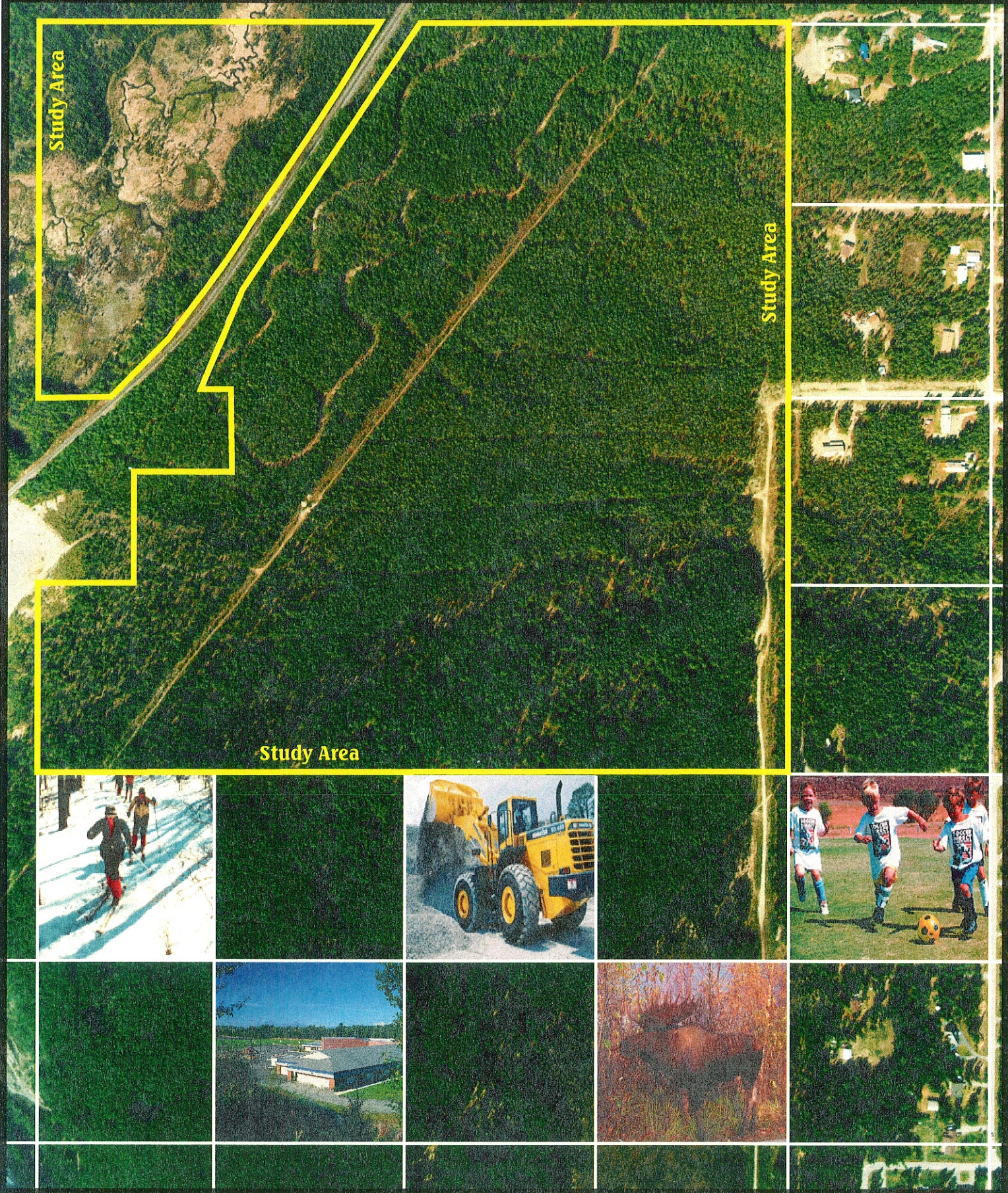


NW 1/4 Section 25 Land Use Study

Draft

Planning Department
Municipality of Anchorage
August 2001



Municipality of Anchorage



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George P. Wuerch, Mayor

HERITAGE LAND BANK

August 22, 2001

Dear Residents:

The draft *NW¼ Section 25 Land Use Study* contains the Planning Department's analysis and recommendations regarding the future use of the NW¼ Section 25. This is the result of the planning process that began late last year.

This report provides the public and decision-makers with background information and land use recommendations, which should be useful during the upcoming public review process. Each of the entities listed below will hold a public hearing and public deliberations regarding the future use of the NW¼ Section 25.

Here is the tentative schedule of public hearings:

Chugiak-Eagle River Parks & Recreation Board of Supervisors

Monday, September 10, 7 p.m.
Room 204, Valley River Center
11901 Business Boulevard, Eagle River

Planning and Zoning Commission

Monday, October 8, 6:30 p.m.
Assembly Chambers Room 108, Z.J. Loussac Library
3600 Denali Street, Anchorage

Heritage Land Bank Advisory Commission

Wednesday, October 17, 11:30 a.m.
Mayor's Conference Room 830, City Hall
632 West Sixth Avenue, Anchorage

Assembly - Introduction, 5 p.m. Tuesday, November 20

Public Hearing, 5 p.m. Tuesday, December 10
Assembly Chambers Room 108, Z.J. Loussac Library
3600 Denali Street, Anchorage

In addition, municipal staff from Heritage Land Bank, Planning, and Cultural & Recreational Services will be available to discuss the study and the upcoming public review process at an **open house** at Birchwood Elementary School on Wednesday, September 19, at 7:00 p.m.

If you have questions in the meantime, please contact Pat Tilton, Heritage Land Bank at 343-4336 or Tom Davis, Planning Department at 343-4224. We look forward to working with you to resolve long-standing land issues concerning the NW¼ Section 25.

Sincerely,

A handwritten signature in cursive script that reads "George J. Cannelos".

George J. Cannelos
Executive Director

**NW¼ Section 25
LAND USE STUDY
(Draft)**

August 1, 2001

**Prepared by
The Municipality of Anchorage
Planning Department
for the
Heritage Land Bank**

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SUMMARY

The *NW¼ Section 25 Land Use Study* is a site-specific study for a 145-acre Heritage Land Bank (HLB) property located in Birchwood. This area is one of several large HLB properties in Chugiak-Eagle River that the Municipality has yet to formally commit to a specific use. The purpose of this study is to determine the most appropriate land use for the NW¼ Section 25. Its recommendations are based on community facility needs, environmental characteristics, compatibility with surrounding land uses, available infrastructure, recommendations of the Comprehensive Plan and relevant satellite plans, HLB responsibilities, and community preferences and aspirations.

The *Land Use Study* recommends a balance of multiple community facility needs related to the Study Area. It is recommended to add the majority of the NW¼ Section 25 to Beach Lake Regional Park, primarily for trails and open space. There is a provision of 35 acres within this parkland for community sports fields. A park access and collector street is also required to provide site access and north-south connectivity in Birchwood. The southeastern corner of the Study Area, a ridge top of 9 acres, is reserved for an elementary school site. Finally, the land use recommendation accommodates a need for limited gravel extraction.

A final recommendation for the easterly plain of the Study Area is contingent on the resolution of two outstanding issues. First, the appropriate extent of park facilities in the easterly plain should rely on an updated *Beach Lake Park Master Plan*. A park master plan should review the future needs of recreational user groups for the regional park, and coordinate, balance and preserve recreational uses through policy statements and location and design of facilities. A land use recommendation regarding the easterly plain also depends on the extent of gravel extraction in the NW¼ Section 25. The Municipality and the State should negotiate an agreement that sets limits to extraction, in order to minimize impacts on parks and neighborhoods, and to accommodate other legitimate community facility needs. Given the outstanding issues, there are three (3) land use options for the easterly plain. While each option is legitimate, Option C - Limited Action is preferred, because the most appropriate use of the easterly plain cannot be determined until the gravel extraction agreement and an updated plan for Beach Lake Park have been addressed.

This study was prepared to meet the requirements of the *Comprehensive Plan* and HLB regulations (AMC 25.40) regarding site-specific studies for undesignated, uncommitted HLB lands. Review and approval of the study must comply with the public process under AMC 25.40 and includes review by area community councils, the Chugiak-Eagle River Parks Board, the Heritage Land Bank Advisory Commission, the Planning and Zoning Commission, and the Assembly. Approved land use designations will constitute amendments to the *Comprehensive Plan*.

CHAPTER 1. INTRODUCTION

Purpose

The *NW¼ Section 25 Land Use Study* is a site-specific study for a 145-acre Heritage Land Bank (HLB) property located in Birchwood. The general location of the property appears on the Chugiak–Eagle River Vicinity Map. The purpose of the *Land Use Study* is to determine the most appropriate use for the NW¼ Section 25 Study Area.

