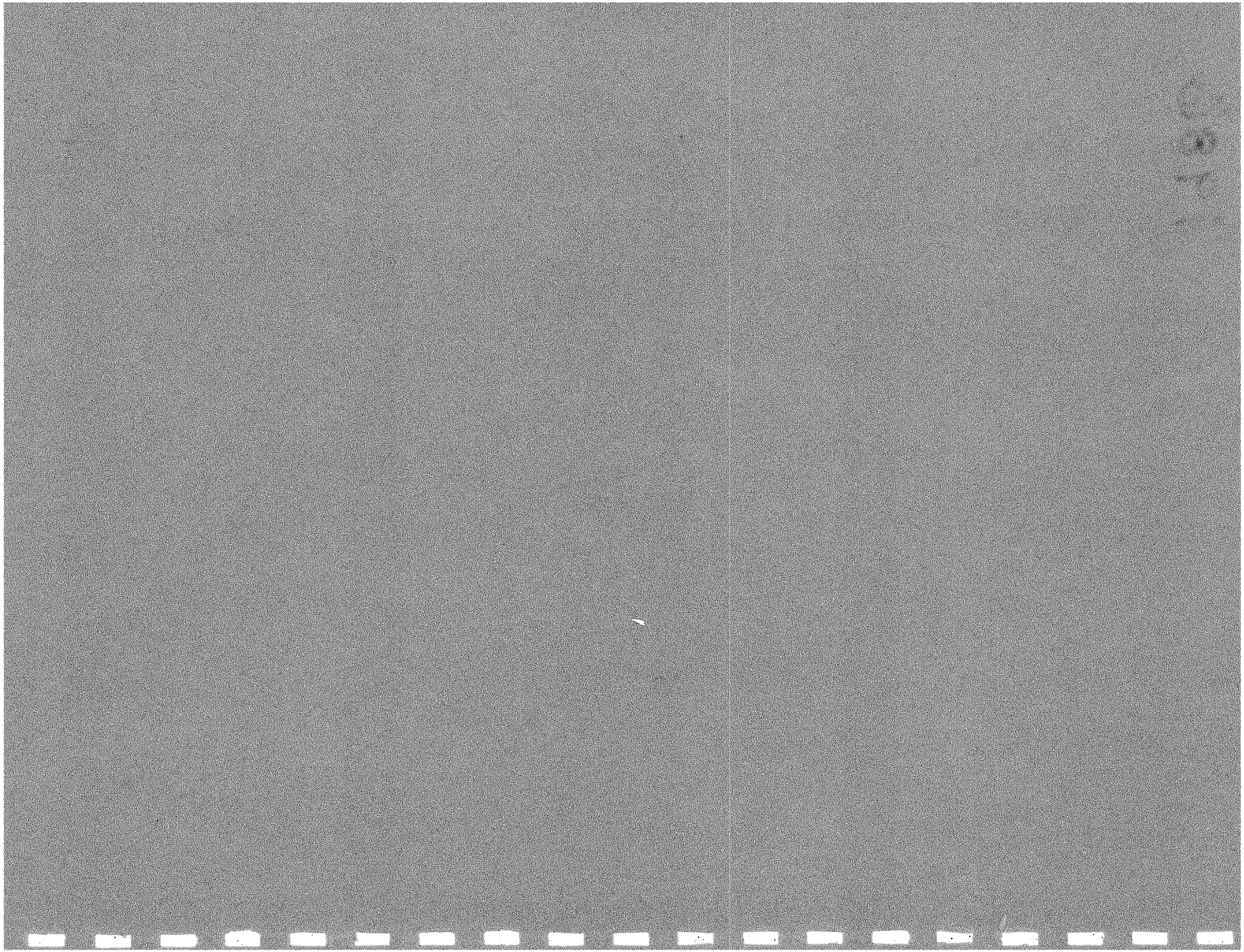
1986

GEO-REZONING

Background Information Packet

Northeast Anchorage

Municipality of Anchorage
Tony Knowles, Mayor



Municipality of Anchorage

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TONY KNOWLES, MAYOR

DEPARTMENT OF PLANNING

March 18, 1986

Dear Anchorage Citizens:

This is one of six books constituting the second complete series of geo-rezone background information packets. The Community Planning Department is updating the reports for each geographic area to reflect current areawide information important to making land use decisions for our community. You can find in these booklets information on demographics, land use, environmental characteristics, parks, trails and open space, public facilities and services, and the transportation network.

Most simply described, geographic rezoning is a case scheduling procedure. Conditional use and rezoning requests are grouped by six geographic areas. All cases for a geographic area are slated for public hearing together before the Planning and Zoning Commission during an assigned month on a four-month rotating cycle. Cases forwarded to the Municipal Assembly for final action are presented as part of a geographic area package.

This simple administrative procedure has enabled the Planning and Zoning Commission and the Municipal Assembly to more efficiently respond to land use petitions while employing more complete and up-to-date information than ever before. They are making these decisions within shorter, more predictable time frames and with the benefit of more effective public participation. Community-wide support from community councils, developers, commissioners and Assembly members made geographic rezoning one of three major accomplishments that earned the Municipality of Anchorage the 1985 All American City award. Anchorage's geographic rezoning system has also gained national recognition from the American Planning Association in its 1986 Outstanding Planning awards.

The Community Planning Department takes pleasure in offering this document to complement the geographic rezoning system. It is our intent to provide a comprehensive picture of major planning concerns affecting Anchorage today, so that we, all of us, can continue to make decisions that will build a better tomorrow for our community.

Sincerely,

Bill Luria
Director of Community Planning
kc4/h18

GEOGRAPHIC REZONING

BACKGROUND INFORMATION PACKET

NORTHEAST ANCHORAGE

March 1986 Update

Prepared by:

Community Planning Department
Municipality of Anchorage
Tony Knowles, Mayor

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INTRODUCTION

Between 1980 and 1983, the Municipality of Anchorage experienced the single largest 3-year period of growth in its history. Population and housing stock increased dramatically throughout the city. Growth rates during this period were lowest in the older, established areas of Anchorage where comparatively little vacant land remains. Nonetheless, undeveloped lands in Northeast and Northwest began to infill at a rapid rate.

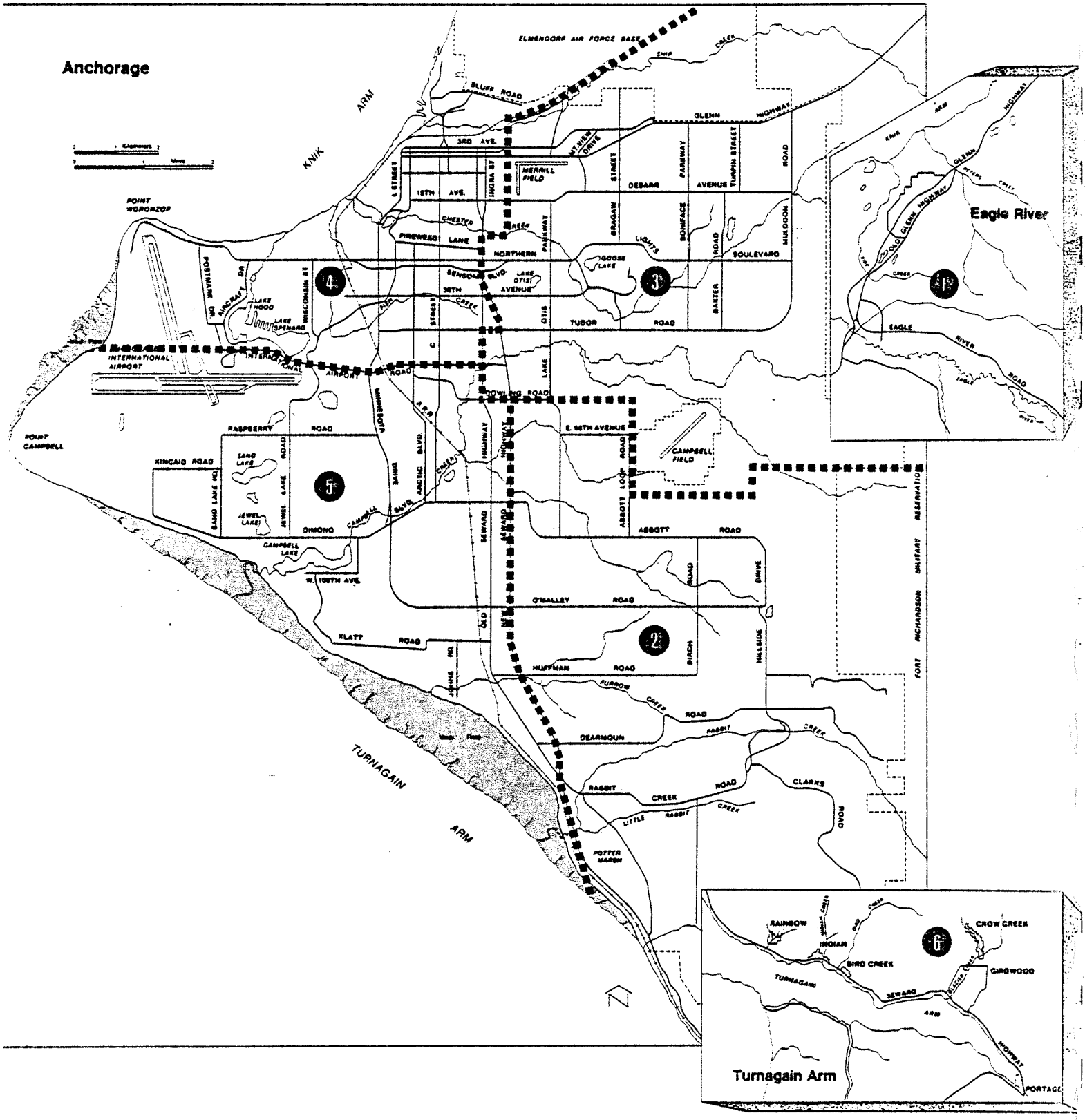
Acceleration of the infilling process helped to focus a number of major land use issues facing Northeast Anchorage. Examples are environmental and design issues related to the development of marginal lands, especially the wetland areas. Other issues have centered on community and neighborhood impacts resulting from redevelopment trends in Northeast, particularly the replacement of traditional single-family housing with higher density multi-family housing.

Today the infilling and redevelopment of Northeast continue to be important land use concerns to both area residents and public decision-makers. Although population and housing stock growth rates have declined since 1983 in almost all parts of Northeast, its overall growth continues. As infilling and redevelopment activities progress, there will be continuing need to minimize incompatibilities between adjacent land uses and to help ensure that new development or redevelopment in the area complements existing uses.

Slower growth rates in Northeast may afford greater opportunity in the next few years to focus on ways of improving both the quantity and quality of Municipal service delivery throughout the area. This is especially important where there are high concentrations of special need populations such as low income residents, minorities, and seniors. Meeting neighborhood needs for new or expanded park facilities, improved street maintenance and lighting, better quality housing at affordable prices - to name but a few - will be a special challenge as local, state, and federal revenues decline.

These are but the highlights of the Northeast development picture. Updated information presented in this package complements the geographic rezoning process by providing an overview of where the community stands today, where it is likely headed in the future, and how its growth and development relate and are linked to other parts of Anchorage: Northeast, Northwest, Turnagain Arm, Southeast, Eagle River and Southwest - together.

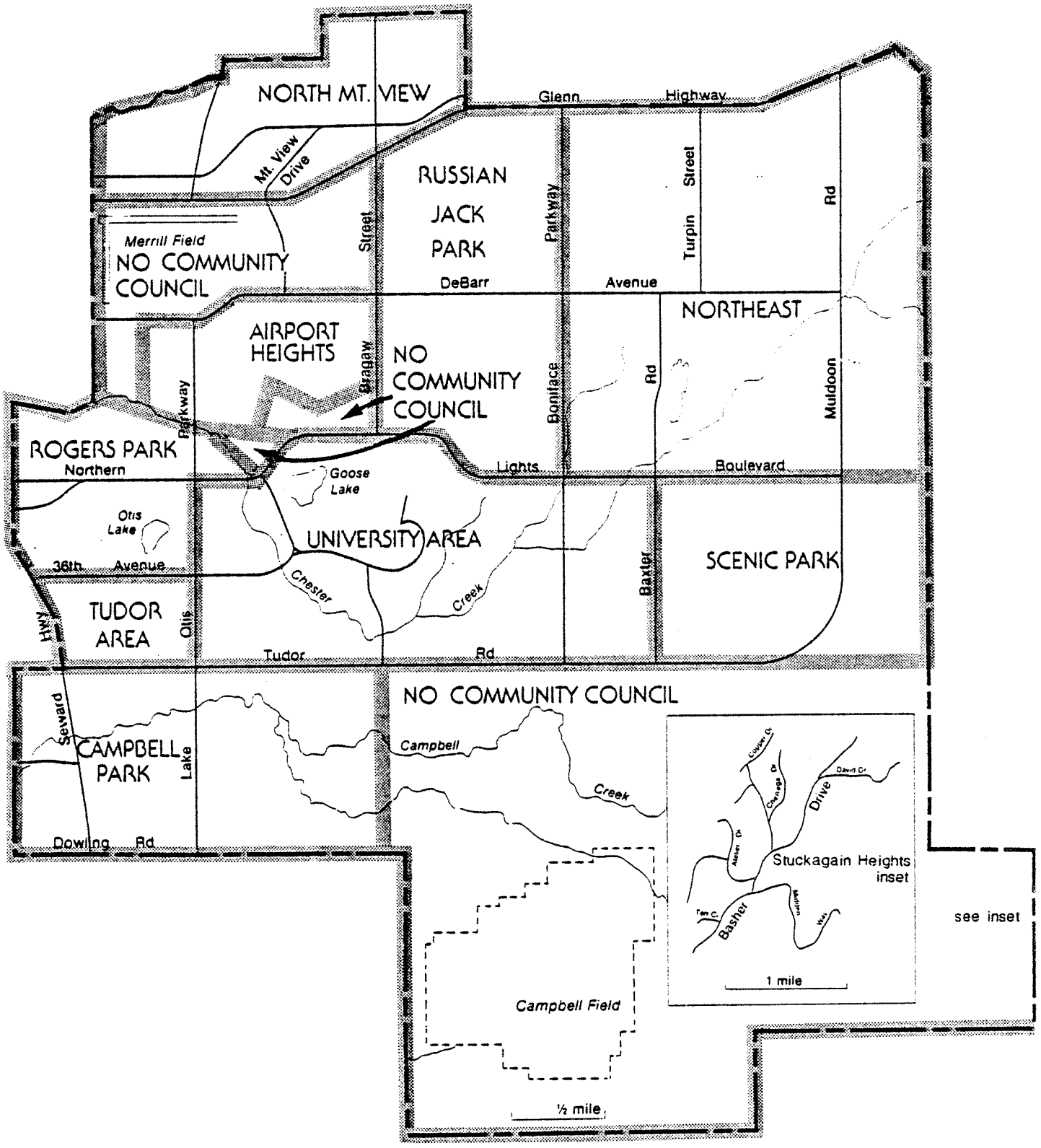
MUNICIPALITY OF ANCHORAGE
Geographic Rezone Areas



This and other geo-rezone information packets are intended to facilitate decision-making processes concerning capital planning, long-range community planning, and, of course, conditional use and rezoning requests. But in the end, their foremost objective is to provide a bridge linking the efforts of all Anchorage citizens - working together to help establish better neighborhoods and a better community as our city grows and matures.

NORTHEAST ANCHORAGE

Community Council Boundaries



DEMOGRAPHICS

Northeast Anchorage is the largest residential sector in the Municipality, housing almost one third of the city's total population. There are nine community councils in the Northeast. Four areas, primarily around Merrill Field and south of Tudor Road, are outside community council boundaries (Figure 2). Almost a fifth of Anchorage's total population resides in three of Northeast's community council areas: Northeast, Russian Jack Park and University Area. Northeast Community Council itself houses one in ten Municipal residents and has the largest population of any council area in Anchorage today.

