and energy patterns, and to specify those strategies associated with more efficient land use and transportation energy consumption patterns.

### 2.5.2 NATURE OF POWER DEMAND REQUIREMENTS

The characteristics of electrical power demand are analyzed in a recent report, **Upper Susitna River Project: Power Market Analysis**. This study only analyses the need for added electrical power generation, although this medium adequately demonstrates the relationship between land use and energy conservation patterns. More studies are now being prepared, and should update much of the supply analysis of electrical power demands. Nonetheless, the Upper Susitna study provides a general indication of power requirements for the Anchorage area, for both the near-and intermediate future. It is instructive in the need for conservation, as well as supply development, measures.

### 2.5.3 PAST DEMAND CHARACTERISTICS

Electrical power demands over the last ten years have shown that the major energy use determinants were the construction of the Trans-Alaska oil pipeline and the oil embargo of 1973-1974. In general, there has been an increasing demand for electrical power by all use sectors including residential, commercial, and industrial. The analysis determined that a major change occurred, after the 1973-1974 gasoline crisis, in the rate of energy growth, and concluded that conservation should be considered as a major factor in planning beyond the 1973 period.

Projections of electrical power demand indicate a fairly severe shortage of available capacity beginning about the 1985-1990 period. Even though the area's utilities are expected to add considerable capacity during this period, available capacity may be exceeded by the 1985 period. Thereafter, the demand-supply situation will worsen, approaching a deficit of nearly 1.3 MW by the year 2000 if additional capacity is not installed. The primary conclusions derived from the Susitna analysis included the need for:

- Substantial power generation increases over the next 15-24 years, and
- Phased energy development strategy, and
- Increased energy conservation, to forestall part of the expected power increases.

The importance of energy conservation measures can best be appreciated when it is realized that the power generation forecasts include a large energy conservation factor. Because of the nature of the projected demand-supply relationship over the next fifteen years, consideration must be given in energy supply and energy management planning to both the provision of additional supply as well as the development of effective energy conservation programs. The Upper Susitna analysis has indicated the need for both approaches and the need for them to be closely integrated.

### 2.5.4 RELATIONSHIP BETWEEN LAND USE AND ENERGY MANAGEMENT PLANNING

Research on the energy demands of land use patterns

has recently emerged, and most have concurred that the varying patterns effect the amount of energy we consume, particularly for transportation, and space heating and cooling. What remains unclear is the extent to which changes in land use can reduce the general level of energy consumption. Yet, in spite of divergent opinions, most studies identify energy conservation goals that land use decisions can promote.

Energy consumption patterns are directly tied to specific community environments. A recent State study analyzed the impacts of alternative community forms on energy consumption levels in an area near Anchorage. It indicated fairly specific relationships between energy control measures and land use patterns.

In analyzing the effects of different urban patterns and densities, marked decreases in energy use accrued through even modest increases in density. More rapid decreases in energy use were not apparent beyond an urban structure that is fairly concentrated. In this study, the creation of moderate densities in southcentral communities resulted in an 18 percent decrease in energy use compared to typical decentralized urban forms. The residential sector had the greatest impact in these relationships, constituting nearly 70 percent of all energy consumption needs. Equally important, this sector is especially sensitive to changes in land density and use patterns.

A fairly direct relationship between land use patterns, transportation, and energy consumption also exists. The pattern and density of land development affects the number of vehicles required, miles traveled, and mode used in travel. Urban forms having moderate densities decreased total transportation energy consumed by 50 percent or more from a baseline, decentralized growth pattern. A centralized land use pattern decreased trip making by an even greater amount. These are significant results since they replicate the levels of energy reduction that can occur in other communities.

In addition to the possible energy savings derived from space heating and intra-city transportation efficiencies, significant energy savings can also result from incorporating community-wide and individual building energy conservation techniques. Examples of such techniques might include:

- Improving individual building design and equipment selection,
- Converting Municipal waste to supplement steam in power plants, and
- Improving siting and orientation of buildings.

Large reductions in energy consumption would accrue through the use of these techniques compared to the baseline energy case, and could approach a reduction as great as 53 percent.

The previous analysis stresses the importance of land use planning to energy conservation, and indicates the impact of even modest changes in technology and use patterns upon energy levels. Perhaps most importantly, it indicates the practical basis for changes in land use, transportation, and supplemental energy technologies necessary to effect reductions in energy consumption.

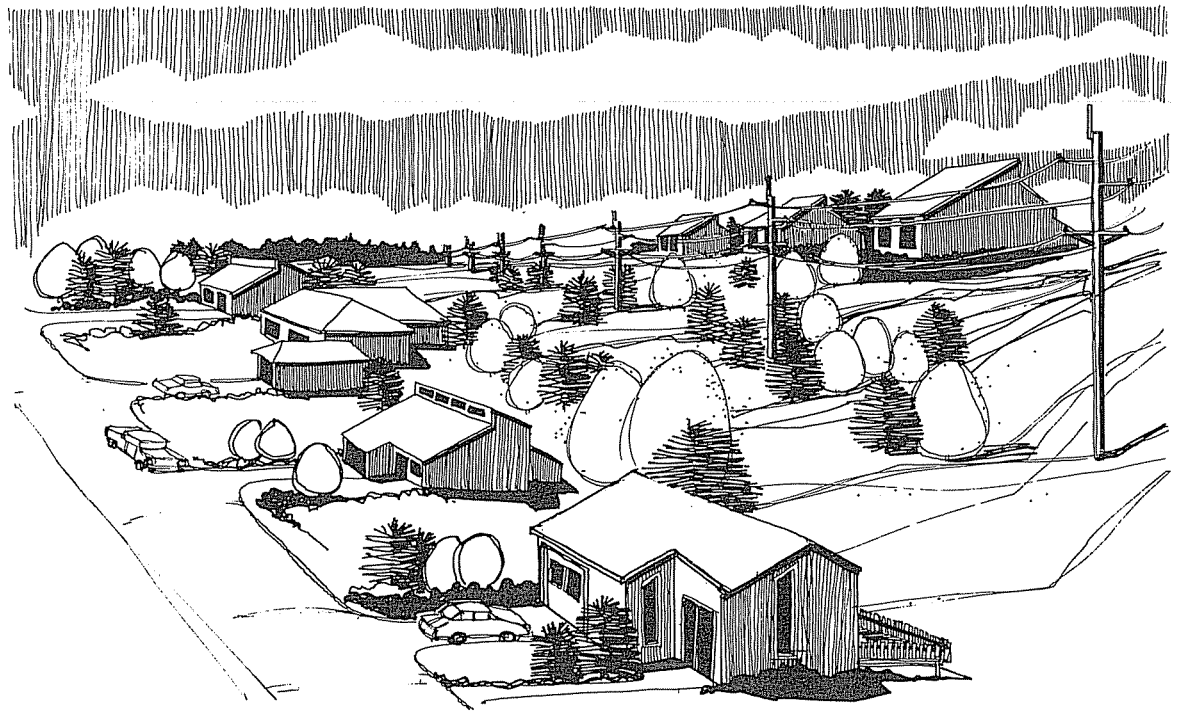
### 2.5.5 DIRECTION OF MUNICIPAL PROGRAMS REGARDING ENERGY SUPPLY AND DEMAND

Municipal policy regarding energy conservation relative to urban form should focus on the general program areas of land use and transportation. As described, important relationships exist between the patterns and densities of land uses, and transportation patterns and densities. Even modest density increases promote the use of more efficient transportation modes and building construction and site design methods. Because of the close tie between land use and transportation patterns, the associated policy and program directions must be mutually supporting.

### 2.5.6 LAND USE PATTERNS: DIRECTIONS AND POLICIES

A variety of mechanisms exist with which land use forms can be guided toward more efficient energy consumption patterns. Included as factors are the following:

- Creating higher densities,
- Combining land uses within geographic areas,
- Utilizing more effective building layout, orientation and landscaping, and



- Applying effective location and density patterns.

These mechanisms are described at length in the report, **Energy Element: Comprehensive Plan Revision**. The creation of higher urban densities is an essential strategy for energy reduction. The common wall area and reduction of apertures in multi-family structures combine to produce considerable space heat savings. This reduction, plus those caused by the more efficient use of public utilities and transit systems, produce economies in energy utilization not afforded by urban forms with predominantly single-family detached dwellings. Approaches used to achieve higher densities can involve the use of higher density zoning, modification of height restrictions, reduction of lot size requirements, and

amendment of zoning ordinances to allow the vertical mixing of uses in structures.

These techniques foster higher densities through either changes in land patterns, the allowance of taller buildings within zones, or the ability to increase densities through increased flexibility in site design. All of these methods are appropriate to Anchorage, and specific recommendations regarding these uses are contained in the **Energy Element: Comprehensive Plan Technical Report**. The recommendation to increase urban densities is consistent with desired land policies, and both improved flexibility in site design and building siting are essential to the effective use of our remaining urban lands.

Changes in building layout, building orientation, and site landscaping are also productive in creating conditions for the more effective use of urban land and public facilities. Appropriate techniques include: the use of bonus points, flexible and cluster zoning, revised site landscaping requirements, and the use of special permits to allow for the flexible orientation of structures on lots. Cluster zoning, which allows for the concentration of structures in particular areas and for the preservation of other uses (primarily open space) in environmentally sensitive areas, can be applied to create development patterns that minimize the need for public facilities. Flexible and bonus point zoning provide similar benefits and can be tailored to provide density bonuses to developers for specified site improvements. The use of these strategies is recommended, and is generally consistent with other Municipal policies to improve site development practices and reduce private development costs.

A final set of strategies involves the location and density of development, and the methods used to guide and influence those patterns. Traditional ways of influencing growth have included the programming of major public facilities, the use of special forms of zoning, and the use of comprehensive plans to guide the placement of facilities. This orientation should be continued and extended to include the processes of land guidance explained subsequently in the Plan. Although these processes are largely related to cost and urban growth considerations, they are also intended to be instrumental in energy conservation and energy management. The rationale for their use should also originate from the need to effectively utilize our energy resources.