In Chapter 1, the study discusses the goals of municipal land management, the role of a land use study, and the planning process for designating community land. Chapter 2 examines the Study Area and vicinity, including physical characteristics of the site, surrounding land uses, and other key issues. Chapter 3 evaluates community facility needs and aspirations related to the Study Area. Chapter 4 integrates the research and analysis into a set of Land Use Alternatives for the Study Area, evaluates the implications of each alternative, and provides the basis for the Land Use Recommendations in Chapter 5.

Management of HLB Lands

The NW¼ Section 25 was conveyed to the Greater Anchorage Area Borough by the State of Alaska in 1968, and later deposited in the municipal Heritage Land Bank. This land remains one of several large municipal properties in Chugiak-Eagle River that have yet to be formally committed to a specific use. The HLB is responsible for managing uncommitted lands for the Municipality in a manner designed to benefit present and future citizens of the community, to promote orderly development, and to achieve the goals of the *Chugiak-Eagle River Comprehensive Plan*.

Anchorage Municipal Code (AMC) Section 25.40 establishes and defines the role of the Heritage Land Bank. Part of the purpose of the HLB is to acquire, inventory, manage, withdraw, transfer, and dispose of municipal land that has not been dedicated or transferred to a specific municipal agency for one or more municipal uses. Under AMC Section 25.40.025, Heritage Land Bank Disposals, the HLB is charged with determining which land or interests in land should be disposed of. Such a determination must be consistent with AMC Section 25.40.020, Management of Heritage Land Bank Lands, and the applicable comprehensive plan and implementing measures.

According to AMC Section 25.40.025, if the information in the comprehensive plan and implementing measures is insufficient to determine whether the disposal

of a parcel or parcels is consistent with the plan or measure, then a land use study shall be conducted. This land use study must be completed and adopted through the public process established under AMC Section 25.40.

AMC Section 25.40.025, further establishes that, at a minimum, a site-specific land use study shall address the following:

- (a) the need for community facilities such as roads, parks, trails, schools, satellite municipal offices, etc.;
- (b) identification of historical and natural landmarks, natural hazards, and environmentally sensitive lands;
- (c) public utility needs;
- (d) potential residential, commercial, and industrial uses;
- (e) land use compatibility with adjacent areas; and
- (f) consistency with land uses identified in the Comprehensive Plan and zoning for the area.

Why Study the NW¼ Section 25?

The HLB may designate or dispose of a large landholding once it has prepared a land use study to determine the public needs for the land and which portions of the holdings, if any, should be disposed of. Such a land use study and designation has yet to be prepared and adopted for the NW¼ Section 25.

The Municipality partially completed a draft land use study for this property in 1991, during the preparation of the *Chugiak–Eagle River Comprehensive Plan*. The draft provides much information that is incorporated in the chapters to follow. However, the draft is also incomplete and outdated. It is missing a site environmental analysis, a public facility needs analysis, and a recommendations chapter. There was no public review or adoption.¹ Two years later the *Chugiak–Eagle River Comprehensive Plan* adopted a land use designation specifically for the NW¼ Section 25.

That designation is Residential/Park, with Environmentally Sensitive Lands in the northwestern corner. However, the *Comprehensive Plan* does not specify which areas should be a certain use nor a density of residences per acre.

¹ The 1991 *Land Use Study (Site-specific) of the NW¼ of Section 25, Draft #2* appears in Appendix B.

Comprehensive Plan guidance regarding the NW¼ Section 25 is as follows:

The Heritage Land Bank manages large land holdings in the Chugiak-Eagle River area. These lands were selected by the Municipality as part of its state land entitlement and are currently uncommitted to any specific use. However, support has periodically been voiced locally for utilizing some of these lands for specific purposes. For example, the Birchwood and Eagle River Community Councils have requested that the northwest quarter of Section 25 be reserved for park use.

Land placed in the Heritage Land Bank is generally land that is reserved for future public purposes, land that is excess to municipal needs but unsuitable for disposal or development, or land that is excess to municipal needs that may be disposed through sale or lease to the private sector. Revenues generated from land disposals are used for acquiring land that is well located and is suited for public purposes.

It is the intent of this Plan that specific studies be done for large Heritage Land Bank land holdings before any disposals take place. Such studies should include an evaluation of public need, an evaluation of impacts of proposed uses on adjoining properties and public infrastructure, community aspirations; and Land Bank goals and objectives. Revised land use designations for these properties may then be appropriate. (Chugiak-Eagle River Comprehensive Plan pp. 135-136)

In this way, the *Chugiak-Eagle River Comprehensive Plan* directed that a site-specific land use study of the HLB property shall be prepared in order to provide sufficient direction to guide the future use of the property.

Planning, Public Review, and Approval Process

The *NW¼ Section 25 Land Use Study* adheres to the planning process requirements of AMC Section 25.40.025 regarding site-specific studies. Following is a summary of the planning process used to prepare the study, throughout which public discussion and written comments were integrated with the application of planning principles and analysis:

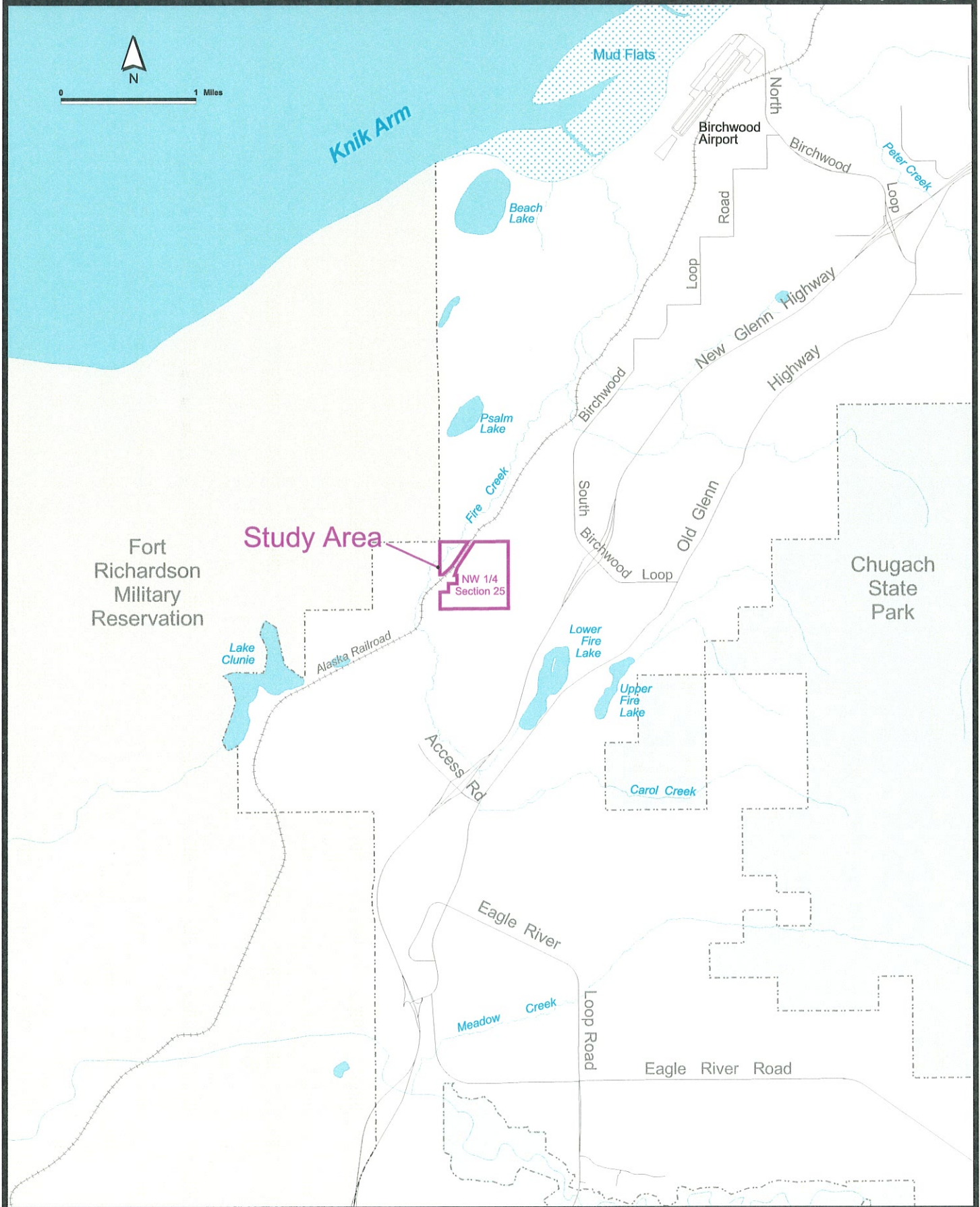
1. Data Collection and Analysis regarding site conditions, surrounding land uses, and other factors. A public information meeting was held on December 6, 2000. Public discussion and written comments regarding community needs for the Study Area were incorporated into land use alternatives.
2. Inventory of Existing Land Uses in the surrounding area, including characteristics, needs, and compatibility with neighboring uses.
3. Identification of Potential Land Use Types for the Study Area, including acreage needs, environmental constraints, and compatibility with other uses.