Northeast Anchorage is typified by a core city/suburban character that is pointedly reflected in its demographic composition. National census data for 1980 demonstrates the wide diversity among Northeast residents in terms of race, age and income (Table 1). Almost forty percent of the non-white population in Anchorage lives in Northeast, with one in five of the area's residents representing a racial minority. In this respect, North Mountain View is of particular note. Almost 40% of its population is non-white, compared to a racial minority representation of 15% for Anchorage as a whole.

Median ages within the Northeast are also widely dispersed around the Municipal average of 26.3 years. Median age ranges from a low of 24.1 years in North Mountain View to a high of 32.3 years in the Rogers Park area.

Income differentials for the area are even more pronounced. Again, North Mountain View and Rogers Park represent the two extremes. North Mountain View's average income ($20,540) is only two-thirds the Municipal average of $32,073. Amost a quarter of its population falls below the poverty level, twice the percentage for Anchorage as a whole. By contrast, average income in Rogers Park ($52,418) is almost two-thirds higher than the Municipal average and two and a half times higher than the average income in North Mountain View. Less than four percent of the people in Rogers Park are below poverty level, compared to ten percent for Anchorage as a whole.

Northeast has experienced significant increases in both population and housing stock since 1980, even though its overall growth rates have generally been lower than Municipal averages. Recent housing stock growth has been an exception. Between 1984 and 1985 Northeast's

TABLE 1

CENSUS PROFILE
Northeast Anchorage
1980

Community Council[1]	Population	Race					Age				Housing				Income	
		Wht.	Blk.	Native[2]	Asian[3]	Other	0-4	0-19	65+	Median Age	Civilian Housing Units	Persons/ Household Average	Vacant Units	Housing Value	Average	Below Poverty[4]
		(Percent of Total)					(Percent of Total)						(Percent)	(Dollars)	(Dollars)	(Percent)
rth Mt. View	5,463	63	13	18	2	4	12	35	4	24.1	2,671	2.60	21.4	60,300	20,540	22.3
ssian Jack rk	7,649	79	10	6	2	3	11	34	2	25.0	3,607	2.61	18.8	72,400	24,355	12.7
rport Heights	3,869	81	8	7	3	1	8	34	2	27.5	1,442	2.80	5.8	68,600	34,267	8.1
gers Park	4,011	90	2	3	4	1	6	32	3	32.3	1,433	2.89	3.3	96,500	52,418	3.8
dor Area	1,913	84	9	3	3	1	8	36	2	28.2	651	3.01	4.5	97,800	41,852	7.8
rtheast	18,819	86	6	4	2	2	10	36	1	26.0	7,418	2.91	13.0	85,600	32,503	10.1
iversity Area	7,373	85	6	5	2	2	8	36	1	25.5	2,925	2.76	13.0	88,100	31,770	10.0
enic Park	4,819	92	4	2	1	1	8	37	1	29.7	1,657	3.16	8.0	98,300	43,525	2.1
mpbell Park	4,290	88	3	5	2	2	9	36	1	26.1	1,889	2.67	14.5	85,800	28,817	8.0
mainder of ea[5]	1,287	78	8	8	2	4	11	32	4	27.0	582	2.53	17.5	67,000	28,912	13.5
---																
rtheast Total	59,493	83	7	6	2	2	9	35	2	N/A	24,275	2.79	12.0	N/A	N/A	N/A
chorage Total	174,431	86	5	5	2	2	9	35	2	26.3	66,749	2.80	13.4	89,100	32,073	10.2

1 Military Bases are not included in statistics for Northeast Anchorage but are included in Anchorage Total statistics.
2 Native - American Indian, Eskimo and Aleut
3 Asian - Asian and Pacific Islander
4 Represents the percent of people below 125 percent of the 1979 poverty level. Poverty level varies by family size, number of children and the age of the householder or individual. Examples of 100% poverty level are a single person making $3686 or a family with two parents and two children making $7356 in 1979.
5 'Remainder of Area' refers to portions of Northeast outside established community council boundaries.

urce: 1980 Neighborhood Statistics Program, U.S. Department of Commerce, Bureau of the Census

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average growth rate (5.2%) exceeded the Municipal average (4.9%) by a slim margin (Table 2). This is primarily due to housing stock growth in the Scenic Park and Campbell Park Community Council areas. Construction of detached single-family housing at the Tudor-Muldoon curve accounts for much of Scenic Park's 12.7% housing stock growth. Campbell Park's impressive 21.6% increase reflects gains in both single-family and multi-family housing. Examples are the new attached and detached single-family units east of Lake Otis Parkway and large multi-family complexes immediately east of the New Seward Highway.

TABLE 2

POPULATION AND HOUSING STOCK
Northeast Anchorage
1980 -1985

	Population[1]					Civilian Housing Stock				
Community Council	1980	1983	1984	1985	Percent Change, 1984-1985	1980	1983	1984	1985	Percent Change, 1984-1985
North Mt. View	5463	6950	7395	6695	-9.5	2671	2765	2856	2948	3.2
Russian Jack Park	7649	9946	10863	11040	1.6	3607	4046	4270	4406	3.2
Airport Heights	3869	4671	4942	4959	0.3	1442	1607	1703	1709	0.4
Rogers Park	4011	4151	4230	3669	-13.3	1433	1426	1433	1445	0.8
Tudor Area	1913	2043	2133	1819	-14.7	651	717	736	726	-1.4
Northeast	18819	23554	25107	26578	5.9	7418	8176	8943	9253	3.5
University Area	7373	8817	9579	9260	-3.3	2925	3295	3516	3618	2.9
Scenic Park	4819	5893	6626	7120	7.5	1657	2011	2301	2594	12.7
Campbell Park	4290	5721	6105	6425	5.2	1889	2181	2314	2814	21.6
Remainder of Area[2]	1287	1577	1656	1658	0.1	582	612	609	648	6.4
Northeast Total	59493	73323	78636	79223	0.7	24275	26836	28681	30161	5.2
Anchorage Total	174431	230846	244030	248263	1.7	66749	77915	84643	88804	4.9
Percentage of Anchorage Total in Northeast	34	32	32	32	-	36	34	34	34	-

1 Military bases are not included in Northeast Anchorage (by community council), but are included in Anchorage Total figures.

2 'Remainder of Area' are those portions of Northeast Anchorage outside established community council boundaries.

SOURCE: 1980 Neighborhood Statistics Program, U.S. Department of Commerce, Bureau of the Census

1983, 1984, 1985 Household Surveys, Municipality of Anchorage, Community Planning Department

Four community council areas in Northeast experienced negative population growth between 1984 and 1985: North Mountain View (-9.5%), Rogers Park (-13.3%), Tudor Area (-14.7%) and University Area (-3.3%). Except in Tudor Area, these losses have occurred despite modest gains in total housing stock. As a result, vacancy rates for some or all housing types in these areas are generally higher than Municipal averages (Table 3). Single-family vacancy rates in Rogers Park (7.75%) and Tudor Area (7.73%) are almost twice the Municipal single-family average of 4.33 percent. North Mountain View's overall vacancy rate is a staggering 16.69%, compared to 8.04% for the Municipality as a whole.

TABLE 3

VACANCY RATES BY COMMUNITY COUNCIL
Northeast Anchorage
1985

Community Council	Single Family	Duplex	3-4 Units	5-19 Units	20+ Units	Mobile Home Parks	Mobile Home Lots	RV's	Total
North Mt. View	1.71	16.12	13.98	25.29	27.07	8.43	33.33	44.64	16.69
Russian Jack Park	1.60	5.17	4.61	8.76	9.36	7.58	10.00	44.19	7.06
Airport Heights	1.57	5.33	4.69	8.97	-	-	-	-	3.63
Rogers Park	7.75	11.11	10.64	12.09	-	-	-	-	8.65
Tudor Area	7.73	11.05	10.17	12.99	-	9.09	-	-	8.95
Northeast	3.27	4.83	4.19	5.53	6.20	8.63	8.48	45.45	5.43
University Area	5.33	11.41	10.03	11.36	12.20	2.54	4.76	100.0	8.68
Scenic Park	5.07	11.45	10.32	11.11	-	-	-	-	8.02
Campbell Park	7.75	10.96	9.55	12.03	12.72	2.53	7.69	100.0	9.45
Anchorage Total	4.33	8.16	8.38	13.92	14.98	6.62	6.33	30.83	8.04

Source: 1985 Household Survey, Municipality of Anchorage, Community Planning Department

Northeast shares with neighboring Northwest several characteristics typical of communities with mixed core city/suburban development (Table 4). Their proximity to the city's major employment centers and transportation corridors results in high population concentrations. Over half the Municipal population in Anchorage today resides in the Northeast and Northwest sectors. These two areas also have the highest concentration of households, almost sixty percent of the Municipal total.

Nonetheless, Northeast and Northwest have consistently had smaller population and housing stock growth rates than other parts of the Municipality. This trend will probably continue for the near term. Because these were the earliest parts of the city to develop, comparatively little vacant land remains today in Northeast and Northwest. Population and housing stock will continue to increase as the area infills. But absolute growth will be lower than in other parts of the city, particularly South Anchorage, where large tracts of vacant land still remain. As all vacant land is consumed in the Anchorage Bowl over the long term, this trend may begin to reverse itself. It is anticipated that the reversal will be particularly marked in the North Mountain View and Muldoon areas as older neighborhoods, in concert with the Comprehensive Plan, are redeveloped at higher residential densities than today's existing development.

TABLE 4

DEMOGRAPHIC COMPARISONS of GEOGRAPHIC REZONE AREAS
Anchorage
1985

	Eagle River	Southeast	Northeast	Northwest	Southwest	Turnagain Arm	Total Anchorage
1. Population (Percent)	10.1	13.5	31.9	19.4	18.1	0.6	(a)
2. Population Growth							
1980-83 (Percent)	71	62	23	31	39	64	32
1983-85 (Percent)	14	23	8	-5	13	11	8
3. Housing Stock Growth							
1980-83 (Percent)	41	49	10	5	27	10	16
1983-85 (Percent)	22	29	12	5	18	17	14
4. Vacant Housing Units (Percent)	5.8	4.6	8.0	8.9	6.9	52.9	8.0
5. Households Who Rent Residence[b] (Percent)	19.3	17.9	44.1	63.5	32.8	34.3	41.1
6. Average Persons Per Household [b]	3.2	3.2	2.8	2.3	3.0	2.5	2.8
7. People 65 and over [b] (Percent)	1.9	1.4	3.0	5.5	1.3	2.4	2.8
8. Children 0-19 Years Old [b] (Percent)	38	36	32	26	34	29	32
9. Number of Households [b]	7,685	10,432	27,763	20,368	14,812	603	81,663

(a) Population by geographic rezone area does not include military on-base population, 15,802 persons or 6.4% of Anchorage's total population.

(b) Excludes military on-base, group quarters and hotel/motel population.

SOURCE: 1985 Household Survey, Municipality of Anchorage, Community Planning Department.

TABLE 5

POPULATION BY HOUSING STRUCTURE TYPE
Northeast Anchorage
1985

Community Council	Single Family	Duplex	3-4 Units	5-19 Units	20+ Units	Mobile Home Parks	Mobile Home Lots	RV's	Other	Total
Airport Heights	3104	998	333	495	0	0	0	0	29	4959
Cambell Park	1911	550	491	590	1830	1017	35	1	0	6425
North Mt. View	1712	600	2055	1654	326	218	9	75	46	6695
Northeast	10569	3372	2593	2458	587	6380	449	30	140	26578
Rogers Park	2885	131	116	511	0	0	0	0	26	3669
Russian Jack Park	2647	1177	1518	2538	1400	1590	26	116	28	11040
Scenic Park	3962	1960	642	553	0	0	3	0	0	7120
Tudor Area	1043	456	145	144	0	28	3	0	0	1819
University Area	3211	1108	961	1762	1133	809	54	1	221	9260
Remainder of Area	217	9	26	250	178	970	0	0	8	1658
Northeast Total	31261	10361	8880	10955	5454	11012	579	223	498	79223
Percent of NE Total	39.5%	13.1%	11.2%	13.8%	6.9%	13.9%	0.7%	0.3%	0.6%	100%
Anchorage Total	118100	27225	22709	25066	15563	16678	4476	617	17829	248263
Percent of Anchorage Total in Northeast	26.5%	38.1%	39.1%	43.7%	35.0%	54.8%		36.1%	-	31.9%

SOURCE: 1985 Household Survey, Municipality of Anchorage, Community Planning Department

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Background

Northeast was one of the first areas of the city to develop as the boundaries of the original townsite at the mouth of Ship Creek expanded south and east. Today Northeast is an area in transition. It is bounded on the west by the Central Business District and on the north and east by well-established national defense facilities. The pattern and direction of its growth are substantially constrained by two factors: (1) major land withdrawals which have been effected over the years by federal, state and local government, primarily in the forms of the Elmendorf and Fort Richardson military reservations, Chugach State Park and the Campbell tract, and (2) the fact that primarily small parcels of vacant residential, commercial and industrial land remain, most large tracts in the area having been developed in earlier years.

Based upon the Anchorage Bowl Comprehensive Development Plan, saturation population for the Northeast is 113,325 persons. In 1985, there were 79,223 persons in Northeast or 70% of the total possible population based on the Comprehensive Plan. As seen in Table 5, the residential nature of Northeast is characterized by a wide variety of living styles. Almost 40% of the population in Northeast resides in single family houses. There are also large numbers of residents in mobile homes and multi-family units. Of those persons living in mobile home parks in Anchorage, 55% reside in Northeast and 44% of those living in multi-family housing with 5-19 units live in Northeast.

Vacant Land

There are approximately 1700 vacant privately held acres in Northeast Anchorage (Table 6, Figure 3). Of these, 40% are zoned for multi-family development, with only 7% zoned for single family use. Commercial and industrial zoning each account for 10% of the vacant land. Approximately 20% of the privately held vacant land in Northeast belongs to private institutions such as Alaska Pacific University.