#### **2.5.7 TRANSPORTATION RELATED IMPROVEMENTS AND ENERGY CONSERVATION PROGRAMS**

Even modest changes in land densities have a significant effect on the effectiveness of transit in reducing overall trip-making. The importance of transportation to energy management centers on the consumption of petroleum by private, single-occupant vehicles. Fully 86 percent of all available petroleum products are used for automobile and truck transportation in Anchorage. Energy management policies must be concerned with two aspects of the transportation system: the development of a more

effective mass transit system and the preparation of strategies to be used in the event of an energy crisis.

Attempts to reduce transportation energy use must concentrate on the more aggressive development of the transit system. Less than two percent of all person-trips are made currently by this mode, although there has been a considerable increase in transit usage over the last three years. The reasons for this ridership increase include the increasing cost of gasoline and the convenience of transit. Municipal policy, as expressed in the various Anchorage Metropolitan Area Transportation Study reports, is to expand the mass transit system to the maximum extent practical. The attainment of the ten percent modal split rate, by the year 2000, will involve major changes in lifestyle and travel-making behavior, a major expenditure of funds for the purchase of vehicles, as well as substantial increases in the operating costs of transit.

The management of the transportation system for energy conservation purposes also involves energy crisis and contingency planning. These analyses are designed to prepare for sudden reductions in energy supplies and for continued high energy costs. They are also intended to result in an overall reduction in fuel consumption and in the increased use of more energy efficient transportation forms. Since the exact date of a future energy shortage cannot be predicted, it is essential that those strategies which require a long lead time for implementation, or that should be in effect at the onset of an energy shortage, be initiated as soon as possible. These strategies are identified in the **Energy Crisis Contingency Plan**, prepared by the Anchorage Metropolitan Area Transportation Study. This plan identifies measures that can be utilized at various levels of energy shortfall, or deficit. They involve varying levels of restrictiveness, depending upon the significance of the energy shortfall condition. Because many of these programs are only effective -- and are only required -- in the event of such shortfall conditions, Municipal policy focuses on the development of strategies to meet probable worst case energy reductions. These strategies augment a continuing energy conservation program. The latter expresses Municipal policy to ensure the inclusion of energy considerations in traffic engineering, highway, and transit

projects, and to promote the more aggressive use of paratransit resources, of both the public and private sectors.

#### **2.5.8 ENERGY GOALS, POLICIES, AND OBJECTIVES**

The goals, objectives and policies relating to energy management are derived from the various studies and plans prepared by the Municipality relating to energy crisis/contingency planning and energy conservation. They are identified at length in Table 2-3. These programs must be viewed as a starting point for energy management planning and as an expression of the **general** direction to be followed by the Municipality in developing programs to minimize, or make more efficient, energy use. Although a series of program areas are identified which specify major activities that should result in energy use reductions, perhaps the most important recommendation concerns the need for an overall energy management plan. This plan should focus on the need to properly inventory and analyze energy patterns, and upon the development of a comprehensive set of strategies designed to deal with a full range of human activities involving energy use.

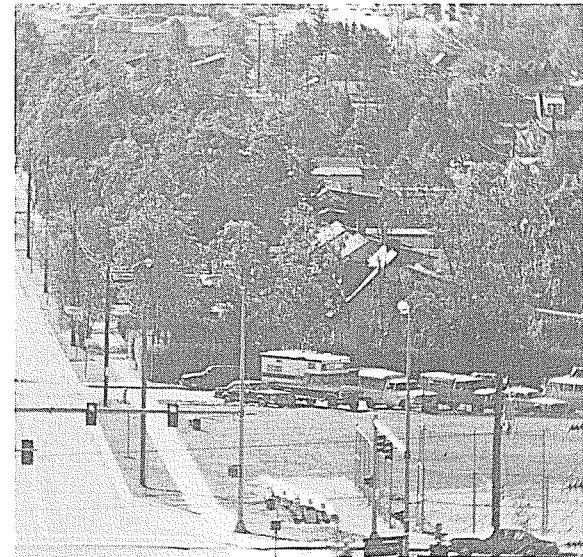


TABLE 2-5

## GOALS, POLICIES, OBJECTIVES: ENERGY

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
Energy	<p>To integrate energy consideration into all private and public decision-making functions and operations, and minimize the economic impacts of energy supply and demand.</p> <p>To manage Municipal energy use, establish energy-efficient operating and maintenance procedures for government buildings, vehicles, parks and recreation facilities and outdoor lighting.</p> <p>To establish a community education and outreach program to maximize economic opportunities and minimize economic hardship.</p>	<p>Encourage and facilitate the development of vacant and out-moded buildings and sites which are currently served by utility and transportation systems. Increase density allowances on such parcels where appropriate.</p> <p>Maximize development options along major transportation routes, especially those incorporating public transit systems.</p> <p>Encourage increased densities and clustered development where centralized energy systems are proposed.</p> <p>Discourage major isolated and free-standing office, education and public service facilities not easily accessible by public transit.</p> <p>Medium density and mid-rise multi-family developments may be permitted adjacent to areas of high intensity employment or person use, such as industrial areas, schools and colleges, and high density commercial units.</p>	<p>Establish minimum performance standards for structural heat losses and gains, lighting, interior and exterior, and heating ventilation air-conditioning systems for new buildings.</p> <p>Design and build new Municipal/public buildings as exemplary structures to demonstrate the feasibility of low energy use and natural climate modification techniques.</p> <p>Develop energy conservation measures for public facilities to reduce operational costs and encourage private sector participation in conservation and non-petroleum cogeneration measures.</p> <p>Refine the AMATS Energy Crisis and Contingency Plan to develop necessary energy crisis management programs for the transportation system and continue current energy conservation programs.</p>	<p>Land allocation and development patterns should permit the greatest possible current and future use of alternate energy sources for space heating and cooling.</p> <p>The Municipality shall encourage development that takes advantage of natural conditions and utilizes renewable energy supplies, to minimize non-renewable and overall energy consumption.</p> <p>The Municipality shall examine methods of expanding existing residential, commercial, and industrial energy conservation programs.</p> <p>The Municipality shall encourage medium and high density residential uses, balanced with other planning policies, to maximize the efficient use of all forms of energy.</p> <p>Commercial, residential, and recreational land uses should be integrated in order to reduce travel distances, optimize the reuse of waste heat, and permit on-site energy generation, as practicable.</p> <p>Continue to encourage the cooperation and communication between the public, utilities, and the various levels of government concerning energy-related issues. Encourage Municipal and State efforts to promote energy conservation in such areas as building codes, the development of renewable sources of energy, and the establishment of equitable energy allocation systems.</p>



TABLE 2-5

## GOALS, POLICIES, OBJECTIVES: ENERGY COMPONENT

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
		Senior citizen housing should be located near shopping, personal services, recreation and cultural centers, with easy access to public transportation and small vehicle circulation systems.	Develop a new facility conservation program to preclude the expensive retrofit of energy conservation equipment at a future time.	The Municipality shall require transit waiting stations and small vehicle parking facilities at all large public and private high activity centers (such as shopping, recreational, social and governmental centers).
		Medium density residential development shall be encouraged near neighborhood service centers.	Continue and expand the joint State-Municipal Transportation Conservation Program. Intended to reduce single occupant vehicle work trips, this program shall be designed to coordinate the areawide alternative modes program.	The use of mass transit and alternative transportation systems shall be encouraged as a major means of reducing energy consumption.
		Encourage Neighborhood and commercial uses in centers on major automobile and transit routes.	Prepare and implement an integrated Energy Management Plan for the Municipality that provides an overall strategy to community energy conservation, energy crisis planning, and energy demand planning.	Efficiently manage the public and private rights-of-way to permit full utilization and coordination of the circulation and transportation facilities and to maximize passenger and freight miles traveled per unit of energy consumed in a manner consistent with safety and convenience.
				Medium to high density residential development shall be encouraged at the periphery of the Central Business District, along primary transit routes and near major transit stations.



URBAN DEVELOPMENT: PATTERNS AND PROCESS

3.1 URBAN DEVELOPMENT: PATTERN AND PROCESS

This section of the Comprehensive Plan identifies the relationship between the land use, public facility, and urban development processes that affect the patterns of urban development. It is important to understand that the Comprehensive Plan deals not only with the patterns of development, but with the processes that affect land development over time as well. This latter aspect is particularly critical given the dynamic nature of the Anchorage economy.

The existing land use and density patterns reflect the way in which people have organized space for recreation, living, and productive activities. These activities tend to recur, and they exhibit unique physical and spatial qualities. Because of this uniqueness, land use patterns tend to be segregated into geographically distinct areas. Certain uses prefer particular locations for given activities. This reflects the capability of the site to accommodate the activity as well as the tendency for certain functions to locate in particular locations. Land uses tend to be largely organized on an economic basis, generally to minimize travel costs and maximize market values, but they also reflect social and cultural forces. From a planning standpoint, this last area of concern is critical, since it reflects values that are often obscured by the overriding market forces.

The Comprehensive Plan maps express the way in which the community wishes to develop over time and space according to certain developmental goals. These patterns of land use and residential densities attempt to accomplish the following objectives of urban planning, which are considered to be either functionally or economically important:

- The ability to provide a maximum interaction of human and economic activities. This is critical since all activities are interrelated, but are separated by space.
- The opportunity to minimize disruptions between activities so that social and environmental values are preserved.
- The ability to properly locate public facility systems. A close interaction exists between land uses and the pub-



lic facilities required to support those uses. The careful provision of urban services minimizes environmental disruptions and requires a smaller expenditure of public funds.