4. List of Key Land Use Issues, based on all of the information above, that Land Use Alternatives must address.
5. Identification of Land Use Alternatives for the Study Area, in consideration of environmental constraints, land use compatibility, and public facility needs. A community discussion of Land Use Alternatives for the Study Area took place at Birchwood ABC Elementary on April 18, 2001. Comments from this second meeting resulted in changes to the Alternatives and evaluation.
6. Evaluation of the Land Use Alternatives, in terms of how the Land Use Alternatives address the key issues, and implications for a recommendation.
7. Selection of Land Use Recommendations, through narrowing of the list of preferred alternatives to a Land Use Recommendation.

Review and approval of the study will comply with the public process procedures under AMC Section 25.40.030 and include review by area community councils, the Heritage Land Bank Advisory Commission, the Chugiak-Eagle River Parks Board of Supervisors, the Planning and Zoning Commission, and the Anchorage Assembly. Approved land use designations for the NW¹/₄ Section 25 will become an amendment to the *Chugiak–Eagle River Comprehensive Plan*.



Chugiak - Eagle River Vicinity Map



CHAPTER 2. STUDY AREA DESCRIPTION

Location, Size, and Description

The Study Area is the NW¼ Section 25T 15N R2W SM, generally known as the NW¼ Section 25 in Birchwood. It consists of 47 parcels comprising 145 acres of land owned and managed by the municipal Heritage Land Bank. The NW¼ Section 25 is located west of the New Glenn Highway, east of the Fort Richardson Military Reservation, and south of Chugiak High School.

As it appears on the Birchwood Vicinity Map, the NW¼ Section 25 is sandwiched between the 1,688-acre Beach Lake Regional Park to the north and the 1,500-acre Powder Reserve development area to the south. To the east is a small, semi-rural, suburban neighborhood. To the west, the Alaska Railroad track alignment isolates the Fire Creek floodplain and Fort Richardson Military Reservation from most of the Study Area.

The Study Area can be reached from the east through the residential neighborhood. Three streets in this neighborhood dead-end at the Study Area. Hillcrest Drive connects one-half mile between the Study Area and the Glenn Highway interchange at Chugiak High School. Recreational trail users can also enter the north portion of the Study Area from Beach Lake Park.

The NW¼ Section 25 is zoned Public Lands and Institutions (PLI), and remains an undeveloped woodland, with the exception of the Alaska Railroad track and permitted and informal recreational trails. A power transmission line easement, owned by the Matanuska Electric Association, traverses the center of the Study Area in a southwest–northeast direction. At one time, a rough service road existed beneath the length of the power line connecting with Hillcrest Drive at the northeast corner of the Study Area. The power line is no longer maintained, and the road has since become a trail. The easement for the Eklutna Transmission Main (water pipeline) runs along the east boundary of the Study Area and is also used as a trail. The Hill Loop Trail, a dedicated unpaved trail, loops into the Study Area from the Beach Lake Park multi-use trail system to the north.

The parcels and easements in and around the NW¼ Section 25 appear on the Property Boundaries Map. The legal description of the Study Area is: Township 15 N, Range 2 W, Seward Meridian, Section 25, NW¼ NW¼ portion and Lots 15 through 22, 39 through 46, 63 through 68, 72 through 78, and 95 through 110. HLB Inventory Map 1-5¹ identifies the Study Area as HLB Parcels 1-009 through 1-025, 1-028 through 1-033, 1-035 through 1-041, and 1-043 through 1-058.

¹ HLB Inventory Map 1-5 appears in *Appendix B*.

The Alaska Railroad right-of-way, identified as USS 9020, diagonally traverses the northwest corner of the Study Area. This right-of-way is 200 feet wide, and removes 7.92 acres from the Study Area, dividing it into northwest and southeast sub-areas, the northwest sub-area becoming isolated from the main Study Area. In addition, the Alaska Railroad Corporation (ARRC) purchased HLB Parcels 1-026, 1-027, and 1-042 in the NW¼ of Section 25 from the Municipality of Anchorage in 1999, for a track realignment. The resulting ARRC land holdings and easement comprise approximately 15 acres of the NW¼ Section 25, leaving the Study Area at 144.74 acres (approximately 145 acres) in size.

Study Area History

Originally surveyed and patented in 1917, the NW¼ Section 25 was selected by the State of Alaska in 1965. In 1968 the State approved the selection of these parcels by the Greater Anchorage Area Borough (ADL 38953). The property was conveyed to the Borough through Patent #817, subject to several encumbrances by the State, including a Free Use Permit for gravel extraction. The land was later deposited in the Heritage Land Bank.

The HLB lands border on Beach Lake Regional Park, for which a master plan had been completed 1973. In 1979 municipal Parks and Recreation expressed an interest in annexing 114 acres of the NW¼ Section 25 to Beach Lake Park. Through the ensuing decades, local community councils, recreational groups, and the Chugiak-Eagle River Parks Board of Supervisors periodically requested that the land be added to Beach Lake Regional Park. In the meantime, recreational uses from Beach Lake Regional Park bled into Section 25, including the Hill Loop Trail which was constructed by trail user groups in the early 1980s.

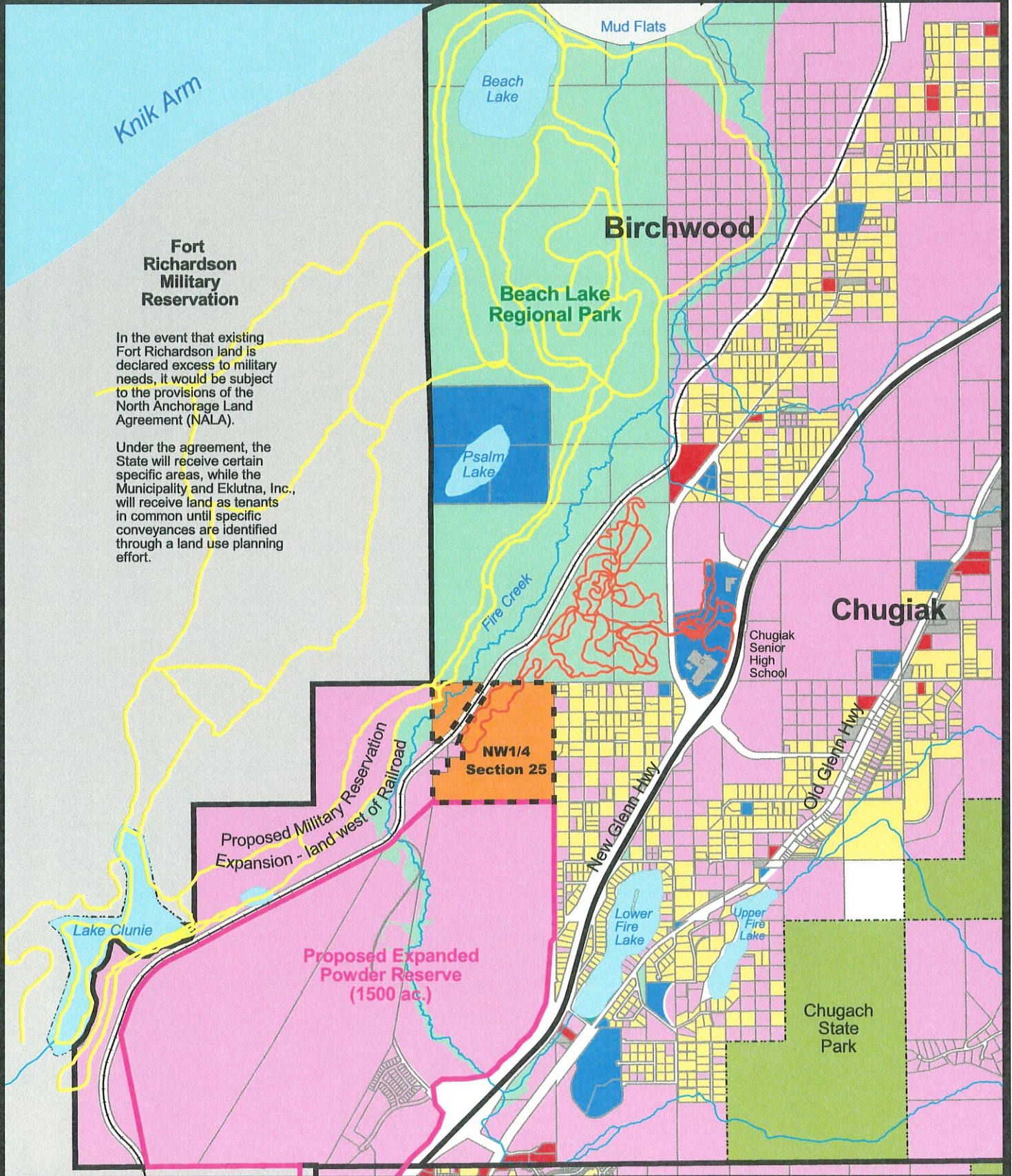
The NW¼ Section 25 has long been known to hold a plentiful source of gravel. In the 1970s, the municipal Department of Public Works attempted to gain approval to use the NW¼ Section 25 as a gravel material site. Local residents and the Alaska Department of Highways (now ADOT&PF) objected, the Department of Highways claiming its exclusive rights to the material under its Free Use Permit. The gravel issue has yet to be resolved by either the State or the Municipality.