Major Land Use Issues

As a consequence of the amount of previous development, much of the new development in Northeast is occuring as infill into previously developed areas and as redevelopment. As can be seen in Table 7, Figures 4-6, except for the R-1A (One Family Residential District - Large

TABLE 6

VACANT PRIVATELY HELD LAND BY ZONING DISTRICT
Northeast Anchorage
1985

	Acres	Percent of Total
Residential		59.4%
Single-Family		7%
R-1	63	
R-1A	52	
Two-Family		13%
R-2A	202	
R-2D	20	
Multi-Family		40%
Low Density		
R-2, D-2, R-2M	320	
Medium Density		
R-3	214	
R-O	59	
High Density		
R-4	101	
	703	
Commercial		10%
B-1	15	
B-3	167	
B-4	1	
Industrial		10%
I-1	148	
I-2	34	
Public Lands and Institutions	341	20%
TOTAL	1736	100%

SOURCE: Anchorage Information Management System (AIMS), Community Planning Department, Research Section

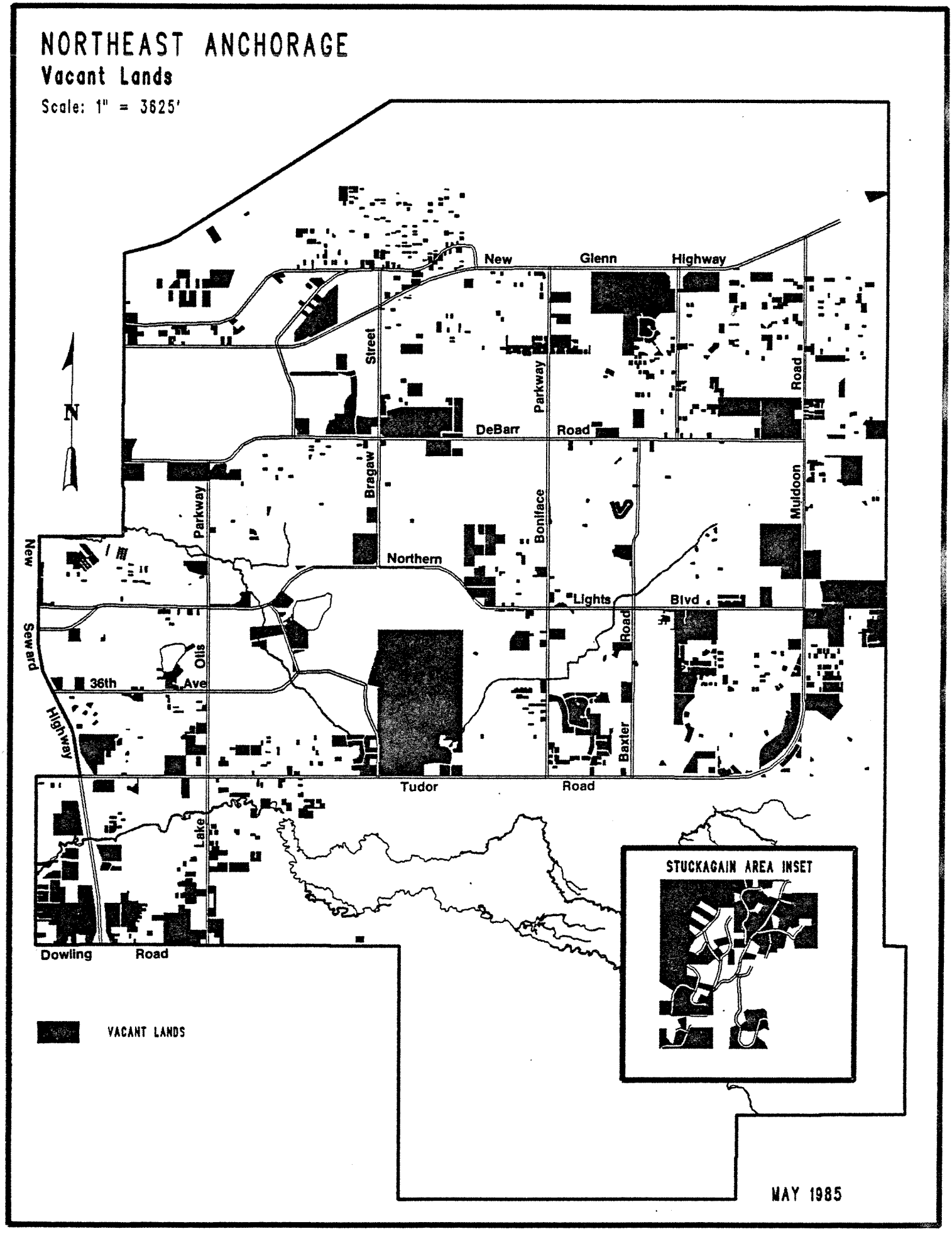

NORTHEAST ANCHORAGE
Vacant Lands
Scale: 1" = 3625'
N
New Glenn Highway
Street
Parkway
Road
DeBarr Road
Bragaw
Boniface
Muldoon
Parkway
Northern Lights Blvd
New Seward Highway
Ollis
36th Ave
Road
Baxter
Tudor Road
Lake
Dowling Road
STUCKAGAIN AREA INSET
VACANT LANDS
MAY 1985

figure 3

TABLE 7

EXISTING AND ALLOWABLE RESIDENTIAL DENSITIES
Northeast Anchorage
1985

	Total Developed Acres	Number of Dwelling Units	Existing Housing Density (DUA)	Allowable Zoning Density* (DUA)
Single-Family				
R-1	1215	5569	4.6	7.2
R-1A	173	780	4.5	5.2
Two-Family				
R-2A	481	2769	5.8	10.4
R-2D	189	1491	7.9	14.5
Multi-Family				
Low Density				
R-2, D-2, R-2M	901	7654	8.5	17.4
Medium Density				
R-3, R-O	657	8896	13.5	40
High Density				
R-4	69	1498	21.7	<40

* This represents a theoretical maximum and does not reflect as-built conditions.

SOURCE: Anchorage Information Management System (AIMS), Community Planning Department, Research Section

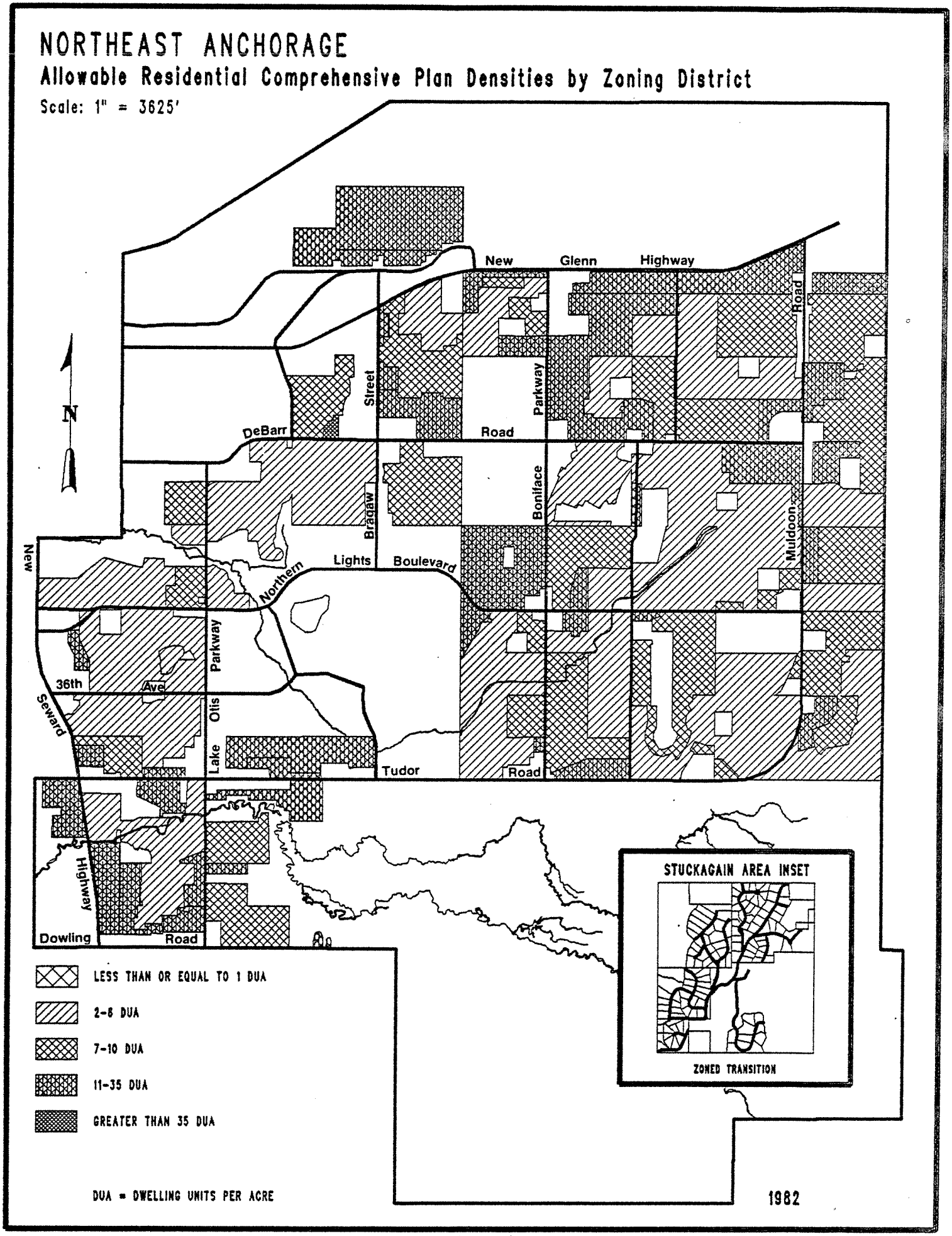
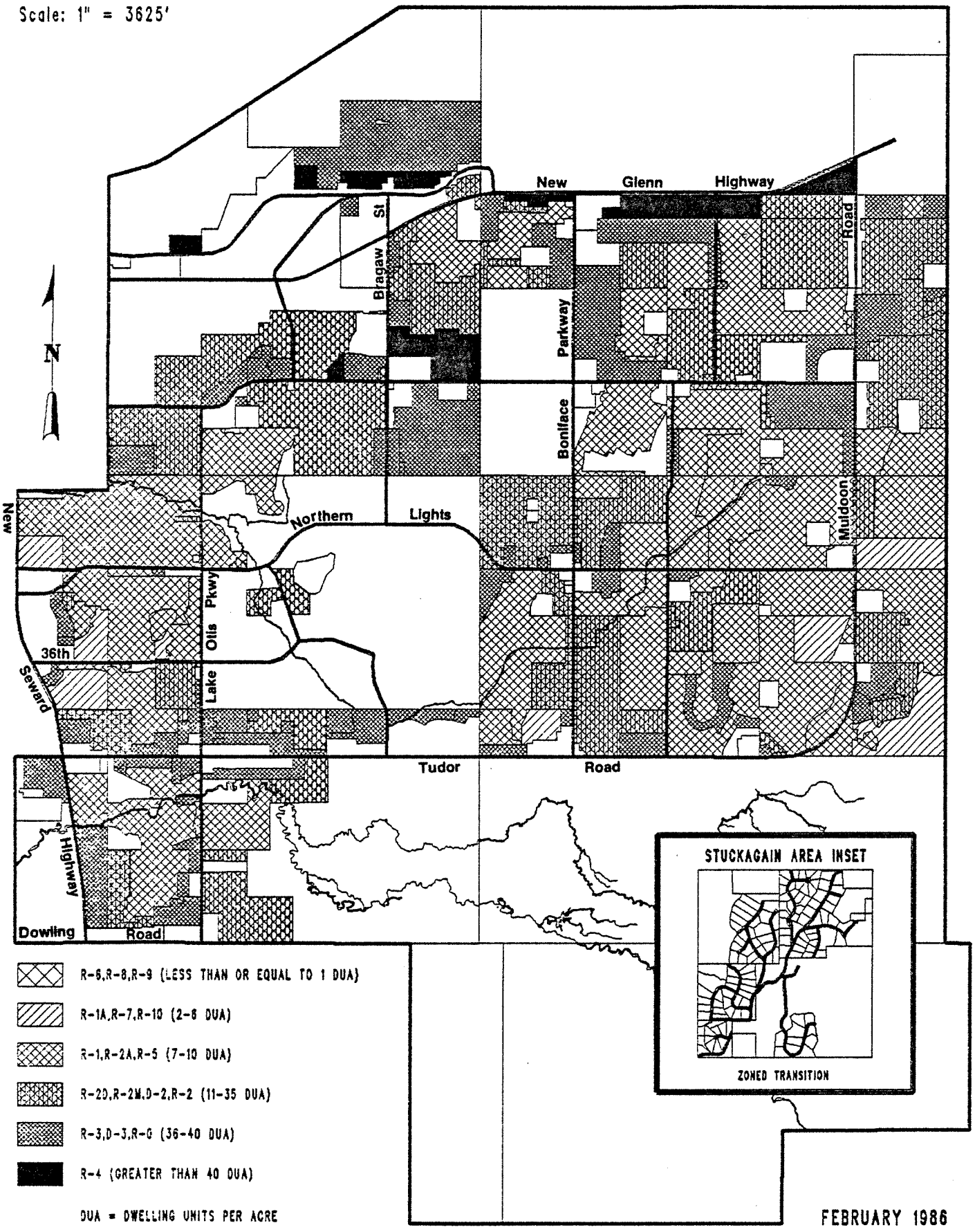

NORTHEAST ANCHORAGE
Allowable Residential Comprehensive Plan Densities by Zoning District
Scale: 1" = 3625'
N
New Glenn Highway
Muldoon Road
Boniface Parkway
Bragaw Street
DeBarr Road
Lights Boulevard
Northern
New Seward Highway
Parkway
36th Ave
Seward
Olis
Lake
Tudor Road
Dowling Road
STUCKAGAIN AREA INSET
ZONED TRANSITION
LESS THAN OR EQUAL TO 1 DUA
2-6 DUA
7-10 DUA
11-35 DUA
GREATER THAN 35 DUA
DUA = DWELLING UNITS PER ACRE
1982

figure 4

NORTHEAST ANCHORAGE

Allowable Residential Zoning Density by Zoning District

Scale: 1" = 3625'



FEBRUARY 1986

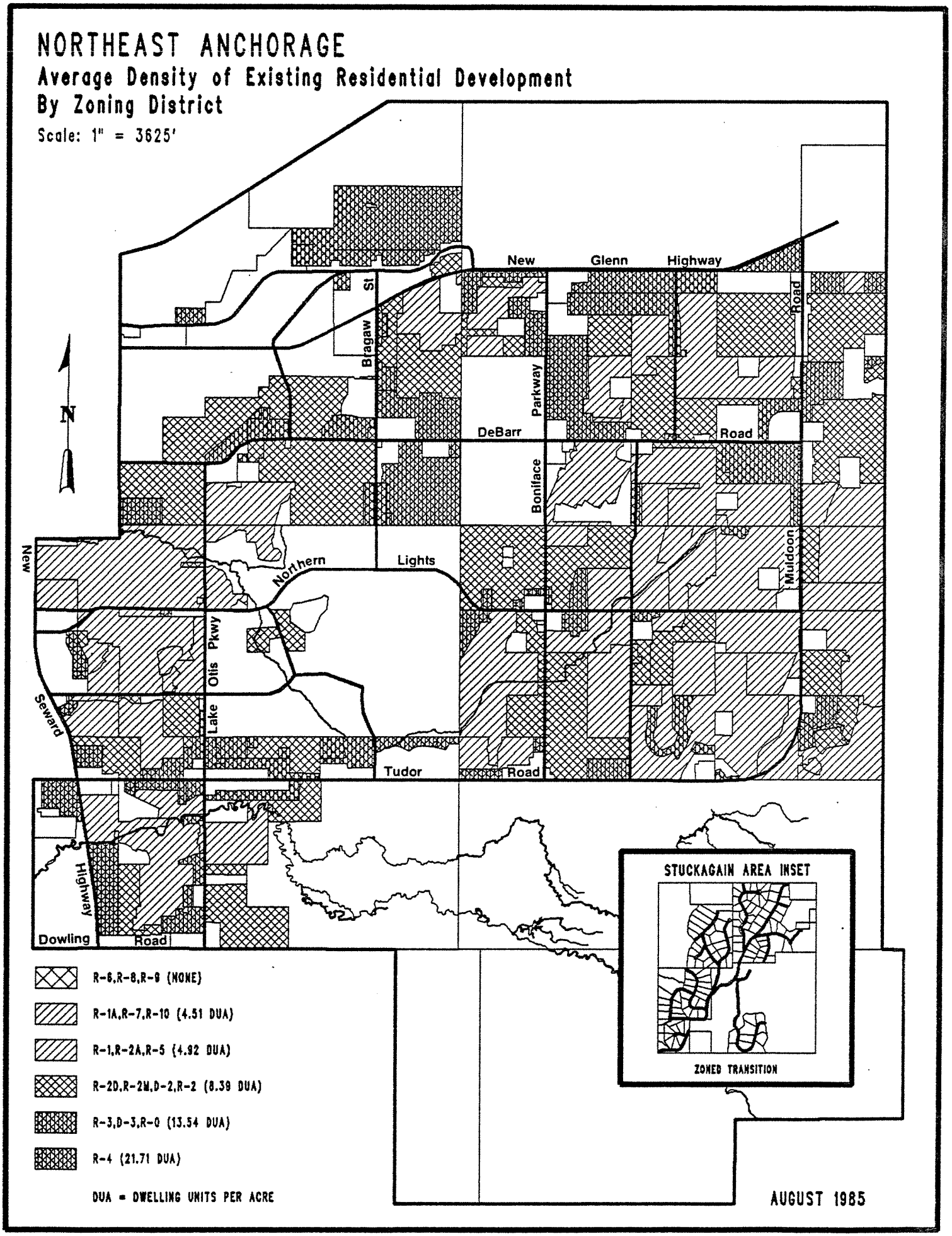

NORTHEAST ANCHORAGE
Average Density of Existing Residential Development
By Zoning District
Scale: 1" = 3625'
N
New Glenn Highway
Bragaw St
Parkway
Road
DeBarr Road
Boniface
Muldoon
Northern Lights
New Seward
Olis Pkwy
Lake
Tudor Road
Dowling Road
Highway
STUCKAGAIN AREA INSET
ZONED TRANSITION
R-6,R-8,R-9 (NONE)
R-1A,R-7,R-10 (4.51 DUA)
R-1,R-2A,R-5 (4.92 DUA)
R-2D,R-2M,D-2,R-2 (8.39 DUA)
R-3,D-3,R-0 (13.54 DUA)
R-4 (21.71 DUA)
DUA = DWELLING UNITS PER ACRE
AUGUST 1985

figure 6

Lot) areas, the existing housing densities are significantly lower than the density allowed by underlying zoning. This is particularly striking in the multi-family areas which range from an existing density of 8.5 to a high of 21.7, whereas the permitted densities range from 17.4 to over 40 dwelling units per acre. In many parts of Northeast, redevelopment to higher densities will not occur because of housing pattern stability. In other areas, redevelopment will tend to favor the replacement of existing single family housing with higher density multi-family housing.