Although the need exists to properly plan land use patterns and densities for future conditions, land development is a dynamic, changing process. Market forces and community objectives interact in different ways and at different times, over space. Urban patterns tend to change over time, particularly in areas of vacant land or lands needing redevelopment. It is as important to plan for the guidance of these forces as it is to identify the desirable consequences. To reflect this dynamic perspective, planning theory has evolved to include the concept of land guidance systems. These systems are intended to guide and/or regulate the pattern, timing,

and densities of land uses as they evolved over a period of time. This Plan includes such a component. It largely focuses on the timing aspect of land development.

This chapter describes these two processes: that of organizing land uses and the associated process of influencing these forces over time and space. It is essential to understand the interaction of these elements, and the land use maps should be viewed as an expression of the application of these guidance mechanisms over the next 20 years. The maps are also designed to represent desired future land use patterns, not necessarily desired, near-term patterns. The Short-Range Urban Development Plan, proposed in the Implementation Chapter, is intended to deal with land development patterns over the next 6-10 years.

### 3.2 LAND USE ELEMENT

The purpose of the Land Use Plan, with its associated Residential Intensity Map, is to: indicate how land uses are to be organized over space, provide perspective on the relationship between these activities, and relate activity patterns to facility programming and systems.

The land use patterns identified in Map 3-1 are intended to resolve a series of significant issues associated with the development and use of land. For this reason, the depicted land patterns, plus the land policies associated with that type of land, represent a resolution of the competing uses for land. Certain of the issues intended to be resolved, for which Municipal policy has been established in the revision of the Comprehensive Plan, include the following:

- Location of commercial activity. The Plan specifies a strong orientation toward the development of mutually complementary Downtown and Midtown areas, with supporting community commercial centers in east, south, and west Anchorage.
- Location of industrial activity. The Plan expresses Municipal policy to support such development and to locate industrial growth in the Port-Ship Creek industrial area, at the International Airport and Merrill Field, and along the Alaska Railroad in central and southern Anchorage.
- Identification of the preferred mix of single- and multi-family housing. The Plan designates a strong orientation toward the development of multi-family housing in the more central areas of the community, particularly Muldoon, Fairview, Mountain View and Spenard. This orientation reflects the impact of private market forces and the changes in lifestyle now occurring in the community. At the same time, the Plan recognizes the need to improve building and site design practices, provide open space, and maintain the integrity of traditional single-family communities. This last aspect is especially critical and is reflected in the need to apply buffering policies between residential patterns of markedly different densities.
- Identification of appropriate location and density of residential development. The land use policies represent an attempt to balance the needs for additional

multi-family housing with the need to provide as much single-family housing as practicable. Multi-family housing is primarily intended to occur in areas currently zoned for multi-family use, which are either vacant and adjacent to major open space resources, or have potential for redevelopment to multi-family densities. Traditional single-family development (subdivision type densities with three to five dwelling units per acre) is also encouraged, particularly in southern Anchorage—in portions of western Sand Lake near Kincaid Park, The Abbott-O'Malley and Lake Otis communities, and in sections of Campbell-Klatt. Rural low density single-family development is intended to continue in the other portions of the Hillside.

- Identification of the need for and the location of public facilities. The land use patterns identified herein provide the basis for the number, type, and phasing of public facilities to be provided by the Municipality within the foreseeable future. The densities given in the Residential Intensity Map are further intended to guide the programming of facilities to serve residential uses in the Municipal Capital Improvement Program.

#### 3.2.1 PROCESS OF LAND USE PLAN DEVELOPMENT

The land patterns and use densities identified in Map 3-1 reflect the results of a comprehensive analytic process. This process involved an inventory of existing uses, the



projection of the future demands for land, and the balancing of land supply with land demand. It was also strongly influenced by community values and attitudes.

Because the land uses and residential intensities identified in the Plan Map are derived from an economic balancing of land demand with land supply, changes to these patterns must be carefully considered. If changes occur, the patterns of uses and densities must be readjusted to reflect the effects of this change on other parts of the community. For this reason, it will be necessary for the Plan to be revised periodically. This aspect of plan implementation will be discussed more fully in Chapter Four.

The Plan development process involved the following major steps:

- **Land inventory.** The land use inventory identified the amount and type of developed land by geographic area within the Anchorage Bowl. It also identified developed land uses by zoning category. In addition, the inventory specified the amount of remaining vacant land, by small geographic area, according to existing zoning classifications. The inventory provided the starting point for the distribution of land uses and for the identification of areas likely to accommodate future urban growth.

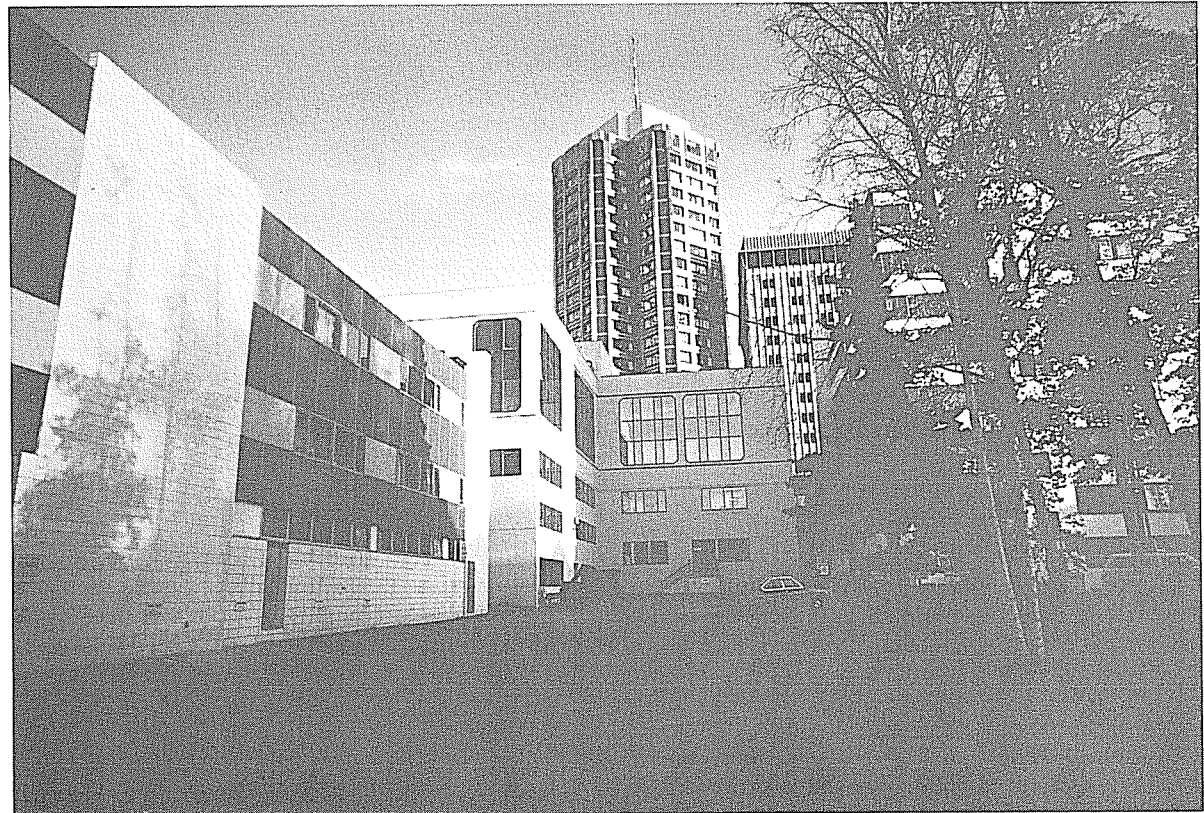
- **Demand projections of residential and commercial-industrial lands.** The demand projections of residential and commercial-industrial land were based upon dwelling unit and employment forecasts, and upon land ratios between land requirements and activity types. Demand projections were derived from State econometric forecasts stepped down to the Anchorage metropolitan region. These population and employment estimates were translated into land requirements for residential, industrial, and commercial land. In turn, the areawide land requirements were stepped down to smaller geographic regions in order to identify land needs for zoning and land use planning. These projections represent the demand side of the planning process, whereas the inventory represents the supply component.

- **Allocation and Reallocation Process: Land Demand/Supply.** The allocation process is repetitive, involving the balancing of land supply with land demand for each of the various uses of commercial, industrial, and resi-

dential land. It involves the initial allocation of demand to particular geographic areas and, later, the allocation of that portion of the land demand to other geographic areas that cannot be accommodated under the first allocation of demand. The results of the allocation and reallocation processes are a balancing of land demand and land supply for the design year (year 2000). The Plan maps represent a balance between the various land uses, and changes to this distribution will require a resorting of the depicted land supply/land demand allocations.

### 3.2.2 PLAN MAP: DEFINITIONS

#### Effect of Directory Provisions



The provisions of this Ordinance are not intended to be self-executing, unless so specified by their terms. All provisions which are not self-executing are deemed to be directive and advisory. Directive and advisory provisions are intended to establish a continuity of governmental policy that are to be used as guidelines for future actions of the Municipal government. The Municipality shall, when appropriate, consider advisory provisions and shall take positive action toward meeting directives within a reasonable time.

#### Land Use Classification System

A vital part of any Comprehensive Plan is the development of a land use classification system upon which



future zoning will be based. The principal objective of such a classification system is to provide a rational and consistent foundation, which will guide the entire land use regulation system.

Previous zoning changes have resulted in a patchwork pattern of various types and densities of land uses. Many incompatible land uses presently exist. The Land Use Classification System will help eliminate future inconsistencies.