In the early 1990s, the *Chugiak-Eagle River Comprehensive Plan* designated the NW¼ Section 25 as Residential/Park, with Environmentally Sensitive Land in the northwest corner, and recommended that a site-specific land use study be prepared to provide direction for use of the site. Since that time, as community growth has increased demand on area public facilities and services, local community councils have made requests that HLB transfer the land to Parks and Recreation, and several other agencies have each identified a need for the property.

Birchwood Vicinity Map



Planning Department
Municipality of Anchorage



NW 1/4 Section 25 Land Use Study Study Area Property Boundaries



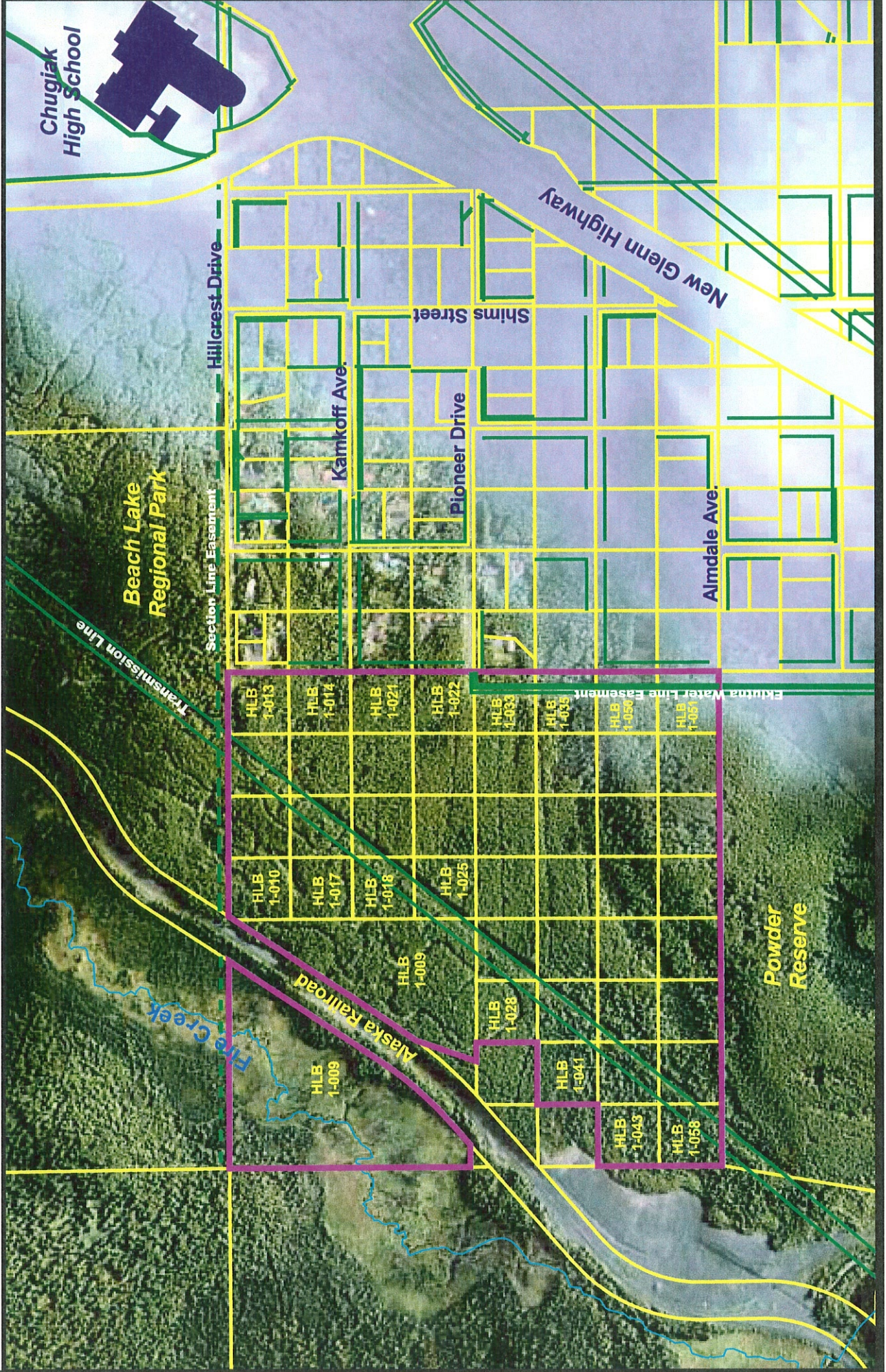
Planning Department
Municipality of Anchorage

 Property Boundaries

 NW4 Section 25 Study Area

 Road or Utility Easements

Note: The cloud cover, which appears in the satellite imagery, is beyond our control.



Site Environmental Characteristics

Topography

The topography of the Study Area is uneven, ranging in elevation from 115 feet in the Fire Creek floodplain to just under 350 feet elevation on the ridge in the southeast corner of the Study Area. Natural drainage flows toward Fire Creek, located to the west of the railroad easement, in a west-northwesterly direction.

As illustrated on the Topography Map, much of the Study Area southeast of the Alaska Railroad is an upland plain that extends from the residential neighborhood area in the east to Fire Creek floodplain in the southwest. The plain is nearly flat, with less than 7 percent slope. The plain is hemmed in on its northern-northwestern margins by a rugged terrain of hills and depressions that extends into the Study Area from Beach Lake Park. These northern hills and depressions provide local-area variations in elevation of anywhere from 240 to 310 feet above sea level. A ridge rises more than 100 feet in elevation in the southeastern corner of NW¹/₄ Section 25. This ridge, with its steep, north-facing slope, overshadows much of the Study Area, and physically isolates the ridge top plateau from the rest of the Study Area. The Slope Map illustrates that the ridge slope exceeds 30 percent.

The Slope Map illustrates three plains isolated from one another by elevation and rugged topography. The first plain is the Fire Creek floodplain. Next, the central plain extends from the residential neighborhood to the east and drains to Fire Creek. Last, the southeastern ridge extends from the Powder Reserve.

Surficial Geology

Chugiak-Eagle River lies along the boundary between two physical regions of Alaska, the Cook Inlet Lowlands and the Chugach Mountains. The Study Area is within the Cook Inlet-Susitna Lowland, at a convergence of several landforms.

The first of these landforms is the Fire Creek floodplain. Fire Creek flows from Lower Fire Lake, crosses the New Glenn Highway and cuts three miles across the Powder Reserve where the creek is bound on both sides by extensive wetlands. Beaver dams across the creek have created a large pond one-half mile south of the Study Area. Fire Creek then flows northward, crosses through the Study Area and Beach Lake Regional Park, and empties into the Knik Arm.

The upland plain that comprises most of the Study Area is an alluvial landform that spreads in a fan shape from the residential area to the east and deposits into

the Fire Creek floodplain to the southwest. The alluvial fan is nearly flat and consists of coarse-grained alluvium—ie., gravel—within 2 feet of the ground surface. The plain is a good source of gravel, crushed aggregate, and sand that is generally 20 feet or more thick. Excavation would likely be easy. The Soils and Underlying Gravel Resources Map shows the area of the known, high quality gravel material. The alluvial fan landform also offers good conditions for building foundations and excavation. Drainage conditions are also good.