This trend is seen in the Mountain View and Muldoon areas. Many of the area residents see this shift as not being acceptable. As example, the North Mountain View Improvement Committee, a citizens advisory group appointed by the Mayor, sent out a questionnaire to the residents of North Mountain View last Spring to determine community attitudes. The survey revealed that 68% of those responding preferred "more" single family housing and that 56% preferred "less" apartments. Overcrowding and adverse impacts on community appearance were cited time and again as major concerns with redevelopment to higher densities.

At the present time there are no design standards or controls to affect the multi-family housing appearing throughout Northeast and other parts of Anchorage. Until such time as these can be adopted, there will continue to be a conflict between area residents who wish to maintain the integrity of their traditional single family developments and the redevelopment to multi-family housing.

Another land use issue, also occuring as a result of prior development, is the increasing pressure for new residential and institutional development in areas with marginal environmental characteristics. This results from the fact that properties on high ground and with good drainage have in large part already been developed; witness the Airport Heights, Mountain View, North Muldoon, Nunaka Valley and Rogers Park areas. Henceforth, new development will increasingly focus on properties within or adjacent to wetland areas with much of the wetland areas probably being lost to development. Development at the corner of Northern Lights Boulevard and Muldoon Road is one such example. Development within remaining portions of the wetland is a particularly critical issue in the Baxter Bog area.

An issue reappearing frequently in the Northeast is that of "strip commercial", the development of commercial enterprises down the length of major roadways. Such

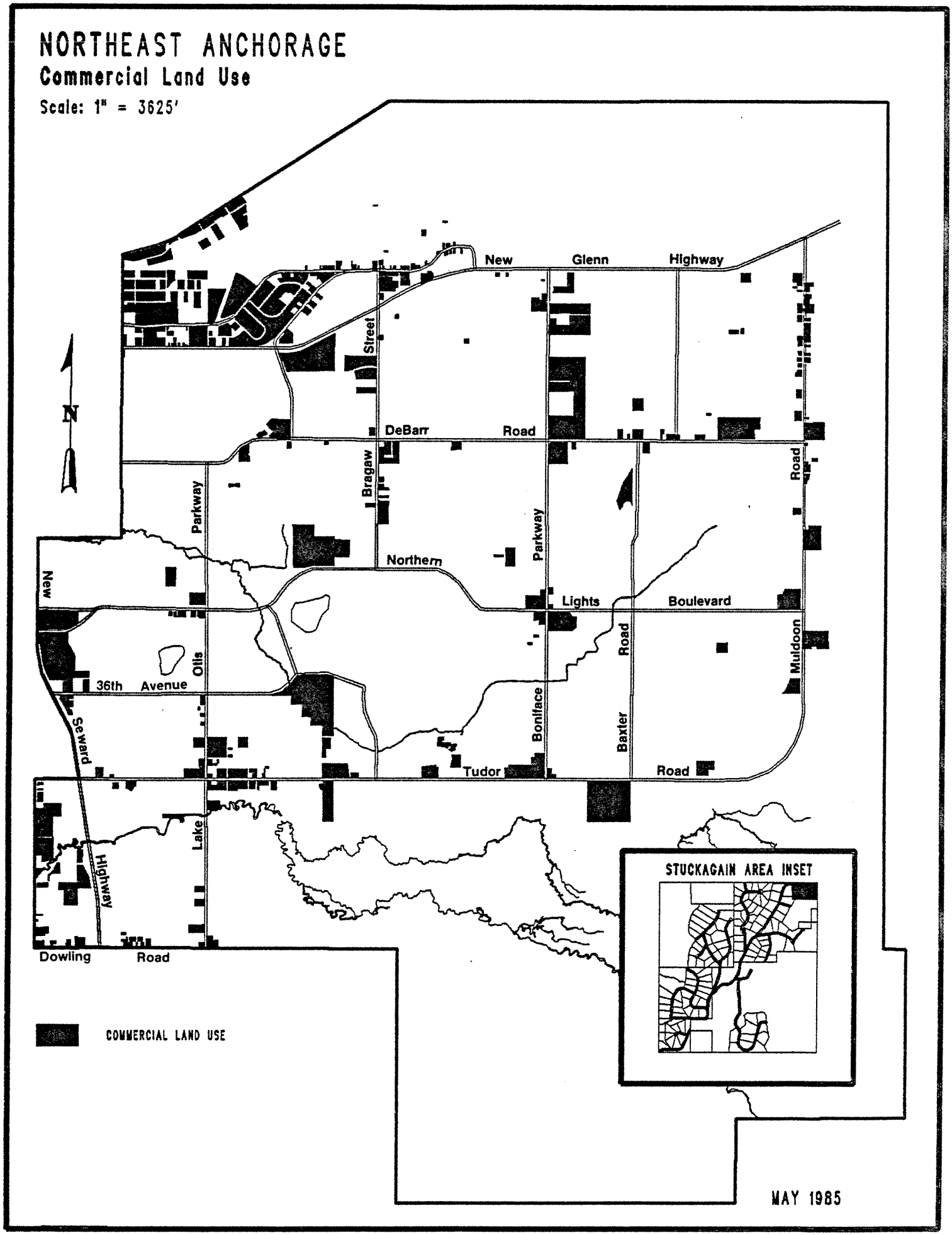

NORTHEAST ANCHORAGE
Commercial Land Use
Scale: 1" = 3625'
N
New Glenn Highway
Street
DeBarr Road
Bragaw
Parkway
Northern
Parkway
Road
New
Lights Boulevard
Seward
Highway
Lake
Dowling Road
36th Avenue
Ollis
Tudor
Boniface
Baxter
Road
Muldoon
STUCKAGAIN AREA INSET
COMMERCIAL LAND USE
MAY 1985

figure 7

development is seen most notably along Muldoon and Tudor Roads and to a lesser extent along DeBarr and Northern Lights Boulevard (Figure 7). Residential to commercial conversions in these areas are typically initiated at or near major intersections and are followed later by other commercial development that extends along the artery. Such strip commercial development leads to congested thoroughfares and intersections, encroachment into residential neighborhoods, and decreasing residential property values. Perceptions that property is no longer viable for residential use lead to further commercial development requests. The trend can be expected to continue, especially where vacant land with good access exists.

Major Planning Efforts

In recent years, major planning efforts specifically undertaken in Northeast Anchorage have included the East City Bypass Feasibility Study, the Goose Lake Plan, and special plans for the Campbell Tract area.

The Campbell Tract comprises some 4,200 acres of Municipal, State and Federal land. Park and institutional land use within the Campbell Tract is guided by original deed restrictions and by the recommendations set forth in the Updated Far North Bicentennial Park Master Plan. A critical issue on this tract is the amount and location of the institutional land development since the tract's primary use is for park and recreational purposes. This question of institutional use is now being addressed in the Tudor Road/PLI Study. The study focuses on the use of the PLI (Public Lands and Institutions) zoned land along Tudor Road within the Campbell Tract.

The Goose Lake area comprises about 1,400 acres and contains within it major institutions such as the University of Alaska, Anchorage Community College, Alaska Psychiatric Institute, McLaughlin Center, and Providence Hospital. This area represents a unique clustering of educational, medical and social service facilities. Nowhere else in the Municipality are major institutions located in such close proximity to one another. The issue here is to allow for growth of the institutional uses without dramatically increasing traffic volumes through the area and without adversely impacting wetland areas.

Wetlands

Freshwater wetlands are a critical environmental feature in certain sections of Northeast Anchorage, most in the Goose Lake, Campbell Tract and Baxter Lake areas. As throughout the Municipality, these freshwater wetlands are subject to the guidelines and standards set forth in the Anchorage Wetlands Management Plan (AWMP). The AWMP delineates policies and standards which distinguish different wetland types and provides the basis for their development and/or protection. Wetlands are generally divided into three basic categories: preservation, conservation and developable wetlands.

It is important to note that there are substantial differences between these categories in terms of the wetlands suitability and availability for development. These differences primarily reflect the relative importance of the wetlands in maintaining essential hydrologic, stormwater retention, and wildlife habitat functions. While some wetland areas can be developed with little or no impairment to natural systems, others are relatively intolerant of human use and are valuable in their undisturbed or original conditions. Designated wetlands categories within Northeast Anchorage are depicted in Figure _.

As the term implies, preservation wetlands are intended to be retained in their natural state because of their inherent values to essential hydrological and biological functions. There are four areas in Northeast Anchorage where land use changes adjacent to preservation wetlands are critically important: [1] the Goose Lake area; [2] south of Tudor Road in the Campbell Tract area; [3] south of Northern Lights Boulevard between Baxter and Patterson in the Baxter Bog area; and [4] the Chester Creek Greenbelt Corridor. Institutional expansion adjacent to the Goose Lake and Campbell Tract preservation wetlands areas is a particular concern. Guidelines for development in the immediate vicinity of these wetlands are set forth in the Goose Lake Plan and in the Updated Far North Bicentennial Park Master Plan. Residential development in wetlands adjoining these preservation areas should be closely monitored for maintenance of the Baxter Bog, Chester Creek, Goose Lake, and Campbell Creek wetlands systems.

Many of the wetlands tracts in Northeast Anchorage have been classified developable. Unlike preservation wetlands, developable wetlands perform less essential natural functions and may be developed with appropriate construction mitigation techniques. A major issue in the development of these areas is effective drainage and subdivision design. Developable wetlands in Northeast Anchorage are primarily concentrated south of the Glenn Highway between Boniface and Turpin, north

NORTHEAST ANCHORAGE

Approximate Wetlands Locations and Areas of High Ground Failure Susceptibility

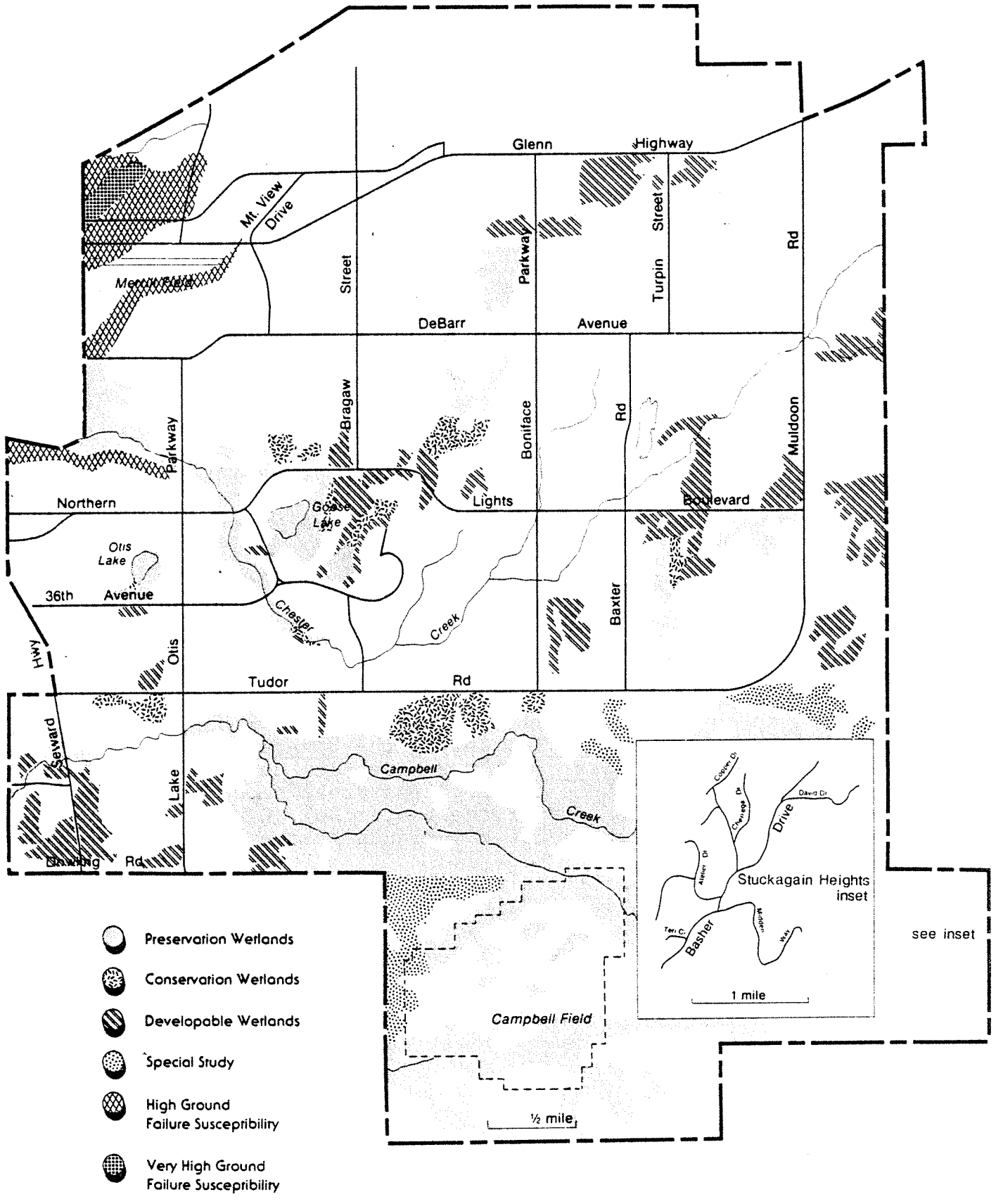


figure 8.

and south of Northern Lights Boulevard between Baxter and Muldoon, east of Muldoon Road, and north of Dowling along the Seward Highway.

Conservation wetlands differ from developable wetlands in that they have certain natural features which require protection. Under adopted Municipal policy. These wetlands will be managed to protect their natural functions and values to the maximum extent practicable while permitting some uses to occur on wetland fringes and less critical wetland areas. It is important to note that development activity involving the placement of fill material in conservation wetlands requires a permit from the U.S. Army Corps of Engineers (COE). The COE recently issued policy clarification of its regulatory procedures under Section 404 of the Clean Water Act as they relate to Anchorage wetlands. Wetlands fill permits will generally not be issued unless the applicant clearly demonstrates the qualitative and quantitive wetland values that would be impacted by the project and those values that would remain and any proposed on-site mitigation measures. COE policy is to use this information to determine whether the proposed activity would result in no overall loss to wetland values. "If applications are received which clearly reflect this information, and the proposal is found to be in the public interest, individual permits will be issued."

These regulatory policies and procedures are a particularly significant issue for conservation wetlands in the Baxter Bog, Goose Lake and Tudor Road PLI areas. An important, related issue is the balancing of the need to protect conservation wetlands features with the need to provide sufficient land for population and institutional growth, particularly in the areas identified for institutional development south of Tudor Road.