● Purposes of the regulatory system:

1. Provide a balanced, compatible land use mix, including a range and placement of land use activities deemed necessary to the community well-being;
2. Separate incompatible uses and minimize conflict between land uses;
3. Provide appropriate land use allocations, by category, in keeping with a realistic assessment of areawide and localized community needs;
4. Assure that the functional classification of land achieves stated community purposes;
5. Ensure the continued physical, social and economic vitality of each community within the Municipality;
6. Provide incentives for reinvestment by the private sector to achieve stated community objectives; and
7. Accommodate changing life styles, technology and economic conditions.

● Form

The land use classification system establishes functional land use categories. These categories are physically grouped in a manner which achieves complementary relationships within and between category. The Plan Map 3-1 graphically depicts the classification system and provides guidelines regarding the scale and intensity of development.

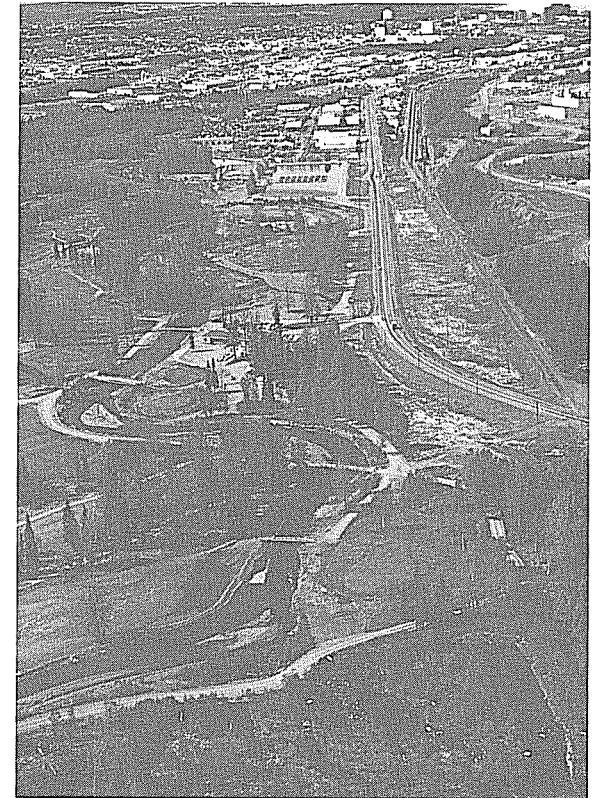
**Residential:** This classification would apply to those areas which are substantially developed for residential purposes and which are expected to remain that way within the time frame of the Comprehensive Plan. It also applies to those areas that are now vacant but are best suited to future residential development. Residential land use density ranges are applied to each community, which generally indicate the number of residential units achievable in a general location. The actual achievable use of a given site will be further defined by the residential zoning, the nature of and adjacency by other uses, the availability of public services and facilities, and environmental considerations. Future land regulations would be guided by the designated intensities of the Plan Map. This classification should have very little effect on existing residential areas, except where redevelopment is occurring or is anticipated to occur. In these instances, it would serve to reinforce or enhance the quality and character of the residential community and of those land use policies contained herein.

**Commercial:** This classification would apply to those areas which are substantially developed for commercial purposes and which are expected to remain that way within the planning period. It also applies to those areas that are now vacant but are best suited to future commercial development. The actual achievable use and development criteria for any given site would be further defined by the commercial zoning the nature of and adjacency of other uses, public services and facility availability, and environmental considerations. The location of all new neighborhood business areas are not depicted on the land use classifications map, because it is impossible to determine the extent and location of these areas at this time. It is anticipated that when requests for neighborhood business zoning are submitted in locations not depicted on the map, such requests would be favorably considered, only if a need is shown, and if the policies for the establishment of business areas which are part of this plan are followed.

**Industrial:** This classification would apply to those areas which are substantially developed for industrial purposes and which are expected to remain that way during the planning period. It also applies to those areas that

are now vacant but are best suited to future industrial development. The actual achievable use and development criteria for any given site would be further defined by specific industrial zoning the adequacy of public services and facilities, environmental considerations, and existing or new performance standards.

**Commercial-Industrial:** This classification would apply to those which are substantially developed for industrial-commercial purposes and which are expected to remain that way during the planning period. It also applies to those areas that are now vacant but are best suited to future commercial-industrial development. The actual achievable use and development criteria for any given



site would be further defined by the specific zoning, the adequacy and availability of public facilities, and environmental considerations. This classification reflects the tendency for compatible and linked industrial-commercial to locate within similar areas, and recognizes the inter-dependency of these uses. It also stresses the need to develop such uses, to the extent practicable, within planned commercial-industrial tracts along major arterials.

**Public Lands and Institutions:** This classification would apply to all existing active uses of this type where development plans have been completed and adopted, or where it is reasonable to expect the use of recently acquired state lands for some public purposes. It would not apply to such lands where the permanent use is yet to be determined.

#### ● Residential Densities

To further define the land classification system, density ceilings are established for each residential classification. These ceilings serve to define the general level of desired development. They are scaled according to factors such as proximity to services, employment, and transportation. Thus, land next to the Downtown Business District could accommodate greater density uses than outlying land not located near such an employment center. Both initial development, and the redevelopment of existing uses, are to be subject to these density criteria. Areas designated for future residential land uses are also to be subject to these density criteria. See Map 3-2.

These densities are meant to express gross density levels; as such, they provide a general indication of total number of dwelling units in a contiguous geographic area for the purposes of facility planning and as an indication of the overall distribution of population and of desired housing type (s). In certain areas, especially in wetland and marginal soil environments, selected densities may exceed the gross density ranges providing, however, that assurances are made for internal circulation, sufficient open space, and buffering. When the buffering and open space areas are included with the developed area, the overall density should be within the gross density range.

#### **Land Use Goals and Objectives**

The previous discussion focused on the infrastructure requirements and the goals/objectives required for the maintenance of the other functional systems. Goals and objectives are identified for the land use component in Table 3-1. They are specified by geographic area and by type of land use. These goals/objectives represent "more specific statements as to the manner in which the community" wishes to develop, to organize the predominant land uses within the community. They constitute a further explanation of the spatial patterns expressed in the Plan Map, and are, therefore, a more explicit definition of those planning criteria to be used in site planning, subdivision, and zoning/rezoning case reviews. They are also to be followed in the evaluation of changes to the Plan Map of this Comprehensive Plan.