The alluvial fan is surrounded by glacial moraine hill and channel landforms that occupy the northern and southeastern fringes of the NW¼ Section 25. The northern fringe is a jumbled terrain of small hills and depressions extending into NW¼ Section 25 from Beach Lake Park. This landform provides a generally good to fair source of gravel and sand, present in considerable thickness.

The southeastern corner of the NW¼ Section 25 is the northern part of a broad ridge system extending from the Powder Reserve. The ridge rises more than 100 feet over the Study Area's central alluvial fan. Rather than an alluvial fan deposit of abandoned gravel material, a mix of materials underlies the ridge—useful for construction material that does not require size-grade specification. The northeastern corner of the Study Area also consists of mixed materials that do not necessarily meet size-grade specifications for construction. Surface geologic materials in the very northeastern Study Area are not quite as well drained, and in some locations are somewhat poorly drained

Soils

As shown on the Soils Map, the predominant upland soil series found in the Study Area is Homestead Silt Loam. It is found in generally the same locations as the coarse grained geologic deposits in the central alluvial plain, northern glacial moraine, and southeastern ridge top. Soil depth, related to the degree of slope, ranges between 8 inches and 48 inches. Water permeability is moderate, and the soil is generally well-drained.

Homestead Silt Loam has good potential for most urban development. It provides a stable base for roads and buildings, but in some areas frost action and sloping topography should be considered in road or building design. It should be avoided as a location for community sewage lagoons, because it is a permeable soil and may allow high concentrations of effluent to pollute the ground water. Individual septic tank absorption fields will function properly in most areas, but special design may be required in areas of compact till. Gardens and lawns do well. The potential for most recreational uses is good except in some areas where moderate slopes may be less suitable. Erosion hazard is slight in flat areas and moderate in slopes of 7 to 12 percent.

Homestead Silt Loam on slopes between 12 and 20 percent begins to present a moderate limiting feature for urban development. Rain water runoff is such that gardens should be tilled across the slope and covered with a mulch to prevent erosion. Slopes of 20 to 30 percent in Homestead Silt Loam become a primary and severe limiting soil feature for urban development. Runoff is rapid and the erosion hazard is severe. This soil is too steep for gardens and lawns. Recreational use is poor, and on complex slopes is restricted to paths and trails. Slopes above 30 percent preclude urban development and most recreational use.

Wetland soil series occur in the Fire Creek floodplain. The high water table and susceptibility to frost heaving action severely limit the potential of these soils for urban development. A pocket of Kalifornsky Silt Loam is located in a nearly flat, shallow basin in the northeasterly plain of the Study Area. Again, high water tables and severe frost action may affect the potential of this soil as a site for buildings, roads, sewage and waste disposal, and other urban development.

Hydrology

The Fire Creek floodplain is a coastal floodplain. As shown on the Floodplains, Streams, and Wetlands Map, it is also a Class “A” Preservation Wetland. With few exceptions, development is not permitted in “A” wetlands. A 25-foot non-disturbance setback is required along stream channels.

The Floodplains, Streams and Wetlands Map also shows a Class “C” Developable Wetland that coincides with the Kalifornsky Silt Loam soils in the northeastern corner of the Study Area. While generally considered developable for most residential and other land use activities, peaty wet Kalifornsky soil in this wetland may not be suitable for on-site water and septic systems.

The toe of the ridge in the southeast corner of the site has an early freeze and late thaw seasonal cycle. The location makes it a poor drainage pocket, despite the presence of Homestead silt loam. This suggests that, even if this area were filled with gravel, it could remain a poor drainage site for residential, road, or trail development due to its ridge bottom location.

The central upland plain of the Study Area drains toward Fire Creek. It is likely that any private development or public use facilities that may be considered for this upland plain would be supplied by individual wells. The alluvial fan deposits here are among the most permeable in Chugiak – Eagle River. Because the most productive wells normally are found in thick deposits of unconsolidated materials, the depth to bedrock is an important consideration for land use planning.

Natural Hazards

The Study Area is located in an area of moderately low ground failure susceptibility. There may be local instability due to ground failure along the steep slopes of the ridge in the southeast corner. Removal of stabilizing vegetation on or above the slope may contribute to slope instability and a localized ground failure hazard. The site is exposed to a mild north winter wind coming from the direction of the Matanuska Valley. The Study Area is not located in an area which is subject to potential avalanche risk. Hazards due to flooding and water table are discussed in the previous wetlands and floodplains sections.

Historic and Natural Landmarks

The *Land Use Study* has identified no unique natural or historic landmarks for preservation on the NW¼ Section 25. There remain some power pole relics of the Eklutna Electric Transmission line easement that traverses the Study Area, inherited by the Matanuska Electric Association (MEA). The Anchorage Light and Power Company provided power to the City of Anchorage from the Old Eklutna Power Plant from 1929 until 1956, when the growing city's demand for electricity outpaced the plant's capacity. There could be potential for the transmission line facilities to be considered as historical landmarks. However, the equipment has long been removed, and all that remain are denuded wooden posts.

Vegetation and Wildlife Habitat

The Vegetation Map illustrates that the central plain is a closed forest of small and medium-sized birch and spruce trees. The plain is affected by the seasonal shadow cast by the ridge that rises in the southeast. Meanwhile, the ridge top consists of tall stands of white spruce and white birch, and medium-aged stands of mixed deciduous trees. The understory on the ridge is made of ferns and grasses. As the topography drops and the soils become wetter, medium-aged stands of black spruce, mountain hemlock and sphagnum shrub bog are dominant. Here the understory consists of alders, devils club, moss ferns, low-bush cranberry and labrador tea. Near the southwestern foot of the ridge system is a stand of mature, cathedral-like birch trees with little understory save a billowy, cloud-like carpet of pale-green, woodland horsetail plants. There is also a small grove of aspen and an open evergreen woodland with lingonberry groundcover in the southwest corner.

The uplands of the NW¼ Section 25 probably support an average diversity of plant and animal species. Moose and bear are prevalent in the Birchwood area. The continuous block of open space found on military, park, and undeveloped land provide habitat for browse and moose-calving. During winter months, a large

moose population is dispersed throughout the area as the animals descend from the snow-covered uplands to the plentiful browse in the lowlands. The same conditions benefit other fur-bearing species. The Fire Creek floodplain and other sections of the Study Area provide standard habitat for many bird species, including duck, geese, bald eagle, marsh hawk, hawk owl, and willow ptarmigan. The creek is also home to silver and pink salmon, and rainbow trout.

A natural open space, and thus wildlife habitat corridor, traverses the Study Area parallel to the Alaska Railroad and the MEA power line easement, connecting Beach Lake Regional Park in the north to the Fire Creek beaver dams in the southwest. The ridge bottom along the southeast Study Area may also be a wildlife corridor, being the margin of flat plain and a ridge, and linking into the floodplain greenbelt to the southwest. The interface of the hilly and flat areas in the northern Study Area might also be favorable for a wildlife corridor.

Scenic Views

The ridge crest in the southeastern Study Area offers scenic views of Mt. Susitna, the Alaska Range, and across the lowland forests of Beach Lake Park to Knik Arm and the Talkeetnas. It also offers views eastward to the Chugach Mountains including Bear Mountain and Roundtop. At least several minor promontories along the ridge crest provide simultaneous scenic views of these landmarks. Meanwhile, the open spruce forest in the southwestern portion of the site offers some views east to the Chugach Mountains.

Climate and Microclimate

The Study Area lies within a transition zone between moist maritime climate and drier continental extremes. Temperature extremes vary from 92 degrees Fahrenheit to -41 degrees Fahrenheit. From September through April, winds are predominantly from the north. Total precipitation is between 15 to 20 inches. Snowfall averages 50 inches, commencing in October and continuing into April. Depth of freezing varies from one locale to the next, depending on underlying soils and drainage and depth of snow cover.