Finally, there are limited "special study" wetlands areas in the Campbell Tract addressed in the Updated Far North Bicentennial Park Plan and, more recently, the Tudor Road Public Lands and Institutions Plan. Special study wetlands are those areas where there is insufficiently detailed land use and environmental information to determine wetland status. Additional study is recommended for these major wetlands areas to determine their suitability for development.

Slopes and Ground Failure Susceptibility

Slopes and ground failure susceptibility are two geological conditions that preclude or constrain development in limited areas of the Northeast. For the area as a whole, these factors are relatively minor and their effects can be mitigated within certain limits.

Slope is a term that refers to the gradient of the land surface. Slopes in Anchorage are mapped on a scale that ranges

from "one", which is nearly flat (slopes less, than five percent or three degrees), to "six", precipitous slopes more than 100 percent or over 45 degrees. The steeper the slope, the more prone an area is to erosion, increased water runoff, rock and land slides, and avalanches. Northeast Anchorage has steep slopes (those in excess of 25 percent) on moraine deposits that form a belt of small, elongate hills running southwest to northeast through the area and in segments along Ship Creek and Chester Creek. These steep slopes pose special development problems. Careful site design and construction practices are needed in these areas in order to protect the slopes and prevent erosion or increased runoff.

Ground failure susceptibility is a term that refers to areas most likely to "fail" in the event of an earthquake. Failure includes ground cracking and earth movement and is dependent on geology, groundwater, slopes, proximity to the earthquake epicenter and the intensity and duration of the shaking. Using standards established in the 1979 Geotechnical Hazards Assessment Study prepared for the Municipality by Harding-Lawson Associates, over ninety percent of the ground in Northeast Anchorage is rated for moderate to moderately low ground failure susceptibility. The remaining three square miles are rated for high and very high ground failure susceptibility, including: [1] the south bluff along Chester Creek east of the Seward Highway; [2] the bluff running southwest to northeast across E. 15th Avenue to Merrill Field; and [3] the North Mountain View area including a broad sector bordering the south bluff along Ship Creek (Figure 8). Public policy is to discourage residential development in these high and very high seismic risk areas. As specified in the Coastal Zone and Comprehensive Development Plans, any development in these areas requires the use of central sewage systems and engineering specifications sufficient to mitigate the potential loss of life and property.

Floodplains

The floodplain is the land adjacent to the normal stream channel that is periodically inundated by floodwaters. The 100 year flood is defined as a flood at any given location having an average frequency of occurrence in the order of once in 100 years, or a one percent chance of occurrence in any given year. The floodway is the stream channel and that portion of the floodplain which must be reserved in order to discharge the 100 year flood without raising the water surface by more than one foot.

In general, flooding is not a major concern in the Northeast as long as floodplain regulations specified in Anchorage Municipal Code 21.60 are strictly enforced. Areas south of 32nd Avenue and east of Boniface are identified as within the 200-year floodplain and, the area north of DeBarr between Edward Court

and Muldoon is identified as within the 500-year floodplain. The relocation of the South Fork Chester Creek to flow through Behm Lake is altering the floodplain. Thus, much of the land between Floring and Bragaw streets is no longer a designated floodplain.

Winds

There are two sources of high velocity winds in Anchorage: [1] the Turnagain Arm wind channel that commonly creates up to 50 mile per hour winds along the Arm and near Cambell Point, and [2] air flows that descend the Chugach Mountains and channel through the valleys creating southeasterly "Chugach" winds greater than 100 miles per hour. In Northeast Anchorage, areas east of Muldoon Road are affected by the Chugach winds. Wind damage in these areas can be minimized with special mitigating measures such as specially constructed and oriented buildings, wind breaks and vegetation.

TABLE 8

PARK RECREATION STANDARDS

Park Type	Acres/ 1000 People	Size Range	Population Served	Service Area	Typical Facilities	Examples
Mini Parks		2500 sf or to 1 acre	500- 2,500	Sub-Neighborhood	Swings, climbing bars, surfaced area, benches	Geneva Woods Park
Neighborhood	2.5	5-20 acres	2,000-10,000	1/4-1/2 mi. radius	Swings, etc. paved courts play fields, benches	Nunaka Valley North Park
Community	2.5	20-100 acres	10,000-50,000	1/2-3 mile radius	Contact with nature, sports fields, tennis facilities	Centennial Park
Large Urban	5.0	+ 100 acres	1 per 50,000	within 1/2 hr. drive	Golf, trails, nature center, swim, sport facilities	Russian Jack Springs Park
Regional	20.0	+ 160 acres	Entire pop. in smaller comm.	within 1 hr. drive	Trails, camping, swim	Far North Bicentennial Park
Greenbelt	10.0	+ 500 acres	Entire pop.	1/2-3 mi. radius		Chester Creek Greenbelt

gel/bt4

Overview

Establishment of a balanced parks, trails and open space system is important to maintaining the overall quality of life in Northeast Anchorage as the area undergoes steady infilling. In general, the area's total parkland acreage compares favorably with other sectors of the Anchorage Bowl, especially in terms of urban and community parks (Figure 9, Table 9). However, acreage for mini and neighborhood parks is in short supply in Northeast Anchorage and may become increasingly deficient as the area infills and population grows.

Parkland needs for Northeast Anchorage are primarily based on a series of recreation standards developed by the National Recreation and Park Association (NRPA) in the early 1970's (Table 8). These standards relate recommended park acreage allocations to the population of an area. The Municipality has employed these standards for several years in establishing park acquisition and development needs. In the Areawide Park Plan, they were used to quantify Northeast's current and projected parkland needs.

As shown in Table 10), Northeast Anchorage in total enjoys a substantial surplus of community parkland acreage. However, almost all areas of Northeast Anchorage are deficient relative to neighborhood park standards (Table 11). In areas zoned for high density development, it is anticipated that neighborhood parkland deficiencies will become even greater between now and the year 2000.

As Northeast Anchorage continues to infill, it is important that parkland be assured now lest the opportunity vanish. There is a particular need to focus on acquisitions for mini and neighborhood parks as well as the provision of linkages between existing parks, schools and greenbelts. The provision of usable open space in large PUD developments is also important in order to bridge any potential future gaps in mini and neighborhood park facilities.

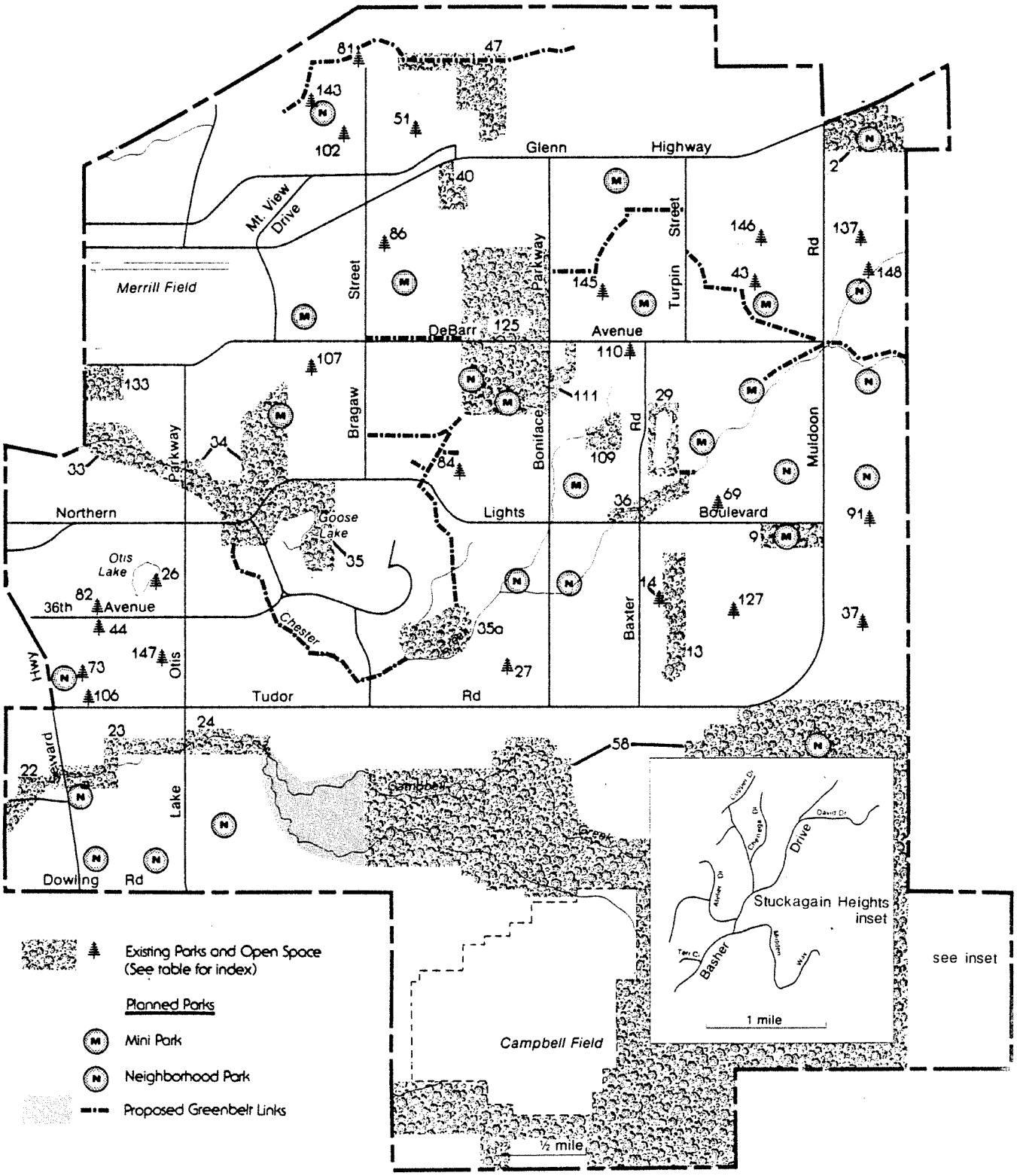
In December 1985, the Assembly adopted the Anchorage Parks, Greenbelt and Recreation Facility Plan. The following recommendations, which pertain to Northeast Anchorage, are extracted from that plan:

Recommendations: Mountain View

- A cooperative agreement with the military and Alaska Railroad should be sought to realize the Ship Creek Greenbelt.

NORTHEAST ANCHORAGE

Park and Greenbelt Plan



Adapted from Anchorage Park, Greenbelt and Recreation Facility Plan; approved December 17, 1985 by the Municipal Assembly.

figure 9

TABLE 9

NORTHEAST ANCHORAGE PARKS and OPEN SPACE

NO.	NAME	ACRES	TYPE
9	Arnold Muldoon	64.47	C
13	Baxter Bog Park	46.40	OS
14	Pfleiger Park	5.00	OS
22	Unnamed Park	33.75	OS
23	Wickersham Park	20.36	N
24	Campbell Park	35.81	N
26	Carlson Park	2.37	M
27	Castle Heights	1.38	M
28	Centennial Park	70.93	C
29	Cheney Lake Park	45.25	U
33	Eastchester Park	86.75	N
34	Tikishla Park	105.06	C
35a	University Lake Park	60.00	C
35	Goose Lake Park	67.81	U
36	Chester Valley Park	22.38	OS
37	Chugach Foothills	6.31	OS
40	Conifer Park	14.89	N
43	Creekside Park	8.40	N
44	Crescent Park	2.89	M
47	Davis Park	94.84	C
51	Duldida Park	0.57	M
58	Far North Bicentennial/ Hillside Park	4029.03	R
69	Foxhall Park	4.33	M
73	Winderness Park	1.62	M
81	Irwin Street Park	1.86	M
82	Jacobson Park	5.41	N
84	James Vernon Nash	2.26	M
86	Kanchee Park	2.38	M
91	Little Dipper Park	1.29	M
102	Mountain View Park	1.86	M
106	Needle Park	0.06	OS
107	Nichols Park	1.23	M
109	Nunaka Valley Park	22.97	C
110	Nunaka Valley North Park	5.44	N
111	Nunaka Valley West Park	14.02	OS
125	Russian Jack Springs Park	299.04	U
127	Scenic Park	5.21	N
133	Sitka Street Park	17.69	N
137	Standish Street Park	0.23	M
143	Thompson Avenue Park	13.78	N
145	Towne East Park	7.40	N
146	Turpin Park	2.5	M
147	University Park	2.82	M
148	Valley Street Park	2.43	M

M = mini park
N = neighborhood park
C = community park
U = urban park
R = regional park
OS = open space

TABLE 10

COMMUNITY PARKS: NEED ASSESSMENT BY GEO-REZONE AREA

Geo-Rezone Area	Estimated 1984 Population	Acres Needed To Meet Standard*	Current Community Park Acreage	Surplus or Deficiency	Estimated Saturation Population	Projected Need (Acres)	Estimated Additional Acreage Needed at Saturation Level
NORTHWEST	50,278	125.70	74.75	-50.95	78,000	195	120
NORTHEAST	80,332	200.83	439.33	+238.50	106,000	265	None
SOUTHWEST	49,711	124.27	119.31	-4.96	90,000	225	105
SOUTHEAST	31,424	78.56	67.76	-10.80	60,000	150	82
EAGLE RIVER EKLUTNA	23,896**	59.74	190.00***	+130.26	85,000	212.5	22.5
TURNAGAIN ARM	1,506	3.77	19.00****	+15.23	20,000	50	31

* NRPA standard is 2.5 acres per 1,000 persons.

** Does not include group quarters.

*** This includes the Eagle River Lion's Club Park which may or may not, depending on the disposition of rights to that land, continue as a long-term community park.

**** Includes projected expansion of Forest Park area.

gel/bt5

TABLE 11

NEIGHBORHOOD (NHB) PARK NEEDS BY TRANSPORTATION DISTRICT (TD)*
Northeast Anchorage

Park Planning Area	TD	1983 Population	Minimum Acres Needed According To NRPA Standards (2.5/1000)	Existing NBH Park Acres	Deficiency or Surplus	Estimated Saturation Level Population	Overall Acres Needed to Meet Saturation Population	Additional Acres Needed at Saturation Level
Mountain View								
	5	6,294	15.74	18.07	+2.33	7,250	18.13	0.06
	12	9,810	24.53	17.27	-7.26	16,550	41.38	24.11
Muldoon								
	13	11,664	29.16	20.96	-8.23	22,840	57.10	36.14
	17	13,042	32.61	12.03	-20.58	15,380	38.45	26.42
	25	12,628	31.57	12.88	-18.69	19,240	48.10	35.22
Lake Otis								
	16	5,041	12.60	11.23	-1.37	6,000	15.00	3.77
	23	5,824	14.61	19.70	+5.09	7,750	19.38	0.00
	24	2,082	5.21	2.02	-3.19	2,956	7.39	5.57
Campbell Park								
	28	5,721	14.3	6.02	-8.28	9,800	24.5	18.48

* Northeast Anchorage community councils are included in whole or in part in the following Transportation Districts: (a) TD 5, North Mountain View; (b) TD 12, Russian Jack Park; (c) TD 13 and 17, Northeast; (d) TD 25, Scenic Park and eastern half of University Park; (e) TD 16, Airport Heights; (f) TD 23, Rogers Park and Tudor Area; (g) TD 24, western half of University Area; and (h) TD 28, Campbell Park.

gel/bt6

- As part of an overall development program, fill should be brought in so that Thompson Park can be recontoured and made useable for area residents.

- Recognizing the need for better distribution of mini-parks and neighborhood parks, land should be set aside for park purposes, including the following general areas: North Mountain View; the vicinity of Penland Mobile Home Park; the vicinity of the west end of San Ernesto or San Roberto Street; and within mobile home parks south of DeBarr Road (particularly if redevelopment is sought) and the Martin Arms Apartments.

- A neighborhood park should be developed within the west side of Russian Jack Springs Park to serve residents in the vicinity of Reka Drive.

Recommendations: Muldoon

- Given the potential doubling of population in this area, mini-parks and neighborhood parks should be acquired on an evenly distributed basis, including areas projected for higher density housing, and where mobile home parks currently exist, east of Muldoon Road, the Bonibrook area, and the southern edge of Russian Jack Springs Park.