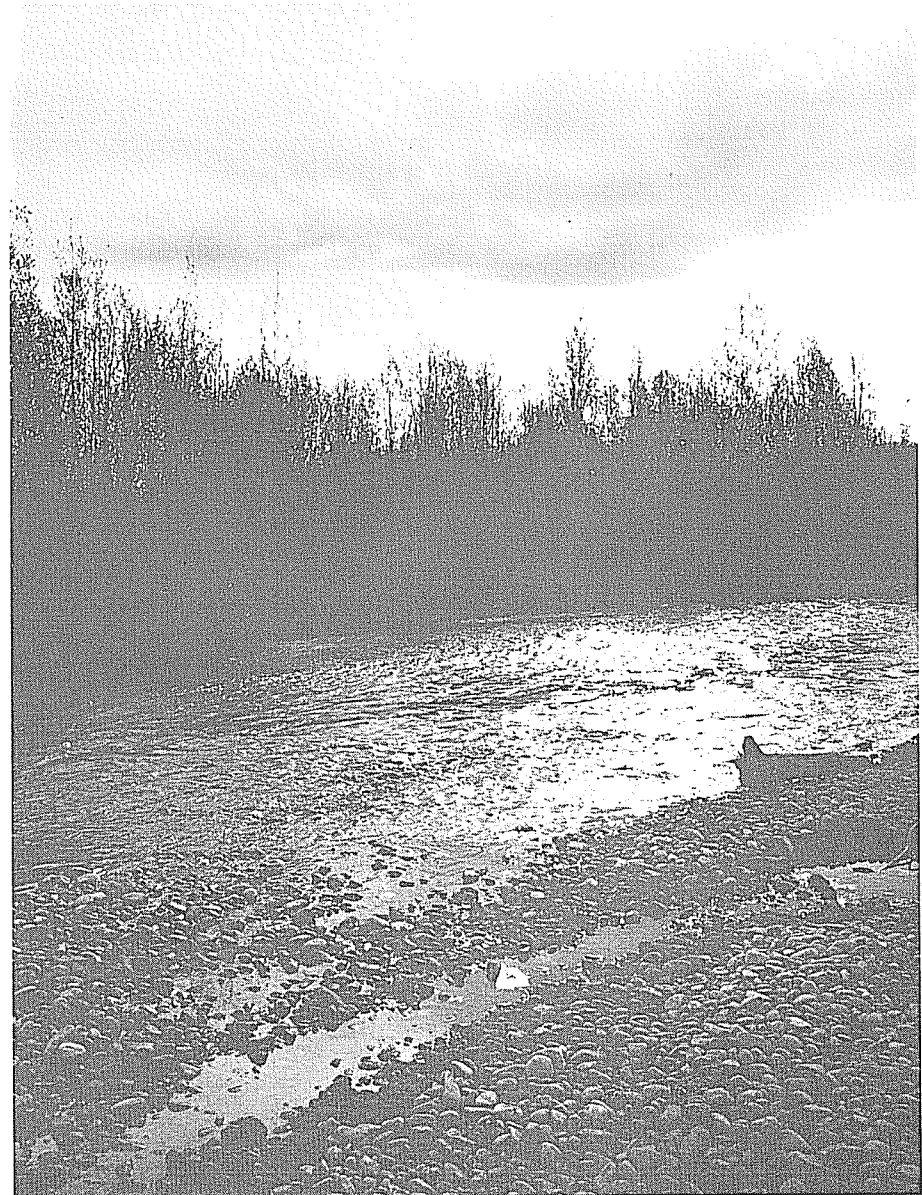




TABLE 3-1

## GOALS, POLICIES, OBJECTIVES: LAND PATTERNS

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
Element: Land Use				
Sub-Element: Residential	<p>To develop an enforceable land use plan for the social and economic needs of the community, consistent with the natural characteristics of the area.</p> <p>To develop and maintain residential communities that provide a safe and healthful environment and are protected from incompatible land uses and land activities.</p>	<p>Adopt and implement policies and programs that reduce land use conflicts and nonconformities.</p> <p>Establish residentially zoned neighborhood should be protected from the intrusion of incompatible facilities and land uses and their effects (noise, glare, dust).</p>	<p>Develop flexible and cluster use zoning ordinances that afford incentives, such as density bonuses, to developers that provide amenities or specialized housing needs.</p> <p>Develop and implement acoustical standards for multi-family construction impacted by vehicular noise.</p>	<p>Enhance residential communities by incorporating open space, park, trail system interconnections.</p> <p>Future land development should incorporate and protect natural land forms, vegetation, and scenic vistas.</p> <p>The Municipality shall ensure that open space and public facilities are provided to enhance the continued livability of neighborhoods where facility deficits exist.</p>
		<p>The reservation of land required for public facilities (parks and school, storm drains) shall be encouraged through the use of flexible and cluster zoning.</p>	<p>Revise the Official Streets and Highways Plan to create planned internal circulation systems for sub-areas, to reduce the effects of vehicular infiltration into predominantly stable residential neighborhoods.</p>	<p>Higher residential densities should be permitted had encouraged in areas where amenities can be provided, where the land is suited for such development, where access may be provided without constituting a hazard of overloading residential streets, and where development can be designed to minimize conflicts with other uses.</p>
		<p>The development of passed over vacant land and revitalization or older, closer-in areas shall be encouraged as given in the Municipal Land Management System.</p>	<p>Develop and implement a manual of design and construction practices for vacant multi-family residential areas that includes but is not limited to flexible lot design, landscaping, acoustical construction practices, and improved internal circulation standards.</p>	<p>The development of major public facilities (water, sewer) should be encouraged prior to the urbanization of large tracts of vacant residential land.</p> <p>Provision shall be made for multi-family housing in areas close to the downtown; in clusters around commercial, office, and public buildings; and in areas that have convenient access to major transportation corridors.</p>

TABLE 3-1

## GOALS, POLICIES, OBJECTIVES: LAND PATTERNS

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
		<p>The conservation of existing housing by the rehabilitation of substandard units and such other methods shall be encouraged, including the relocation of existing structures and the conversion of nonresidential structures to residential use, provided such actions reflect planned densities for the subject area.</p> <p>The area's supply of sound housing in stable neighborhoods shall be encouraged through code enforcement, appropriate zoning, rehabilitation programs, and by discouraging conversions to nonresidential uses.</p>	<p>Re-evaluate and amend, as appropriate, the R-2 zoning district relative to housing density levels, lot size and coverage, and other zoning standards.</p> <p>Develop community sub-area plans that include land use, facility, and service recommendations.</p> <p>Evaluate and develop a series of buffering and transitioning policies and standards between area of differing residential densities.</p> <p>Amend the Zoning ordinance to include a Master site plan review process. This process could involve a site plan review procedure that establishes densities as a result of an evaluation of site characteristics and off-site impacts.</p>	<p>Encourage cooperation between public, private and consumer sectors of the area's housing market.</p> <p>Subdivision and other development reviews shall evaluate the effects of the proposed project upon adjacent land uses and shall consider mitigation measures for secondary impacts, including but not limited to landscaping, acoustical requirements, internal circulation patterns, off-set drainage, impacts, the effect upon public facilities and services, and the need for transitional zones and/or buffering.</p>
Commercial	<p>To encourage the effective location and design of commercial structures.</p> <p>To encourage the development of commercial uses and commercial areas required to accommodate demographic increases</p>	<p>Discourage the development of new strip commercial areas and focus future activity to create a more clustered pattern of commercial development.</p>	<p>Improve the delivery of goods through the preparation and implementation of an Urban Goods Movement Study.</p>	<p>Commercial development shall be concentrated at strategic locations, rather than allowed to expand along major arterials.</p> <p>In locating commercial uses, criteria shall be considered such as accessibility, existing or plan-</p>

TABLE 3-1

## GOALS, POLICIES, OBJECTIVES: LAND PATTERNS

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
		<p>Major commercial developments shall be planned to encourage and permit the greatest level of accessibility for a variety of transportation modes, including pedestrian movement to and within such developments</p>	<p>Amend the zoning ordinance to include a mixed use commercial/industrial zone.</p> <p>Develop and implement a commercial arterial design manual identifying preferred site design practices and ingress-requirements.</p>	<p>ned utilities and facilities, suitability of terrain and environment, and the location of existing or proposed compatible or complementary uses.</p> <p>Neighborhood centers shall be established with convenience shops trading in those goods and services required on a day-to-day basis by the population of the immediate area.</p> <p>The location and need for small commercial areas serving neighborhoods not depicted on the Land Use map shall be guided by the following criteria:</p> <ul style="list-style-type: none"> <li>• Adequate current and future accessibility to the proposed site.</li> <li>• Compatibility with neighborhood development patterns and neighborhood needs.</li> <li>• Adequate public utilities and services.</li> <li>• Evidence of economic need for commercial services within the affected neighborhood.</li> <li>• Utilization of buffering and other design techniques to mitigate off-site impacts.</li> </ul> <p>Commercial areas should have the following existing or planned characteristics:</p> <ul style="list-style-type: none"> <li>*A range of utilities and business service appropriate for the category of development.</li> <li>*Adequate and efficient access to major transportation systems without reliance on residential streets.</li> <li>*Adequate transit related facilities at major commercial centers.</li> <li>*The existence of major natural or man-made barriers or buffers that separate commercial areas and their effects from other existing or anticipated noncompatible land use.</li> <li>*Supporting business services, which complement commercial use, should be encouraged.</li> </ul> <p>Uses such as light manufacturing, construction contracting, warehousing, wholesale distribution</p>
		<p>Develop joint commercial industrial use districts clustered in areas adjoining major arterials or at areas served by rail.</p>		

TABLE 3-1

## GOALS, POLICIES, OBJECTIVES: LAND PATTERNS

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
Downtown Business District	To promote the continued development of a downtown business district having a full-range of urban uses and activities.	Promote a mixture of financial, retail, cultural, recreational, government and service-oriented development in the CBD and encourage more high density residential development in the close to the CBD.	Develop and implement an Urban Design Plan for the Downtown.  Implement the concepts of pedestrian malls, transit malls, and landscape beautification within the Downtown.	<p>activities and offices shall be developed to the extent practicable in clearly defined districts convenient to major arterials or rail lines. Retail and office functions generating little traffic to or from the district by the general public shall also locate in these districts.</p> <p>Commercial uses that generate high traffic volumes shall be located in areas convenient to major traffic ways, with primary access through non-residential areas.</p> <p>Encourage and maintain transit-related commercial centers along designated major transit corridors, as given in the Transportation Plan.</p>
		Develop the Central Business District to a human scale inter-relating open space, structures and pedestrian movement, safety and comfort.	Develop and implement an Urban Development Plan for the Downtown.	<p>Encourage the preservation of historical resources in the original townsite area and the development of a historic railroad town complex.</p> <p>Provide a balance between transit and parking facilities in order to maintain normal economic growth consistent with the air quality standards given in the Air Quality Management Plan.</p> <p>Encourage the development of the downtown as a multiple-use district, structured for the development of entertainment, lodging, governmental, and selected high-value retail functions.</p>
		Develop better access to and around the DBD, while removing through-traffic from the internal street system.		<p>The Municipality shall locate all major office functions within the downtown and shall encourage both State and Federal agencies to locate within this area, as appropriate to their functions.</p>

TABLE 3-1

## GOALS, POLICIES, OBJECTIVES: LAND PATTERNS

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
Industrial	To design and locate needed industrial facilities, and to encourage the development of such facilities required to support the economic base of the Anchorage area and related natural resource and transportation activities at a regional and state level.	<p>To concentrate industrial activity in areas with appropriate infrastructure and having satisfactory access.</p> <p>To protect and preserve the integrity of industrially classified areas for industrial use and related complementary activities.</p>		<p>Medium and high-density residential development at the periphery of the downtown and areas immediately adjacent to it shall be encouraged, especially along arterial corridors identified as potential redevelopment sectors in the Residential Intensity Map.</p> <p>Major new activity centers shall include adequate provision for transit facilities and parking.</p> <p>To concentrate industrial activity in areas especially suited for intensive development.</p> <p>Industrial areas should have the following existing or planned characteristics:</p> <ul style="list-style-type: none"> <li>*A range of utilities and business services appropriate for the industry.</li> <li>*Adequate and efficient access to major transportation systems without reliance on residential streets.</li> <li>*The existence of major natural or man-made barriers or buffers that separate industrial areas and their effects from other existing or anticipated noncompatible land use.</li> </ul> <p>Supporting business services which complement industrial use should be encouraged.</p> <p>Develop and maintain single-use industrial districts through the provision of adequate amounts of contiguously zoned industrial land and through necessary public facilities and service.</p> <p>Resource extraction areas adjacent to residential areas should be confined to their present areas of operation; all extraction areas must also eventually conform to the patterns identified in the Land Use Plan map.</p>

### 3.3 LAND GUIDANCE SYSTEM

The land guidance system emphasizes the management of urban spatial processes. It recognizes the dynamic nature of urban growth and the need to respond to basic economic forces. It also acknowledges the very real impact of public decisions upon urban form and the need to effectively organize these decisions. The land guidance system is intended to influence the patterns of urban forces that operate over time in order that the spatial patterns and densities given in the Comprehensive Plan can be fully realized.