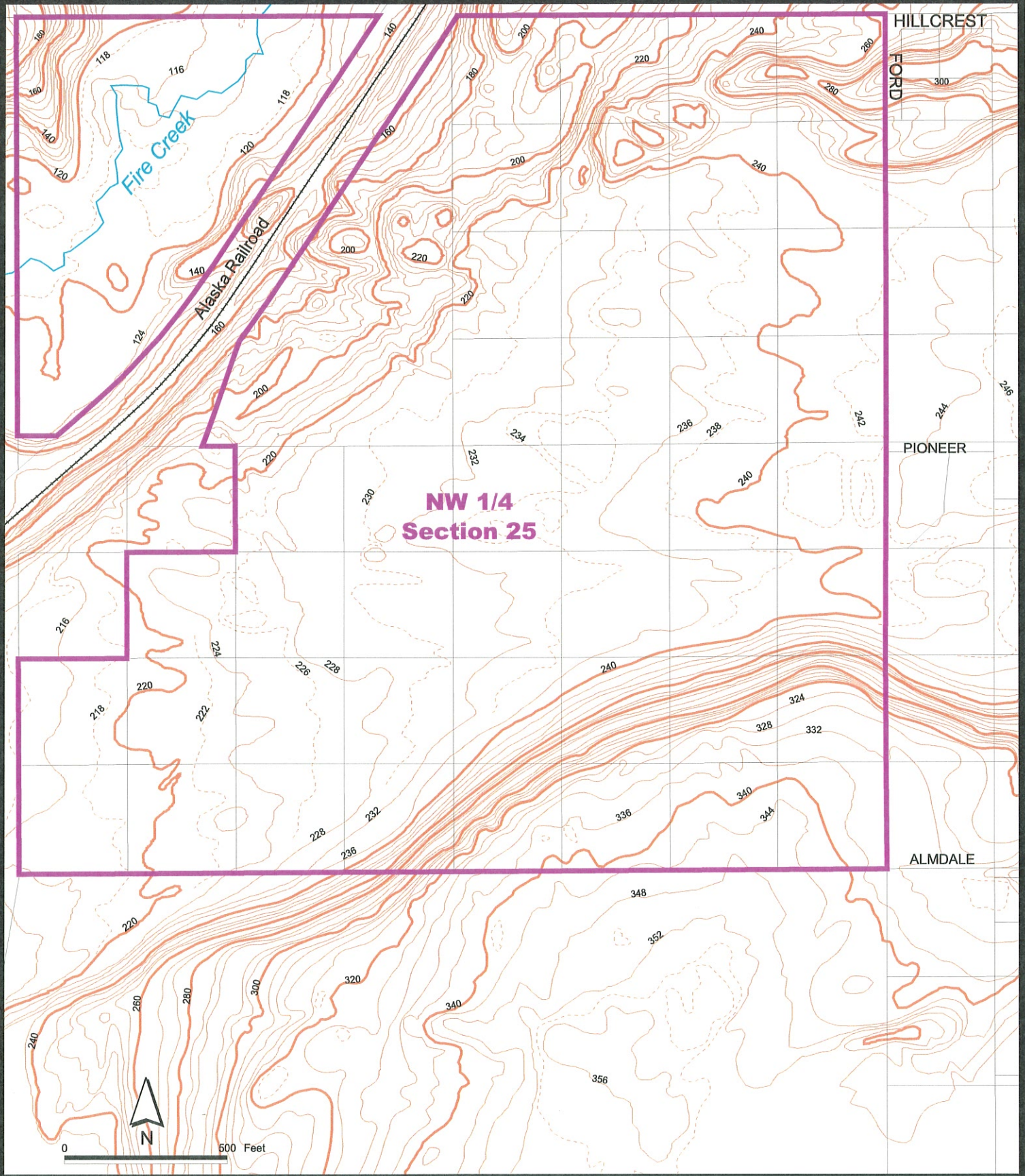
The ridge that rises in the southeast Study Area casts a seasonal shadow that keeps temperatures lower and the snow longer over much of the Study Area to the north. The Vegetation, Habitat, and Scenic Views Map shows the extent of daytime ridge shadow at several times during fall, spring, and winter. The very toe of the ridge is perceptibly cold and humid. Favorable growing conditions prevail at the top of the ridge and to some extent in the southwestern Study Area.

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Topography (4' contour intervals)