- A neighborhood park should be acquired to the north of Susitna School, and a corridor should be acquired to the south to provide a connection to Muldoon Park.

- A portion of the snow dump area should be converted into greenbelt and neighborhood park space in the vicinity of Northview Drive.

- A trail system should be developed around Baxter Bog Park and extend to Muldoon Park.

- Access should be provided from College Gate to the open space system of the university area, and a neighborhood park should be established at the eastern edge of Behm Lake.

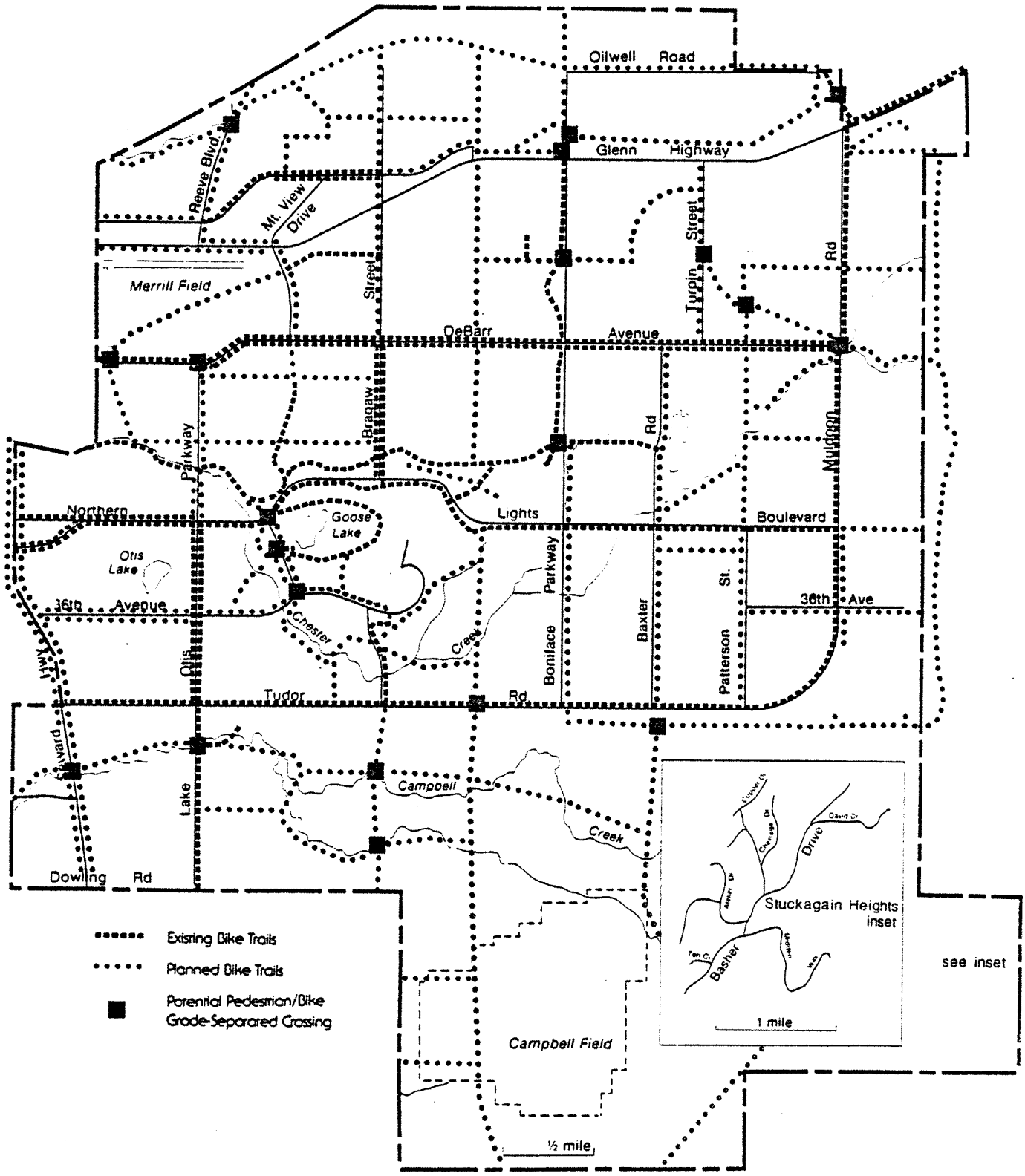
- A large neighborhood park should be developed near Chugach Foothills as identified in the Far North Bicentennial Park Plan.

Recommendations: Rogers Park, Airport Heights and the University Area

- Community park facilities, including play fields, parking and a boating dock, should be provided to Behm Lake and integrated into the South Fork linear park system.

- Given its extensive acreage, wetland constraints and position in relation to nearby neighborhoods, a master plan should be prepared for Tikishla Park.

NORTHEAST ANCHORAGE
Bike Trail Plan



Adapted from Anchorage Trails Plan, July, 1985; approved Spring, 1985 by the Municipal Assembly.

figure 10

- A 5 acre extension of Geneva Woods Park should be acquired to the west of that park, providing adequate space for a neighborhood park near higher density housing, and buffer space between different residential densities.

- A linear park should be set aside along the South Fork of Chester Creek. This system should have a mini-park development in the vicinity of 40th Street and Chester Creek.

Recommendations: Campbell Park Area

- Two neighborhood parks should be acquired in the vicinity of 56th and 59th Avenues. These would serve as a buffer between different land uses and be in close proximity to very high density housing.

- A buffer should be provided between the Boys' Club Lake and projected multi-family housing south of Tudor Road.

- A neighborhood park should be located within that area of Section 33 to be designated as an extension of the Campbell Greenbelt, east of Simonian Subdivision.

Special Plan Areas - Goose Lake and The Campbell Tract

There are two large areas within Northeast Anchorage where park, recreational and other land uses are guided by major planning efforts: [1] The 1,400 acre Goose Lake area, guided by the Goose Lake Plan, and [2] approximately 4,200 acres in the Campbell Tract area, guided by the Updated Far North Bicentennial Park Master Plan.

The Goose Lake Plan addresses major issues of concern related to institutional expansion in the Goose Lake area including promotion of a campus-like setting, retention of open space, protection of natural areas and scenic vistas, and the provision of an integrated trail system. Among other considerations, the Plan recognizes that: [1] wooded paths used for walking and running and area trails used for biking, skiing and dog mushing are of great value, and [2] a trail spine with connections could help link all institutions in the area. This concept helps reinforce the campus identity of the area and is further identified in the Comprehensive Plan and the Anchorage Park, Greenbelt and Recreational Facility Plan.

In view of its size and various land use designations, the Campbell Tract requires even greater land use planning and management attention than is normally given park and institutional land. In 1985 the Municipal Assembly adopted the Updated Far North Bicentennial Park Master Plan. The Plan specifies policies and guidelines for both park-related and institutional land development. Various types of trails are discussed in the Plan as are recreation facilities such as sports fields, an alpine ski area, visitor center, neighborhood park and camp facilities, and an amphitheater.

Schools

Anchorage Community College, University of Alaska - Anchorage and Alaska Pacific University are all located in Northeast Anchorage. In addition, there are 17 elementary, two junior high and two high schools drawing significant enrollments from Northeast Anchorage (See Figure 11). Rogers Park and Tudor elementary schools also have a substantial number of students who reside outside the Northeast Anchorage area.

Table 12 summarizes enrollments and capacities for Northeast Anchorage schools. Student capacities are defined by the Anchorage School Board as 21 students per room for elementary schools and 36 students per room for junior and senior high schools. Anchorage School District staff believes that slight overcrowding (less than 10%) has only a minimal effect on the programs in most buildings. Enrollments exceed capacities at six northeast elementary schools, with significant overcrowding at Tudor, Mountain View, and Scenic Park elementaries. Enrollments at East High School and Wendler Junior High School are very slightly above capacity.

TABLE 12

SCHOOL CAPACITY AND ENROLLMENT
Northeast Anchorage
1985

Elementary Schools	Student Capacity	9/26/85 Enrollment	Additional Students Existing Classrooms Could Accommodate*
Airport Heights	420	386	34
Baxter	504	522	-18
Chester Valley	420	412	8
College Gate	378	329	51
Creekside	399	356	43
Lake Otis	462	489	-27
Mt. View	546	650	-104
Muldoon	420	399	21
Nunaka Valley	420	327	93
Ptarmigan	420	358	62
Rogers Park	483	345	38
Russian Jack	483	347	36
Scenic Park	504	571	-67
Susitna	420	459	-39
Tudor	504	617	-113
Williwaw	378	318	60
Wonder Park	420	391	29
Secondary Schools			
Clark Junior High	920	804	116
Wendler Junior High	1,012	1,026	-14
Bartlett Senior High	2,461	1,855	606
East Senior High	2,001	2,009	-8

* Minus sign indicates school enrollment is above capacity.

NORTHEAST ANCHORAGE

School Sites – Capacity Ratings

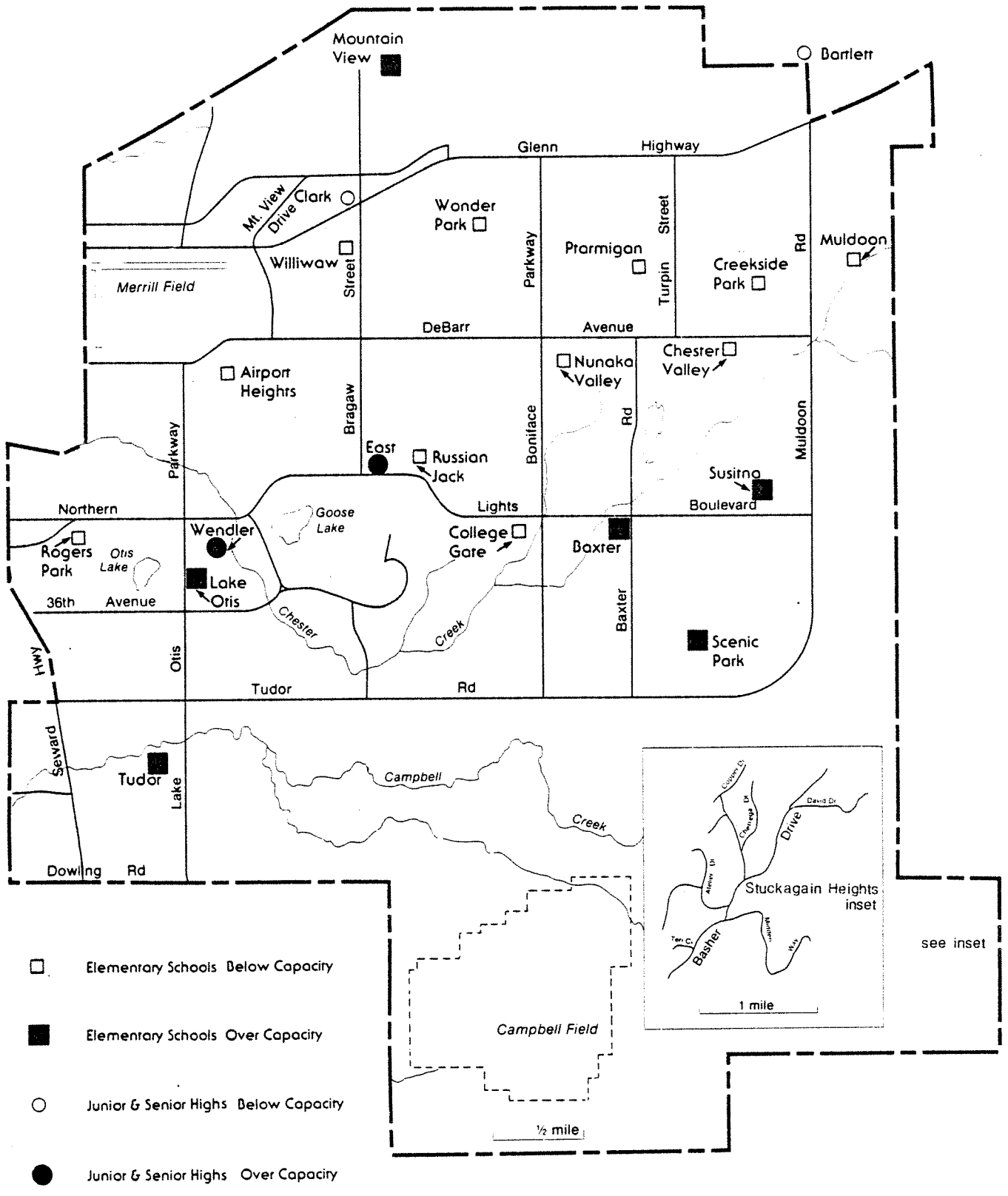


figure 11

Northeast Anchorage neighborhoods have resisted attempts to redraw elementary school attendance boundaries to solve the local overcrowding problems. Residents prefer to have their children attend neighborhood schools despite crowding. Classroom additions are not planned for Northeast Anchorage schools, with the exception of a four classroom addition to Susitna Elementary School scheduled for construction during the 1987-89 school year.

Water

Northeast Anchorage is served by two major water systems: Anchorage Water and Wastewater Utility (AWWU) and the former Central Alaska Utilities (CAU), which was acquired by AWWU in 1984. The combined AWWU and CAU system has adequate transmission line systems and reservoirs to serve current and projected development in Northeast Anchorage with water for domestic, business, and institutional useage. However, some areas lack fire flow capability. In those instances, private development is required to meet Fire Department standards through any of a variety of means - booster pumps, sprinkler systems, loop systems, and so forth.

AWWU is in the final stages of developing a Water Master Plan and other technical studies for the Anchorage Bowl. These planning efforts are addressing the following issues:

- the most beneficial means of inter-tying what are now separate AWWU and CAU systems;
- the effect on the Anchorage Bowl, including Northeast Anchorage, of routing water from the Ship Creek Treatment Plant to Eagle River in conformance with the first phase of the Eklutna Project; and
- the most effective method of transmitting and distributing water from the Eklutna Project throughout the Anchorage Bowl.

The draft Water Master Plan identifies immediate improvements including additional interties and additional or larger booster pumps to alleviate supply and/or pressure problems at the higher elevations. Valve openings and closures in some existing interties will also help.

The major goal of the plan in the Northeast area is to provide an adequate supply of water to the higher elevations at acceptable pressures (the 425' and 450' zones). These areas can be served off of a proposed 48-inch transmission line from the Eklutna Water Project south along the military boundary. The line is currently programmed for design/construction in the 1987/88 timeframe. A storage reservoir will also eventually be needed to serve this pressure zone.

Following completion of these planning efforts, it is anticipated that there may be recommended capital improvements to the water systems now serving Northeast and other areas within the Anchorage Bowl.

Wastewater

All of Northeast Anchorage is within the Anchorage Wastewater Service Area. The wastewater interceptor and trunk collection system that serves the area consists of a network of lines ranging in size from 8 to 48 inches in diameter. This system is adequately sized and located to serve current and projected population growth in the area with three possible exceptions.

The first exception is the Goose Lake institutional area which is served by a 14 inch trunk line that ties into the Chester Creek Interceptor. If future developments at Providence Hospital, ACC and UAA are all tied into this line, it will likely overload the trunk. Other than up-grading or paralleling the existing line, a potential resolution of this problem would be to direct wastewater toward the existing 48 inch interceptor located to the east and south along Bragaw and 40th Avenue alignments. This interceptor has more than ample capacity to serve the area.

The second exception is a trunk line varying in size from 15 to 16 inches that serves an area generally located north of Chester Creek between Orca Street and Lake Otis Parkway to DeBarr Avenue, east to Penland Park, and then north again to the North Mountain View commercial/industrial area. Included in this area are Northway Mall, Penland Park, Humana and Charter Hospitals, and the Eastridge Condominiums. It is anticipated that much of this area will undergo further intensive residential and/or commercial development that could potentially generate wastewater loads that might exceed the capacity of the existing line. Replacement of a 500 foot segment of 16 inch line with a 24 inch line at the terminus of the trunk line into the Chester Creek Interceptor would substantially increase the trunk's capacity to serve future development of the area.