The types of control measures that may be applied under community growth management systems range greatly in both diversity and emphasis. They vary from the use of conventional subdivision and zoning controls to the more innovative forms of urban services provision and preferential land taxation. Certain of the controls tend to be prescriptive and are expressed in a regulatory form; others are more flexible in their application and are oriented toward providing sufficient incentives to redirect normal market forces. The types of methods that are used include administrative, planning, public facility, and timing techniques. The range and types of controls are identified at length in the report, **Municipal Land Management System**. The land guidance system recommended in the Comprehensive Plan focuses upon the use of incentives and flexible land guidance mechanisms. The intent is to strengthen the current set of regulatory controls dealing with land development, and to orient them increasingly to time and spatial processes.

The types of controls that are selected and later applied are also geared to particular land development patterns. Certain of the more inflexible regulatory mechanisms are geared to the development of controlled forms of urban growth. The approach recommended herein reflects and reinforces the moderate infilling developmental strategy expressed in the Alternative Land Use Study, and in the Plan Map Technical analyses found that the more restrictive land guidance mechanisms are only necessary under very concentrated growth patterns. Such patterns were not determined to be appropriate at this time.

#### 3.3.1 RECOMMENDED LAND GUIDANCE APPROACH

The land guidance system recommended here emphasizes the use of incentive mechanisms, and is geared toward the attainment of moderate levels of in-filling within areas of vacant land either served or about to be served, by water and sewerage systems. This approach provides the timing component necessary to achieve the land use patterns of the Comprehensive Plan. See Map 3-3.

It should be emphasized that the areas depicted on this map are intended to represent the **major** areas of facility expansion in future years. Certain smaller acreages may not be depicted, because of cartographic scale. In these instances, the adjacent identifiable service timing areas should be used to indicate the appropriate phasing period. Larger, vacant areas unidentified on this map are **not** intended to receive organized sewerage and water services. These are intended to remain as rural, low-density of vacant areas, and are so identified, in detail, in the Hillside Wastewater Management Plan and Wetlands Management Plan, respectively. Of course, the other services of (but not limited to) fire, police, and schools must be provided to the developing rural areas of the Anchorage Bowl as population increases. It is expected that Stuckagain Heights will not require organized water and sewerage services. Phasing strategies for the southwestern Campbell-Klatt Bog will depend upon the outcome of the on-going wetlands study.

Urban development is intended to occur in an orderly, sequential fashion from the current urban periphery. In this way, public facilities can be economically extended and fully utilized to design capacities. It will also make possible the more efficient provision of such urban services as transportation, social services, and health and educational facilities. The principal characteristics of this strategy are the following:

- Redevelopment of areas within the Mountain View, Downtown, and Fairview communities to realize higher multi-family densities. The development of these densities will serve to: 1) provide sufficient multi-family housing stock for the growing multi-family market, and 2) insure that certain environmentally sensitive areas in south Anchorage are preserved and/or conserved in their natural state or at conditions close to that state.

- Preservation and/or conservation of certain critical areas in the south Anchorage area. Certain of these areas include wetlands, coastal marshlands, and critical habitat areas for wildlife. Development at higher urban densities in the more central areas of Anchorage will allow certain of these environmental areas to be retained in their natural state; this will also achieve other environmental objectives as well as avoid high site preparation costs in marginal soil areas with excessive peat overburdens.

- Increasing concentration of development in the south Anchorage area. This region contains most of the developable vacant land in the Anchorage Bowl. The growth of this area is to be separated into near-term and far-term planning periods.

**Near-Term:** Within 1-10 year period, facility development should occur within the large, remaining vacant tracts of land designated for development in the Land Use Map and Residential Density Map. To the extent practicable, services should be provided as a unit during the same phasing period in normal design sequence. Water, sewerage, storm drainage and the other major infrastructure elements should be provided initially. Demand responsive services, as schools and parks, should be planned prior to infrastructure placement but provided in close response to demand.

Within this time period, major new water, storm drainage, and sewerage facilities should be concentrated within the following areas of south Anchorage: portions of Sand Lake west of Sand Lake Road, in the Abbott Loop area between the New Seward Highway and the Campbell Airstrip Tract; in the area of Campbell/Taku and Sand Lake adjacent to the Minnesota Bypass Corridor, except immediately adjacent to Connor's Lake; in the Campbell/Klatt area adjacent to the Minnesota Drive-Victor Road extension projects north of O'Malley Road (extended), and the western portions of the Hillside identified in the Hillside Wastewater Management Plan. Development in these areas is to occur at higher urban densities, as identified in the plan maps and, in the areas of wetland and other environmentally sensitive areas, preferably under versatile design approaches involving either flexible or cluster zoning and Planning Unit Development design. Environmentally sensitive and

important open space resources, identified in the Plan Map, are to be retained in or near their natural state, to the extent practicable.

The provision of other public services and facilities in the aforementioned areas, and in the other parts of the Anchorage Bowl, should occur consistent with projected increases in demographic and economic growth.

**Far-term:** Facility provision should primarily involve an in-filling process of the remaining vacant lands not provided services during the near-term period. Organized sewerage services are not to be provided in areas designated as rural, low-density in the Residential Intensity Map.

### 3.3.2 PACKAGING OF LAND AND GUIDANCE STRATEGIES

Land guidance/management strategies tend to be mutually reinforcing, and are structured to achieve particular patterns and densities of land uses. Both these strategies and their associated policies are tied to the ways that the community wishes to manage and develop urban land.

The strategies identified herein create the bridge between the private and public sectors in the urban growth process. They focus on mechanisms designed to be flexible in approach, and are geared to a strengthening of current regulatory systems.

In order to be effective, the conceptual basis of growth management planning must be transferred to a particular set of planning and programming actions. In general, the Municipal growth management system is organized about four major strategy areas:

#### • Timing and Phasing Strategies-General

The Comprehensive Plan is intended to provide the main rationale for the use of growth management mechanisms. This Plan specifies that the implementation tools used to stage growth, including the Capital Improvement Program and Urban Development Plan, are to emphasize the sequential provision of services at the periphery of

the existing, built-up areas. The Plan also shall establish the timing of facility provision and provide the basis for the sizing and siting of public services and facilities.

#### • Timing and Phasing Strategies-Specific

The land management system recommended herein includes a facility timing component. The phasing of growth in the South Anchorage area—specifically the areas of the western Hillside, Campbell-Klatt, Abbott Loop and Campbell-Taku—is recommended within the next 10 years; thereafter services should be provided in an infilling manner. It is also recommended that the sewerage system be used as the key to manage the rate and location of development. This system is wholly within Municipal control and exerts extensive influence over land patterns and the rates of land development.

#### • Site Design Improvements

These strategies are designed to improve the quality of development and increase the number and range of facilities to be provided within developing areas. Site design techniques include the use of flexible/cluster zoning, the application of land banking techniques, the use of the “master plan” concept in site review, and the requirement for the evaluation of secondary impacts and mitigating design procedures in subdivision plat review. These procedures do not greatly impact the timing and location of growth, but are effective in producing better site design. This is achieved by allowing increased flexibility in design and preserving certain critical environmental areas from development, or by mitigating the impacts of such development.

#### • Strategies Involving Improvements to Administrative Process

The growth management system incorporates recommendations designed to improve the permitting process for private urban development projects. These recommendations are designed to enhance site design and the rapidity of development.

The Municipal Growth Management System is intended to provide for public involvement in land use management decision making while providing clear and defini-

tive guidance to the development process. The procedures recommended herein concentrate upon phasing and timing strategies. They also include techniques to improve the quality of site design and increase the number of needed urban services when required. Together these approaches should provide a mechanism whereby development can be managed as to its location and density in a more effective way than has previously been the case.

The goals and objectives identified in Table 3-2 indicate how development should occur as a process over time and space. In a sense, then, they represent the dynamic aspect of land use policies. They are intended to provide guidance to decision-making on the timing and rate of development, as well as on the location of growth. Finally, they specify which mechanisms are to be utilized, and how these mechanisms are to be applied to achieve desired development patterns.

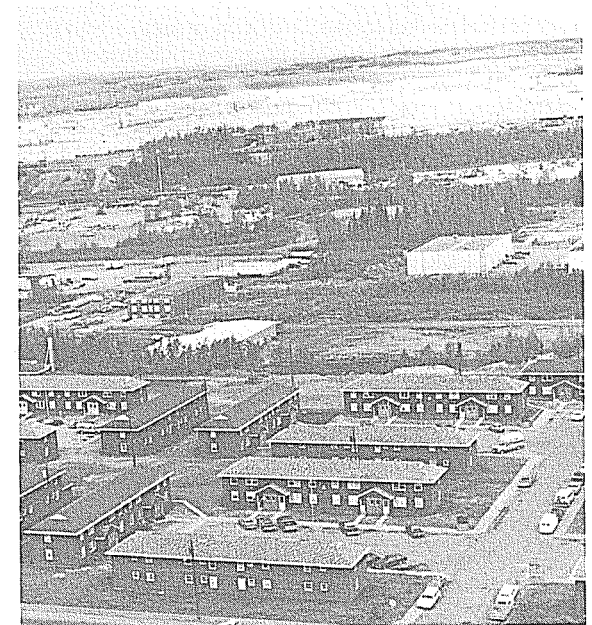




TABLE 3-2

## GOALS, POLICIES, OBJECTIVES: LAND MANAGEMENT PROCESS

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
Urban Land Management Process	To develop the community in an orderly, sequential way to achieve a moderate in-filling of vacant urban lands served or about to be served by public facilities.	<p>Utility installation shall be coordinated to achieve savings and prevent conflicting utility placement, and to achieve the recommendations of the Comprehensive Development Plan. The utilization of existing facilities shall be optimized.</p> <p>To the extent practicable, the costs of improvement, extension, and construction of public facilities shall be distributed between the private and public sectors.</p>	<p>Implement the recommendations of the Municipal Land Management System report, including the development of flexible and cluster use ordinances, the preparation of an official map, and a process of land banking for Municipal lands.</p> <p>Develop an Urban Development Plan to specify areas and densities of development, and the requisite services for such growth, over a 1-6 year planning period.</p>	<p>The priorities for the scheduling, design, and installation of public utilities shall be in accordance with the Comprehensive Development Plan, the Urban Development Plan, and the Municipal Land Management System.</p>
		<p>The scheduling, design, and installation of public facilities shall be undertaken to achieve desired land use patterns and densities.</p>	<p>Adopt the cluster and alpine slope ordinances.</p>	<p>Where development is proposed in areas beyond the planned extensions of public services, the Municipality shall carefully relate proposed uses and densities to site characteristics to preclude future water pollution, inaccessibility, or emergency service problems.</p> <p>Minimize the extension of utilities through areas which are to be preserved for creation or are defined as floodplains, hazardous lands, or wetlands designated for protection in the Wetlands Management Plan.</p>
			<p>Develop and implement the master plan review and land-banking concepts.</p>	<p>Municipal utility system shall be only extended to those areas where it is economical to provide both sewer and water and where residential densities (including and greater than 3 units per acre) can be reasonably anticipated and accommodated within an entire planning community. Utility systems shall not be extended to areas designated for rural, low density development in the Residential Intensity Map, except to resolve public health needs.</p>
				<p>Where the economic extension of both sewer and water utilities is unfeasible and where natural site limitations exist relating to soils, topography, and water, on-site systems and land development practices shall be related to the general capacity of the area to accommodate such systems.</p>