Planning Department
Municipality of Anchorage

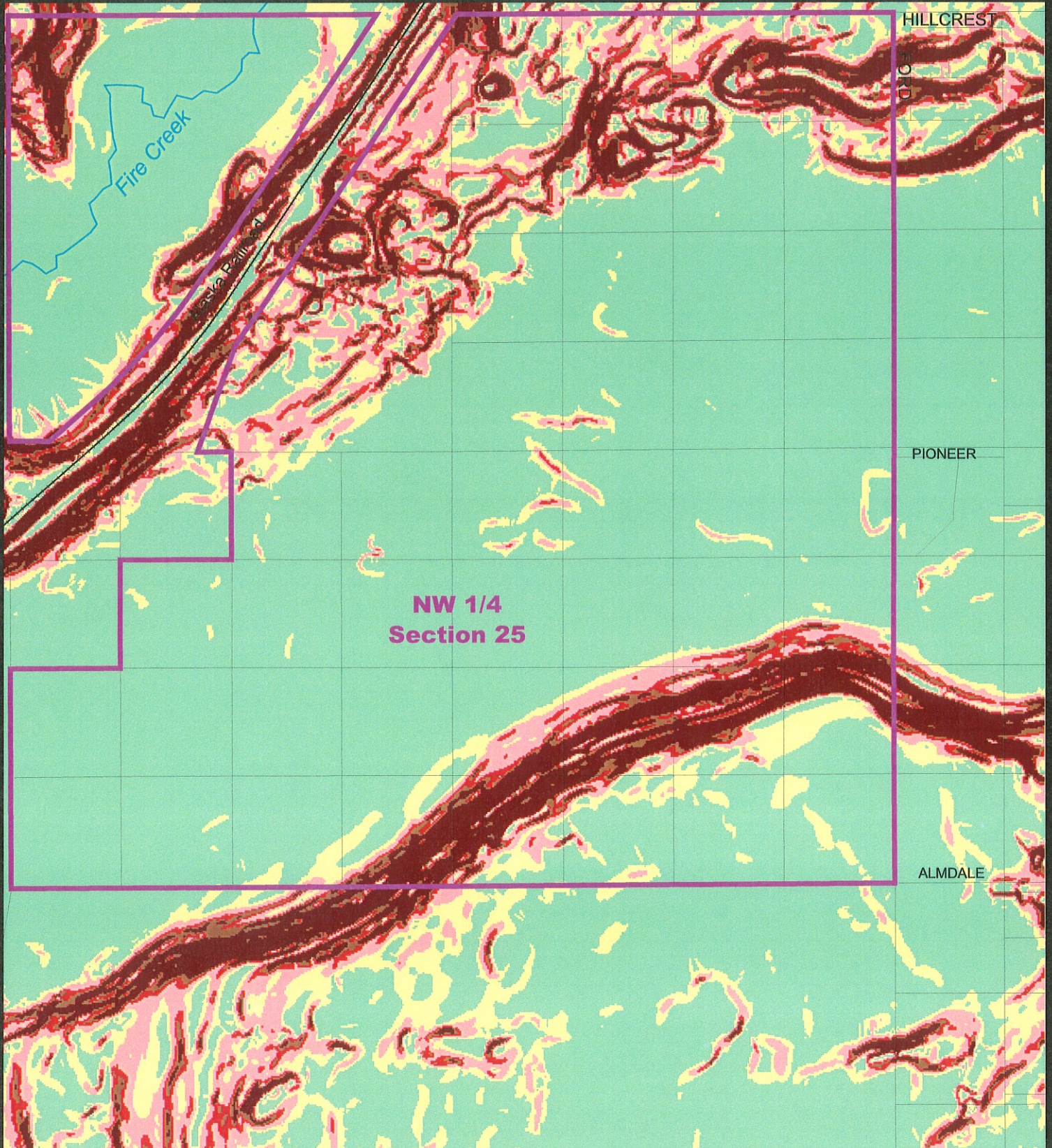




Slope

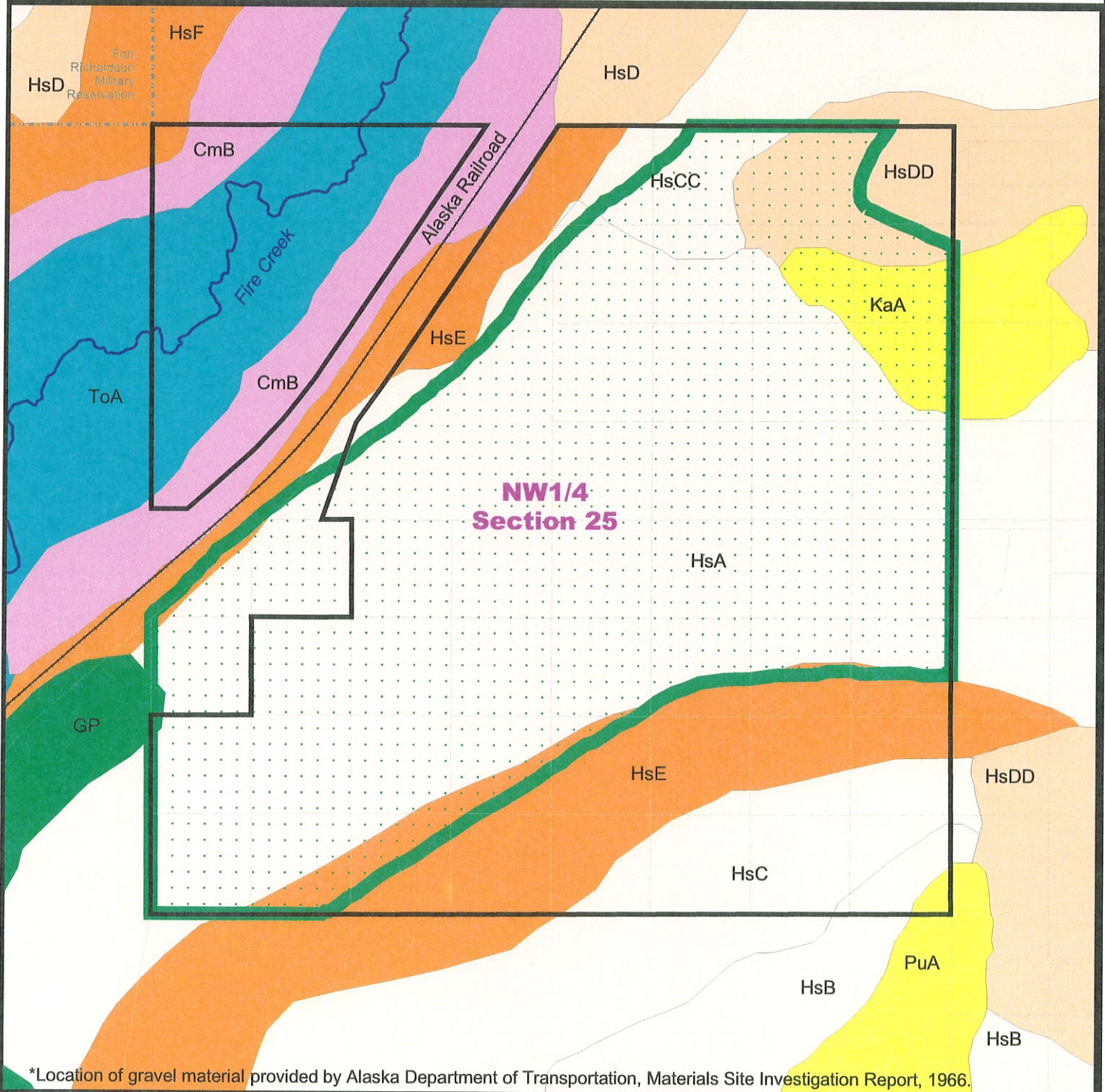
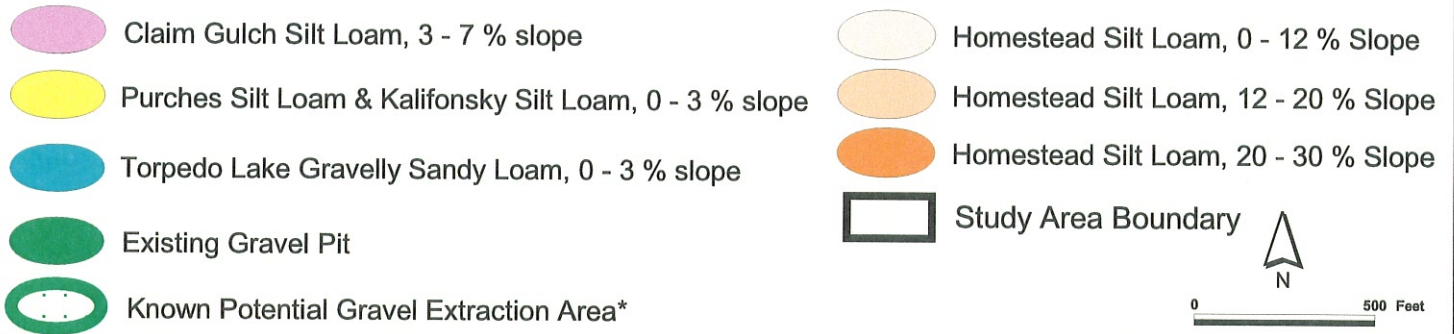


 Study Area Boundary





Soils and Underlying Gravel Resources

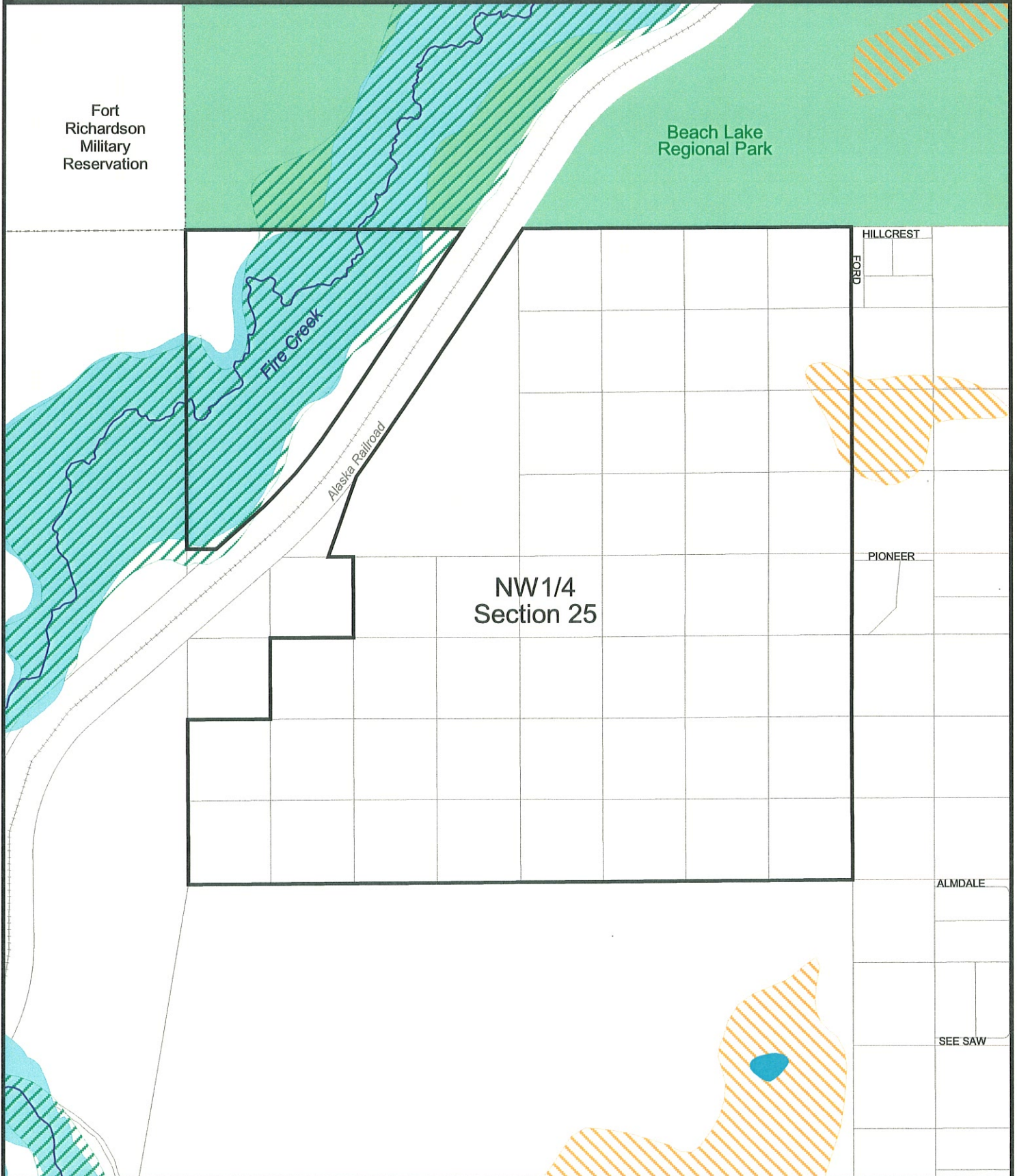


*Location of gravel material provided by Alaska Department of Transportation, Materials Site Investigation Report, 1966.