The third exception is associated with the D-2-4 trunk. This trunk consists of 12-inch thru 18-inch mains and is located east of Muldoon along the military boundary between DeBarr Road and East Northern Lights Boulevard. Currently the line flows at capacity during peak flows. The problem is identified in AWWU's 201 Facility Plan and will be scheduled for relief between 1993-2005. The relief consists of intercepting the 18-inch main at the military boundary and Ptarmigan Street. The trunk will be an 18-inch main which will drain westerly to the

existing 30-inch at East Northern Lights Boulevard and Baxter Road. Should development occur to maximum densities or the service area expanded prior to 1993 then this main will have to be constructed accordingly.

With the exception of the three trunks discussed above, Northeast's wastewater collection system is adequately sized to handle future development in the area. The combined capacity of the three wastewater interceptors exiting from Northeast Anchorage at Ship Creek, Chester Creek and Campbell Creek could serve a population in excess of 340,000. Based on Comprehensive Plan densities, saturation population in the year 2000 for Northeast Anchorage is approximately 113,325 only a third of the system's potential service capacity.

TABLE 13

Level of Service for Roadways

A. Free flow with low volumes, speeds controlled by posted limits.
B. Stable flow, drivers have reasonable freedom to select speed and lane of operation.
C. Stable flow, most drivers restricted in their freedom to select speed or change lanes.
D. Approaching unstable flow, with little freedom to maneuver.
E. Capacity, unstable flow, momentary disruptions and stoppage.
F. Forced flow, short and long stoppages, low speeds.

Level of Service for Signalized Intersections

A. No vehicle waits longer than one red indication.
B. Occasionally the green phase is fully utilized.
C. Occasionally drivers may have to wait more than one red indication, some backup.
D. Approaching instability with substantial delays during short peaks within rush hour.
E. Capacity, the most vehicles that can be accommodated, full utilization of every green phase, substantial dependence on good coordination between adjacent signals, long queues of vehicles waiting, delay may be up to several cycles.
F. Jammed conditions, long delays.

NOTE: LOS definitions are derived from the 1983 Anchorage Area Traffic Report prepared by Alaska Department of Transportation and Public Facilities (ADOT/PF).

Rapid residential, commercial and industrial growth throughout the Municipality is taxing the existing road network. In Northeast Anchorage, transportation is a concern as increasing numbers of area and outlying residents pass through the sector in transit to the Central Business District and mid-town. As congestion grows, traffic flows destablize on major thoroughfares and accidents increase. These problems and on-going and proposed projects and programs to resolve them are the prime focus of the following discussions.

Road and Highway Conditions

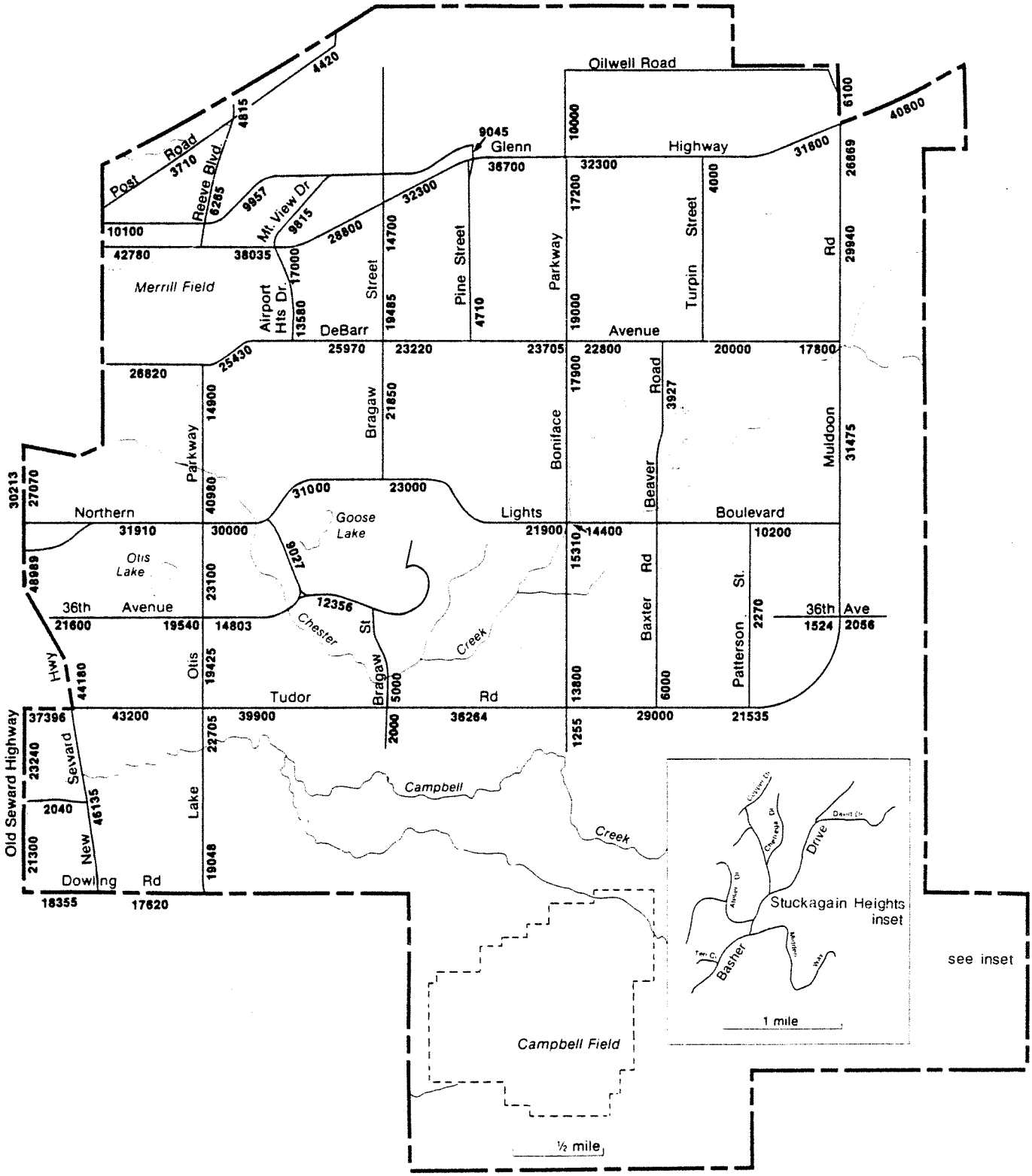
Northeast Anchorage transportation boundaries are defined by: Elmendorf Air Force Base to the north, Dowling Road to the south, the Old and New Seward Highways to the west, and Fort Richardson Army Base/Chugach Forest to the east. The major north/south thoroughfares are: Muldoon Road, Boniface Parkway, Bragaw Street, Lake Otis Parkway, and Airport Heights Drive. The major east/west roads are: Glenn Highway, DeBarr Road, Northern Lights Boulevard, Tudor Road, and 36th Avenue/Providence Drive. Many smaller streets interconnect Northeast's neighborhood transportation network.

In Northeast as throughout Anchorage, roadway conditions are principally determined by two factors: [1] the number of vehicles traveling a given segment of road during a typical day (referred to as Average Daily Traffic or ADT), and [2] the physical parameters of a roadway, (e.g., number of lanes and width per lane). Combining these two factors, it is possible to derive a relative measure of a road's ability to efficiently carry traffic, termed the Level of Service (LOS).

Level of Service ratings for roadways and intersections range from 'A' through 'F', with 'A' being the highest and most desirable condition, and 'F' designating the least efficient and least desirable. Table 13 lists LOS characteristics for both roadways and intersections. A 'D' rating is generally regarded the lowest acceptable level of service in urban areas. Roads or intersections with ratings of 'E' or 'F' are significant problem areas and are therefore deemed "deficient".

Average daily traffic counts in 1984 for major roadways in Northeast Anchorage are shown on Figure 12. Roadways

NORTHEAST ANCHORAGE
Average Daily Traffic Counts - 1984

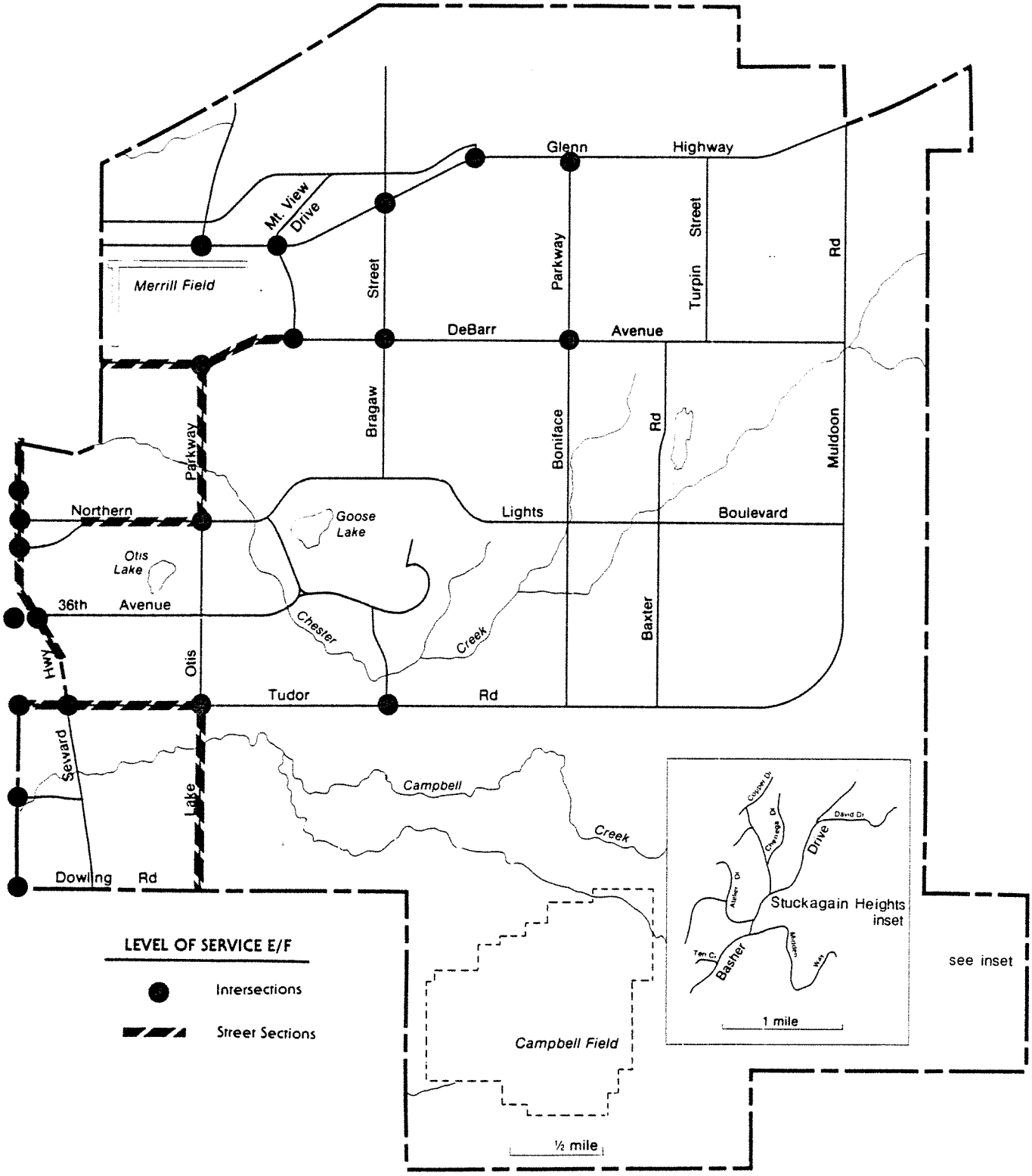


Source: State of Alaska, Department of Transportation, 1986.

figure 12

NORTHEAST ANCHORAGE

Roadway and Intersectional Deficiencies: Peak Hour Level of Service



Source: 1983 Anchorage Area Traffic Report. State of Alaska. Dept. of Transportation and Public Facilities. September 1984.

figure 13

and intersections with service (LOS) problems are seen in Figure 13. The principal problem areas or deficiencies are: on the Glenn Highway at its intersections with Boniface, McCarrey, Bragaw, Airport Heights, and Reeve; DeBarr Road, east from Merrill Field to Airport Heights Drive, in addition to its intersections with Bragaw and Boniface; Northern Lights Boulevard, west from Lake Otis Parkway to La Touche; Tudor Road west from Lake Otis to the Old Seward Highway; Lake Otis Parkway, from Tudor to Dowling, as well as from DeBarr to Northern Lights Boulevard; New Seward Highway, generally north from Tudor to Fireweed; and the Old Seward Highway at its intersections with 36th Avenue, Tudor, International Airport Road, and Dowling.

Accident frequency is also related to highway operations characteristics. According to a Municipal report prepared by the Division of Traffic Engineering, of twenty intersections in Anchorage having the highest frequency of accidents, six of these intersections are in Northeast Anchorage:

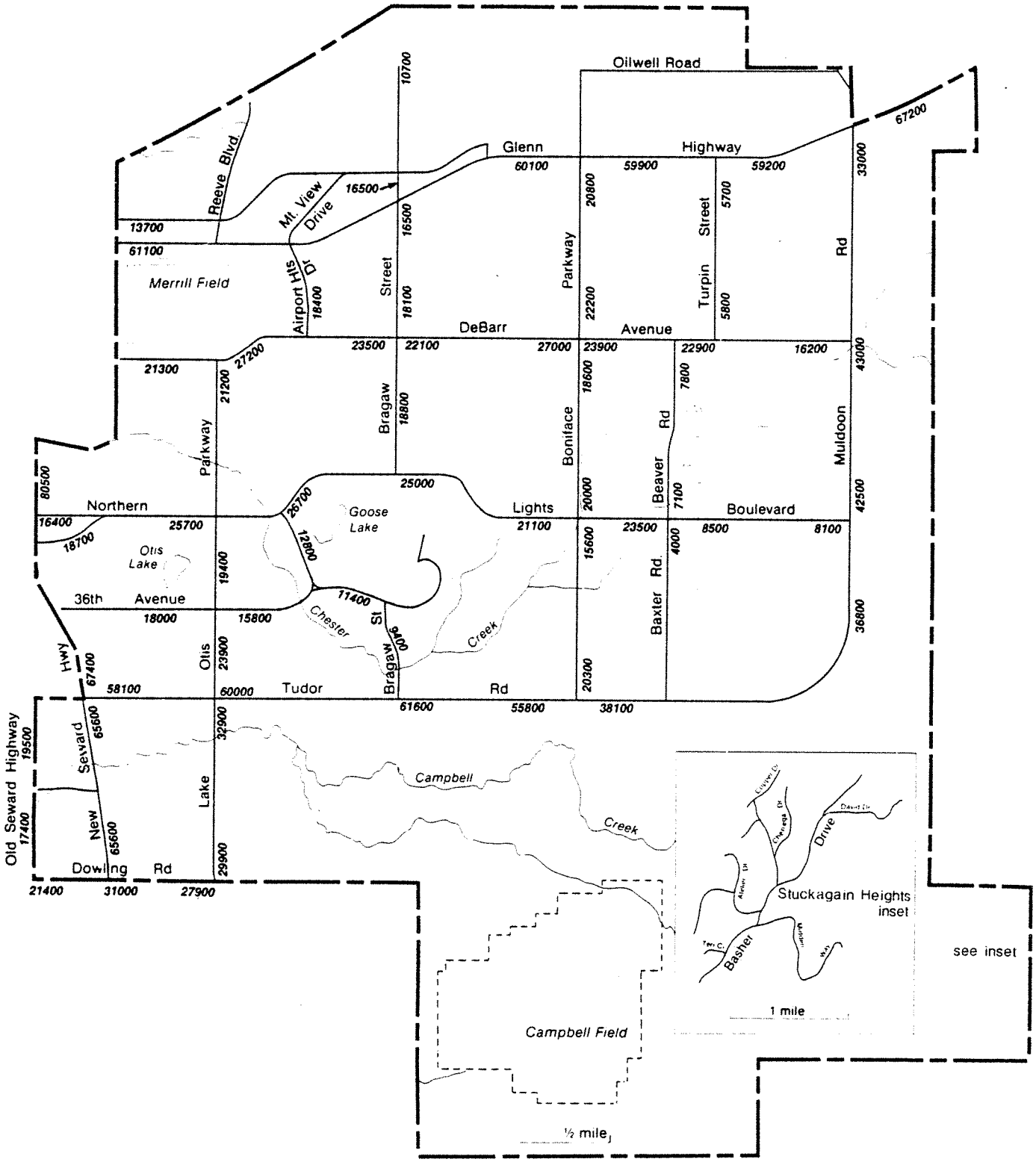
- New Seward Highway/Tudor Road
- Lake Otis Parkway/DeBarr Road
- Boniface Parkway/Northern Lights Boulevard
- Lake Otis Parkway/Northern Lights Boulevard
- Boniface Parkway/DeBarr Road
- LaTouche Street/Northern Lights Boulevard

In 1984, there were a total of 185 accidents recorded at these six locations.