TABLE 3-2

## GOALS, POLICIES, OBJECTIVES: LAND MANAGEMENT PROCESS

Comprehensive Plan Element or Sub-Element	Goals	Long Term Objectives	Short Term Objectives	Policies
				<p>Where on-site utility systems are required and where natural site limitations exist, community utility systems and clustering of dwelling units shall be encouraged.</p> <p>Alternative methods of treatment and disposal of on-site sewage shall be encouraged where site and engineering practices are determined to be satisfactory. These systems shall correspond to the recommendations of the Hillside Wastewater Management Plan.</p> <p>When utilities are installed, they shall be designed with capacity to meet the planned land use intensities given in the Residential Intensity Map. Design capacities shall not exceed the holding capacities identified in this Map.</p> <p>Where practicable, utilities shall only be provided as extensions from build-up areas or to undeveloped lands where the extension is consistent with the staging recommendations of the Comprehensive Plan and Urban Development Plan.</p>
		Develop a master school facility and site location plan for the Anchorage Municipality.		Land use decisions and other actions by the Municipality shall consider the need for and effective location of school facilities and educational services. These requirements shall be reflected in zoning and subdivision plat reviews, and in all adopted studies and plans of the Municipality.

## CHAPTER FOUR PLAN IMPLEMENTATION

### 4.1 INTRODUCTION

The purpose of comprehensive planning is, of course, to affect the patterns and densities of land development. The traditional planning focus has been on physical development patterns, as identified 20-25 years in the future. But increasingly, planning has been concerned with the means by which development decisions can be influenced over time in order to manage the process of urban growth to achieve desired patterns of land use.

This section identifies the implementation measures which will carry out the recommendations of the Comprehensive Plan, as well as identify the relationship intended to exist between this Plan and other programs and activities. The Plan should not be viewed as a device for limiting the further development of the Anchorage Bowl, but, rather, as a mechanism to ensure its enhancement as they are continues to grow. Both the design of the implementation measures and the adoption of this Plan will depend heavily upon the involvement and support of the Anchorage community.

### 4.2 LAND USE IMPLEMENTATION MECHANISMS: LAND USE PATTERNS

The mechanisms used to achieve the patterns and densities of land uses given in the Comprehensive Plan focus upon the traditional methods of subdivision and zoning review, as well as the newer forms of innovative zoning and performance controls that strongly affect land development. These patterns are also controlled, to a very large degree, by the strategies associated with the land guidance system described in Chapter Three.

#### 4.2.1 THE PLAN MAP

The Plan Map is adopted to supplement and explain the written text of this Plan and to establish a rational guide for the future application of land use regulations.

##### • Land Use Classification Map

Form and Purpose: The Land Use Classification Map identifies those areas which, on the basis of the entire Com-



prehensive Plan, are best suited for the functional classifications indicated. The Map further identifies those areas, regardless of classification, which should be governed by more flexible regulation. The functional categories neither affect current zoning regulations nor place additional regulations on specific property. Further land use regulation decisions such as rezoning, subdivision and special exceptions, must conform to the indicated functional categories in the absence of exceptional circumstances. Exceptions could be recognized where existing uses are compatibly integrated into the area or where future uses could comply as compatible land uses by meeting appropriate standards pertaining to access, noise, landscaping, screening, structural, or other improvements required by circumstances (see Map 3-1).

##### • Residential Intensity Map

Form and Purpose: The Residential Land Use Intensity Map depicts generally desirable densities or intensities of future residential development. The Residential Intensity Map will not affect current zoning regulations nor will it place additional regulations on specific property. Future land use decisions must conform to the indicated intensity except in those circumstances where a greater specific intensity would not alter the plan for the area.

Unless there is a clear and overriding benefit to the immediate neighborhood, densities lower than those indicated on the Plan Map are to be strongly discouraged since they affect the implied balanced distribution of residential, commercial, and industrial land uses given in Map 3-1.

Development at such lower densities must establish a strong factual basis for such change and must demonstrate that no reasonable alternative exists to the proposed action. Somewhat greater intensity may be provided through planned unit developments, the use of the proposed cluster or flexible use zoning ordinances, or near established high-density nodes or in areas immediately adjacent to such nodes where the rezoning process determines that these densities are consistent with the overall intent of concentrated housing at a focal location. Likewise, greater density may be suitable around neighborhood shopping centers or along principal transit corridors. (See Map 3.2)

The Comprehensive Plan Map provides guidelines for land use decisions. Because the Map represents a summary of all the written data and policies outlined in the Comprehensive Plan report, it is necessarily generalized. Since generalization is requisite, the exact boundaries are subject to interpretation. Areas clearly within any particular classification should be treated as indicated. Areas at or near the boundaries may be analyzed under either or both classifications, utilizing the goals and objectives contained in the text, provided that the imprecision of the boundaries is not used as a basis for cumulative encroachment. Ultimately, these Comprehensive Plan Maps must be precisely defined and implemented through land use regulation, ordinances, and the preparation of sub-area land use plans.

#### **4.3 ADOPTION OF CERTAIN ADDITIONAL ELEMENTS AS PART OF THE COMPREHENSIVE DEVELOPMENT PLAN**

Certain studies are essential to implementation of the Comprehensive Plan, since they both affect and support the location and densities of development. The following studies are adopted by reference as part of the Comprehensive Development Plan:

- Coastal Zone Management Plan
- Street and Highway Landscape Plan
- Long Range Element of the Transportation Plan (AMATS)
- Areawide Trails Plan
- Water Quality Management Plan
- Comprehensive Library Services and Facilities Plan
- Official Streets and Highway Plan
- Wetlands Management Plan
- Hillside Wastewater Management Plan

These plan elements should be considered as expansions of the Comprehensive Development Plan and the Plan Map.

#### **4.4 URBAN DEVELOPMENT PLAN**

The long-range land use plan has a number of valid objectives, some of which can only be addressed by resolving general, complex development issues. Certain of these functions include the allocation of land to their more suitable uses; the promotion of economic efficiency by coordinating the size and location of public facilities; and the development of a unified, large-scale urban design. Nonetheless, it is increasingly evident that long-range planning is an inadequate guide to current decisions. Because of this, greater regard must be given to short-term programming and to the impact assessment of actions designed to solve present land use problems. Increased attention to the short-range programming of actions should also enhance the likelihood of achieving the long-range objectives in the 20 to 25 year land use plan. Accordingly, the future Municipal planning program shall include a short-range 1-6 year land development plan, and, as the basis for the budget process, a one-year plan of improvements.

The Urban Development Plan is to concentrate on a program of specific short-term actions to be undertaken in a stated sequence, within stated time limits, and by specific units of local government. It is to be based on specific targets or objectives derived from the Comprehensive Plan and Municipal Land Management System, and is to include an analysis of financial impact and feasibility. The Planning Department is to be responsible for the development and maintenance of the Urban Development Plan. This Plan shall be reviewed by the Planning Commission and Assembly.

#### **4.5 RELATIONSHIP OF COMPREHENSIVE DEVELOPMENT PLAN TO MAJOR PLANNING PROGRAMS AND ACTIVITIES**

The Comprehensive Development Plan is supported and implemented by studies and programs that deal with

urban services, urban facilities, and the process of urban development. Because these studies are central to plan implementation, the relationships between and among these studies are identified below. The intention is to describe the purpose of the individual studies in implementing the Comprehensive Plan and the role that the Plan plays in forming the general structure and focus of these studies and programs.

##### **4.5.1 URBAN DEVELOPMENT PLAN**

The Urban Development Plan is intended to be the short-range component of the Comprehensive Plan. It shall identify the principal areas of urban development, the areas to receive major urban services, and the mechanisms to be used by the Municipality in guiding urban development over the short term (1-6 years). The Comprehensive Development Plan is designed to provide the long range focus of the Urban Development Plan (UDP), and it is intended that a strong interrelationship exist between the short-range solutions of the UDP and the long-range strategies of the Comprehensive Development Plan.