Using information on average daily traffic volumes (Figure 12), Level of Service ratings (Figure 13), data on high frequency accident locations, and projected daily traffic volumes for the year 2001 (Figure 14), two recent planning efforts attempt to resolve and/or alleviate major transportation problems: [1] the MOA Official Streets and Highways Plan (OS&HP, 1985), and [2] the AMATS' Long Range Transportation Element (LRE, 1984). On the basis of the OS&HP and the LRE reports, a package of priority transportation projects to meet the community's current and anticipated roadway needs was developed. This is embodied in the Anchorage Accelerated Roadway Program (AARP, 1984) (Figure 15). From year-to-year, the ability of the Municipality and/or Alaska Department of Transportation and Public Facilities to construct priority road projects origi-

NORTHEAST ANCHORAGE

Average Daily Traffic – Year 2001



Source: Long Range Transportation Plan for the Anchorage Bowl. AMATS. 1984

figure 14

NORTHEAST ANCHORAGE

Transportation Improvements – Programmed and Planned

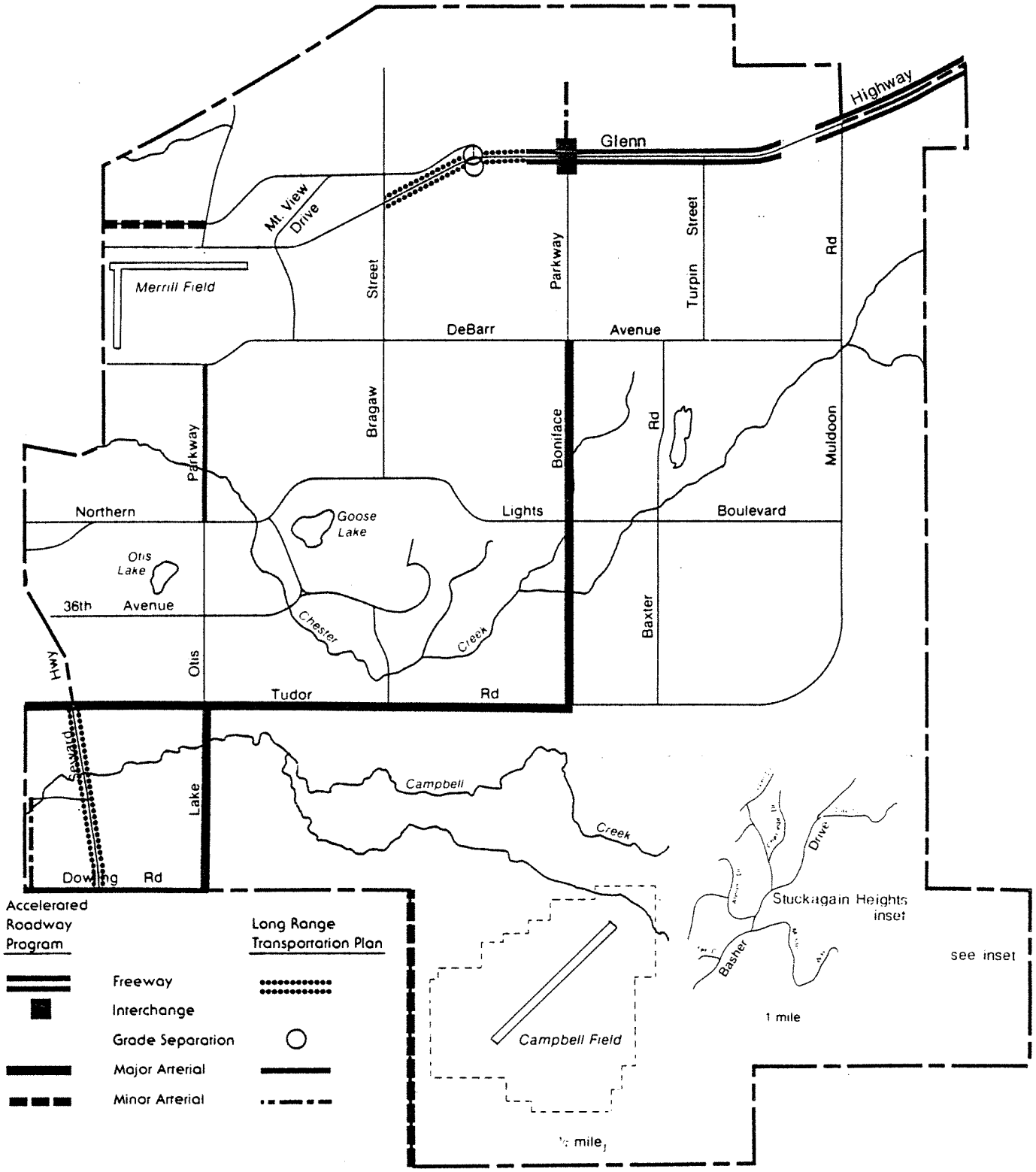


figure 15

nally identified in the AARP is largely dependent on funding approval from the State Legislature and/or Federal government. Two annual documents are produced. The Municipality formulates local road project programming through the Capital Improvement Program (CIP). The Anchorage Metropolitan Area Transportation System (AMATS), a joint effort between Municipal and State agencies, adopts programming of federally-funded projects within its Transportation Improvement Program (TIP).

Although identified in the CIP or TIP as a pressing road improvement need, a particular project cannot be constructed until funds are approved by the State and/or Federal governments, or until alternative funding sources are identified. Discussed below are road improvement projects currently programmed for Northeast Anchorage. It is anticipated that construction of these projects will generally improve service levels in the Northeast sector, particularly along the northern and western freeway systems of Glenn and New Seward Highways, and resolve many of the area's most significant traffic deficiencies.

Two State DOT/PF road improvement projects are in progress to help relieve traffic congestion problems on the Glenn Highway. Construction of the Boniface Interchange is within the 1986 TIP program. This project also includes regrading between Turpin and McCarrey and construction of an overpass at McCarrey. In addition, the Glenn Highway between Muldoon Road and Hiland Drive is in design and is programmed to be widened to 6-lanes with provisions to widen to 8-lanes in the future if determined to be necessary. Further rehabilitation is also programmed by the State for the New Seward Highway from 36th Avenue to 4th Avenue during 1986.

Two major arterial upgrades are programmed within Northeast Anchorage for 1987 and 1988: Lake Otis Parkway from Tudor to Abbott and Boniface Parkway from DeBarr to Tudor. Lake Otis Parkway is currently under design by the Municipality for construction by 1987 for upgrade to 5-lanes with center turning lanes at all intersections, including storm drainage, street lights, traffic control, bike/pedestrian facilities, landscaping and a bridge at Campbell Creek. Construction funding is proposed for 1988 by the State DOT/PF for upgrading Boniface to 4-lanes with turning provisions, curbs, gutters, lighting, pedestrian facilities, and traffic signals. Alternatives are also being evaluated for upgrading Tudor Road from Boniface to Arctic with construction slated for 1988-1990.

Further roadway improvements for Northeast Anchorage have been identified as part of the Long-Range Transportation Element Plan (LRE). These projects are also displayed in Figure 15. Although not scheduled for immediate construction, it is expected that these improvements, which are inventoried in the LRE but not yet programmed in the CIP or TIP, will be completed by the year 2001.

Mass Transportation

Northeast Anchorge has the single heaviest concentration of transit service outside of downtown Anchorage. The area is served by nine People Mover transit routes providing service between residential areas and major destinations (Figure 16, Table 14). Of the forty-six (46) peak hour buses serving the Municipality, twenty-nine (29) provide service to the Northeast. Downtown is served by all routes except Route 93. Major institutions located in the Goose Lake area are served by Route 2, 3, 11, 45 and 93. Route 3 with 2,000 daily riders and Route 45 with 2,200 daily riders consistently lead the transit system in both riders-per-route and riders-per-hour of bus service.

The heaviest concentration of east-west transit service in Northeast Anchorage is on Northern Lights Boulevard. East-west transit service is also provided on Tudor Road, DeBarr Road and 36th Avenue. North-south service is provided on Muldoon Road, Lake Otis, Boniface Parkway and Bragaw Street. The transit system operates weekdays from 6 AM to 10 PM. Saturday service hours are from 8 AM to 9 PM. Sunday service operates between 10 a.m. and 5:30 p.m.

Northeast Anchorage has traditionally supported a high level of transit service. This is in large part due to its higher density land use patterns, especially as compared to other sectors of the Anchorage Bowl. The socio-economic make-up of neighborhoods such as Mt. View is also a factor that leads transit service to be a critical element in meeting many residents' mobility requirements. In the Goose Lake area, concern for adequate parking is leading institutions to seriously look at means of providing incentives which will encourage employees, students and patients to increase transit utilization as well as ridesharing.

Within budget limitations, transit service in Northeast Anchorge continues to be expanded to meet the area's growing need and demand. Employment growth in the Midtown area, for example, has led to increased demand for crosstown bus service. In response to that demand, the Municipality is now selecting a site for a Midtown transit center that will allow for improved transfer connections in the Midtown area. The first part of this service improvement will go into effect in April 1986.

TABLE 14

TRANSIT ROUTES
Northeast Anchorage
1986

ROUTE		Number Of Buses During		Frequency Between Buses (Minutes)		Saturday		Major Generators Serviced
		Peak Hours	Off-Peak Hours	Peak	Off-Peak	Number of Buses	Freq. Between (Min.)	
2	Hillside Park	2	1	30	60	1	120	ACC, Service High Sohio, Downtown
3	Muldoon	5	3	15	40	3	40	Bartlett High, East High, Providence Hosp., UAA, ACC, West High, Downtown
5	Chugach Foothills	1	1	40	60	1	120	Northway Mall, Humana Hospital, Downtown
8	Eastgate	1	1	60	60	1	120	Northway Mall, Downtown
11	College Gate	2	2	30	40	1	80	UAA, ACC, Providence Hospital, Downtown, Boniface Center
12	Boniface Center	2	1	40	60	1	80	Humana Hospital, Downtown, Boniface Center
45	Providence Hosp.	5	3	20	40	3	40	UAA, ACC, East High, Providence Hosp., ANS Hosp, Downtown
75	Ft. Richardson	5	4	20	30	2	60	Ft. Rich, Downtown,
93	Midtown	3	3	30	30	1	120	Boniface Center, Sohio, Loussac Library, ACC, UAA, Providence, Airport, Muldoon

NOTE: Routes 74, 76 and 78 run along Northeast's northern transportation boundary on the Glenn Highway. However, these three routes primarily serve residents in the Eagle River/Chugiak area.

NORTHEAST ANCHORAGE

Transit Routes

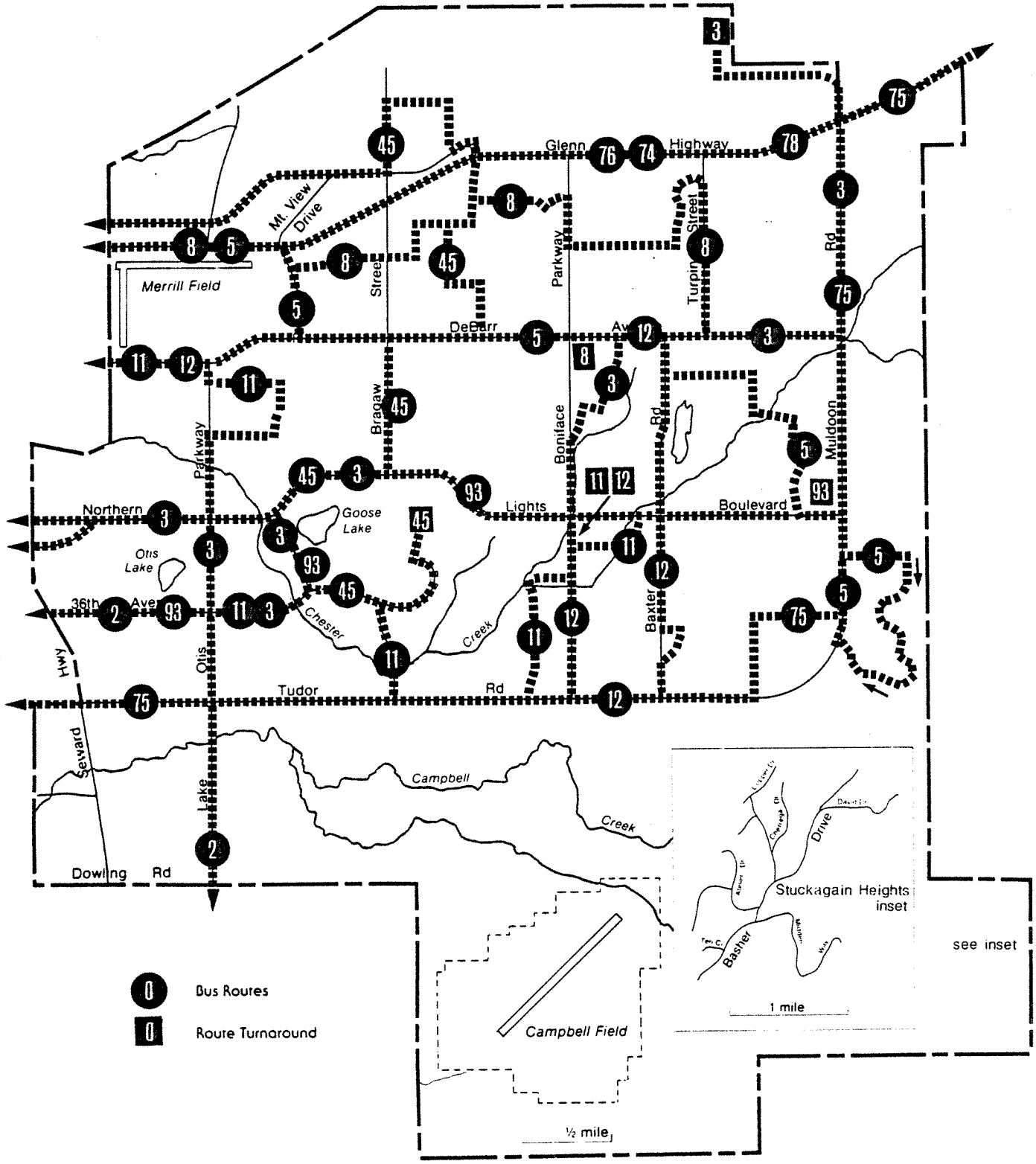


figure 16

Northeast Anchorage will see increased service on Routes 75 and 93. This will improve transit accessibility for Northeast Anchorage residents to employment and shopping areas in Midtown and Downtown Anchorage. It will also provide better transit service to the Goose Lake area and the Headquarters Library.

Carpooling is an alternative transportation option in this area as throughout the Municipality. The Municipality's carpool program was developed as one response to growing concerns over air quality and the level of traffic congestion during peak hours. Anchorage's carpooling service matches commuters with similar routes and work schedules and is available by calling 561-7477.