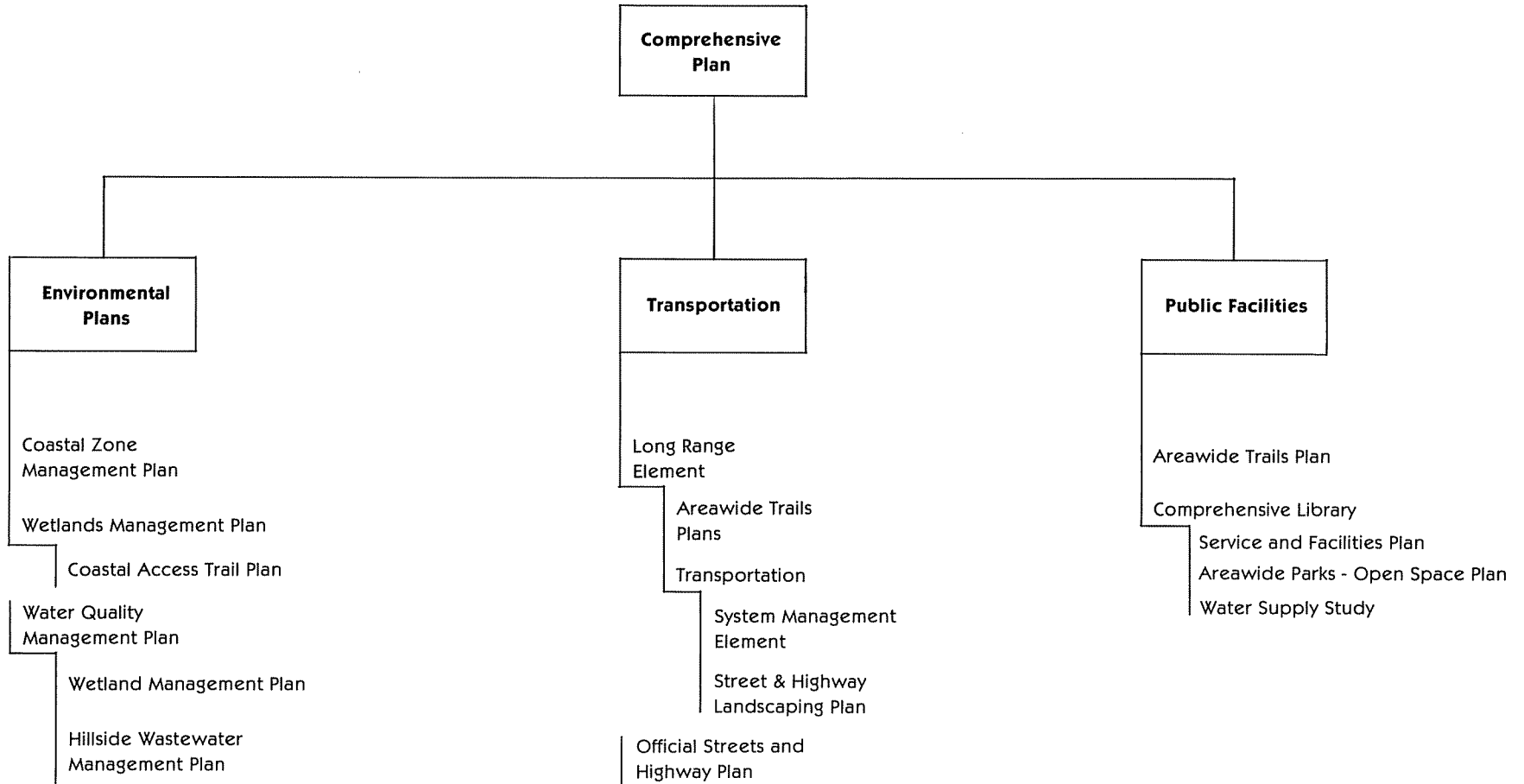
##### **4.5.2 MUNICIPAL CAPITAL IMPROVEMENT PROGRAM**

The Municipal Capital Improvement Program shall specify the public facilities necessary to the implementation of the Comprehensive Development Plan. The Capital Improvement Program (CIP) is also to be directly tied to the Urban Development Plan. The latter identifies the areas to receive urban services by given time periods. The Comprehensive Development Plan is designed to identify the general areas of urban development, and the Capital Improvement Program shall schedule those facilities and services necessary to the support of land patterns at the times specified in the Urban Development Plan.

##### **4.5.3 MUNICIPAL LAND MANAGEMENT SYSTEM**

The Municipal Land Management System shall generally specify the areas and time periods for which development is to be encouraged. This report provides the rationale for the phasing strategies recommended herein and describes in detail the methods to be used in achieving this strategy. The south Anchorage area is intended to receive the majority of new services. There shall be both near-term and long-term strategies to the

# RELATIONSHIP BETWEEN FUNCTIONAL PLANS AND COMPREHENSIVE PLAN



provision of urban services. The Comprehensive Development Plan is to provide the overall rationale for the timing and development of those densities to be achieved at given time periods. The land guidance system identified in the Municipal Land Management System shall be compatible with the timing and urban density recommendations contained herein.

Recent planning theory has stressed the need to develop short-range implementation projects and programs to implement the long-range recommendations of the Comprehensive Plan. Previous comprehensive planning efforts in other communities, as well as those of Anchorage, have resulted in less than optimal near-term solutions for land uses and densities because of the long-range orientation of comprehensive plans. The previously mentioned short-range mechanisms, including the Municipal Land Management System, Urban Development Program, and Municipal Capital Improvement program, should have the effect of, and are intended to provide, mechanisms to relate the Comprehensive Plan to short-range decision making. These strategies are therefore intended to implement, in a direct and clear way, the recommendations of the long-range Comprehensive Plan.

#### **4.6 PROCEDURAL LAND USE IMPLEMENTATION MECHANISMS**

Certain programs administered by the Municipality has an important affect upon the processes of urban growth. Included in this type are the Coastal Zone Management Program and the administration of recently selected State lands. Because of their actual and potential impact, their relationship to the Comprehensive Plan is described:

##### **4.6.1 COASTAL ZONE MANAGEMENT PLAN**

This program provides a framework for decision-making within the coastal zone on both natural and manmade features. It is intended that the land use recommendations contained in this Plan are to be an expression of the preservation, conservation, and utilization areas within the developed portions of the Anchorage Bowl and are to represent the resolution of the zones initially identified as "marginal" and "conflict" within the Coastal Zone

Management boundary. It is further intended that the spatial patterns given in the Land Use Map and its associated goals and policies are to guide the management of and decision-making processes on lands within the jurisdiction of the Coastal Zone Management Plan.

##### **4.6.2 MUNICIPAL LAND SELECTION**

The Municipal Entitlement Act provides for the selection of certain State lands within the corporate boundaries of the Municipality. The Municipality has filed upon, and received from the State, various tracts of land throughout the Municipality. Much of this land remains vacant and available for a variety of potential uses. It is intended that the ultimate use of Municipal selection lands be consistent with this Plan and other approved planning documents. To further such consistency, the Municipality has developed a systematic land management program with the following key elements:

- Municipality owned lands presently required for specific public uses will be reserved for such uses in accordance with Municipal regulations.
- Municipally owned lands required for specific, future public uses will be classified and reserved for such uses.
- Additional lands will be reserved, primarily on a regional basis, for unspecified future public uses.
- Lands not required for present or future public use will be considered for disposal, consistent with applicable land use regulations.

Adopted land management policies and identified land uses will, to the maximum extent possible, further the goals and objectives of this Plan.

##### **4.6.3 WETLANDS MANAGEMENT PLAN**

This Plan designates areas of wetlands protection, conservation, and development. It also establishes the proper mix and type of land management controls to be used in the protection or development of these critical environmental areas. It is intended that the land use and residential intensity recommendations of this Plan are to control the use and management of wetlands within the Anchorage Bowl. By inference, both the Coastal Zone and Water Quality Management Plans are to be consistent with the land use policies of this Plan to the extent that they relate to wetlands.





#### 4.7 LAND USE IMPLEMENTATION: PROCESS MECHANISMS

As indicated, the success of the community to realize its desired land use patterns will greatly depend upon our ability to guide and manage urban growth. The basis for growth management planning, as recommended in this Plan, is to focus on the strengthening of current land control ordinances, the use of incentives to help guide growth, and through the scheduling of sewerage facilities. This last component is critical to guiding the rate, density, and pattern of urban growth. It shall be Municipal policy to implement a growth management process of the type given in the Urban Development Patterns and Process Section of this Plan. These mechanisms are described at length in the **Municipal Land Management System** report.

#### 4.8 PLAN REVIEW PROCESS

This plan is intended to represent a broad policy toward land development and management within the Anchorage Bowl. As such, it was developed around a given set of community attitudes, and demographic data and trends. It is certain that these attitudes and trends will change over time. For this reason it is necessary to establish a process for plan review and reevaluation. Because this review need not necessarily result in the complete revision of this Plan, three levels of review are identified:

- **Plan Reevaluation.** A reevaluation of the major trends and/or policies of the Anchorage Comprehensive Plan must occur five years from the time of its initial adoption. If major deviations from those anticipated in the initial Plan are not identified, a complete revision of the Plan is not required. If major discrepancies are noted in this reevaluation, a revision of the Plan is warranted and shall be initiated.
- **Plan Revision.** The Plan must be reviewed and revised at least once every ten years, preferably following the decennial Census.
- **Plan Review.** The plan shall be reviewed once every two years from its time of adoption in order to make it

consistent with economic and demographic trends and with recent land use decisions and adopted studies and plans, and such other decisions as may be appropriate at the time of review.

It is intended that the adoption of this Plan will indicate that the above processes are to be followed in study reevaluation in order to ensure that the basis framework for decision-making remains current. The analytic process used to develop this Plan involved an inventory of

land availability and a forecast of land demand. It identified a potentially serious shortfall of residential land supply in the 1990-2000 period. Because of the possible magnitude of this problem, it is recommended that future plan reviews critically examine the characteristics of the projected land supply-land demand relationship, to determine if the recommendations continued herein remain valid or should be changed. It is further recommended that this review analyze additions to the Anchorage Bowl land supply, to include adjacent military lands and lands north of the Knik Arm.