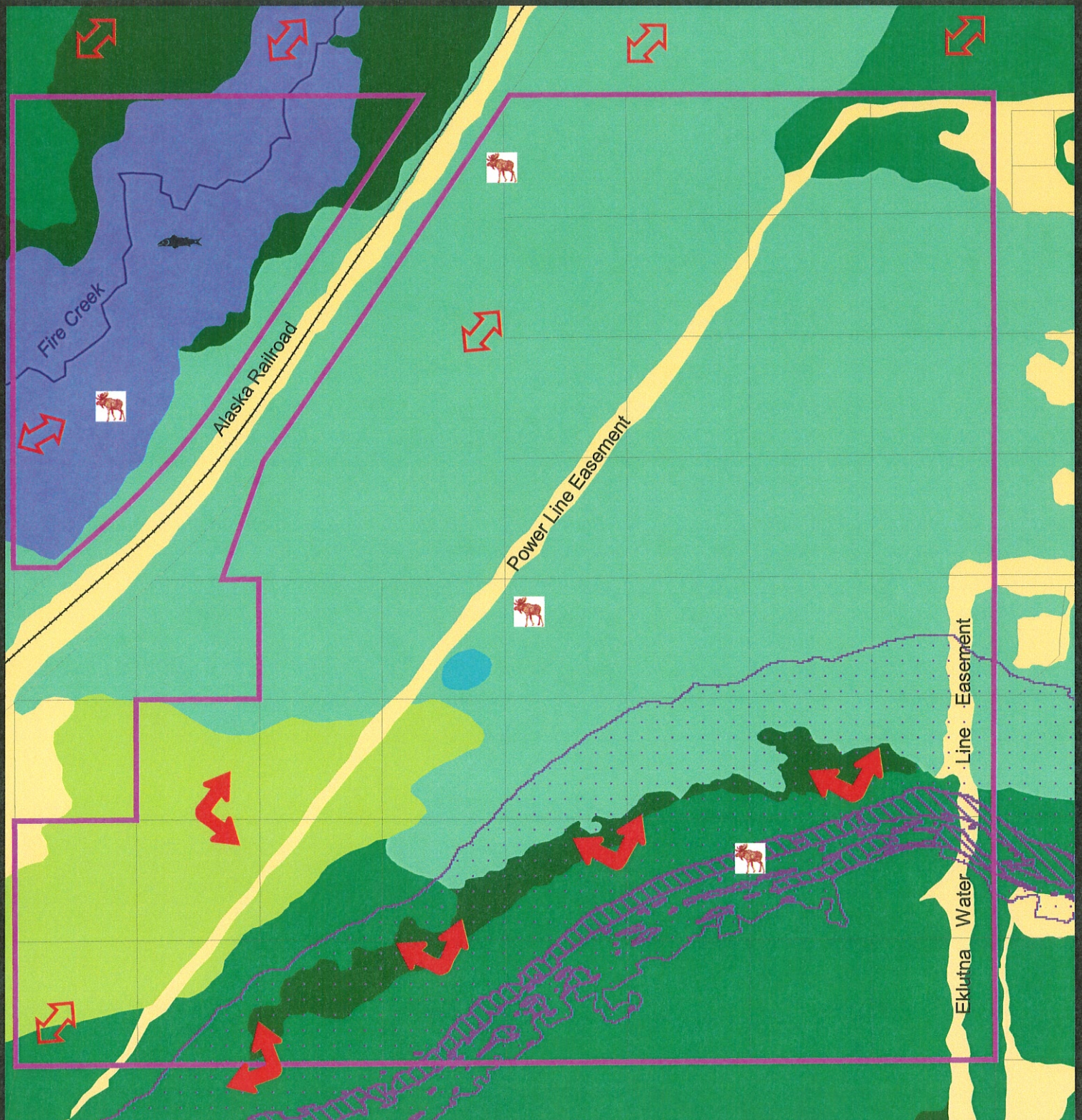
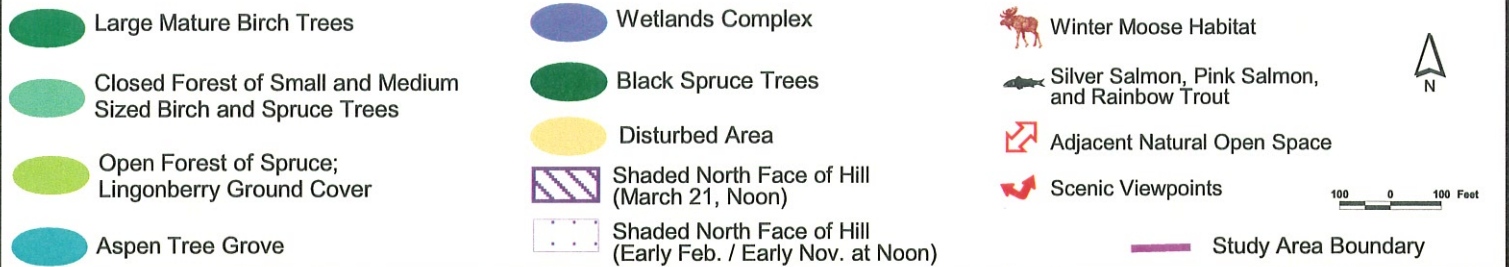
Floodplains, Streams, & Wetlands

- Preservation Wetlands
- Floodplain - 100 year
- Other Areas of Poor Drainage
- Developable Wetlands
- Municipal Park
- Study Area Boundary





Vegetation, Habitat, and Scenic Views



Environmental Suitability for Development

The following table and map illustrate the combined impact of soils, slope, and floodplain on the suitability of the Study Area's suitability for development. "Development" refers to houses, schools, recreation centers, wells, septic systems, playgrounds, sports fields, recreational trails, and roads. The table establishes the criteria for which areas of the map are most suitable, or have moderate or severe constraints to development.

The Site Environmental Analysis Map shows the central upland plain and the southeastern ridge top as most suitable for development. Moderately steep (12 to 20 percent) slopes, a developable wetland in the north-northeast, and the poorly-drained, black spruce woodland along the toe of the southeast ridge present moderate constraints for development. Development site plans need to take into account the moderate environmental constraints, and in some cases a certain land use should avoid such areas altogether.

Steep hill and ridge slopes, shaded dark green on the map, present a severe constraint to development of housing, civic buildings, playgrounds, roads, and even trails in substantial portions of the Study Area. In particular, the southeast ridge may present a severe constraint for trail design, and precludes road access. The Fire Creek floodplain and preservation wetland is another severe constraint. Any trails and other development in this area would require a wetlands permit from the Corps of Engineers.

Unique site features are candidates for conservation or certain appropriate uses, and appear on the Site Environmental Analysis Map as additional considerations for site planning. The mature birch forest, shown as an orange overlay pattern on the map, could be an attractive setting for either buildings or trails. The pink overlay pattern on the map represents a band of scenic viewpoints along the southeast ridge crest. Meanwhile, the purple shaded area represents a hill-shaded microclimate that is less attractive for homes or civic buildings than for nordic ski trails that may take advantage of early fall and late spring snow cover.

The Site Environmental Analysis Map also illustrates the juxtaposition of the natural open spaces of the Study Area in relation to adjacent regional open spaces. Beach Lake Regional Park lies to the north and the Fire Creek Greenbelt is nearby to the south. Land use and site planning for the central-western portion of the Study Area could provide a upland corridor for natural open space and trails connecting Beach Lake Park and the Fire Creek beaver dams.

NW¼ Section 25 Environmental Suitability Table

Soil, Slope, and Wetland Factors		Suitability for buildings, septic, playgrounds, trails, roads
Wetlands and Floodplains	Uplands	Most Suitable
	"A" (Preservation) Wetlands	Severe Constraints
	Buffer of 25 feet around "A" Wetlands	Severe Constraints
	"C" (Developable) Wetlands	Moderate Constraints
	Poorly Drained Toe of Ridge (Proxy: Black Spruce Pocket)	Moderate Constraints
	100-year Floodplains	Severe Constraints
	Buffer of 25 feet around 100-year floodplains	Severe Constraints
Slopes	< 7% Slope Gradient	Most Suitable
	>= 7 and < 12% Slope	Most Suitable
	>= 12 and < 20% Slope	Moderate Constraints
	>= 20 and < 25% Slope	Severe Constraints
	>= 25 and < 30% Slope	Severe Constraints
	> 30% Slope	Severe Constraints
	Ridge crest stability buffer (50 feet of ridge top from the crest, shown as the 320' elevation line)	Severe Constraints
Soils (6 soil types)	Homestead Silt Loam	Most Suitable
	Existing Gravel Pit	Most Suitable
	Purchases Silt Loam	Moderate Constraints
	Kalifornsky Silt Loam	Moderate Constraints
	Torpedo Lake Gravelly Sandy Loam	Severe Constraints
	Clam Gulch Silt Loam	Severe Constraints



Site Environmental Analysis

Physical Suitability for Development* based on Soil, Slope, and Wetlands

- Most Suitable
- Moderate Constraint(s)
- Severe Constraint(s)

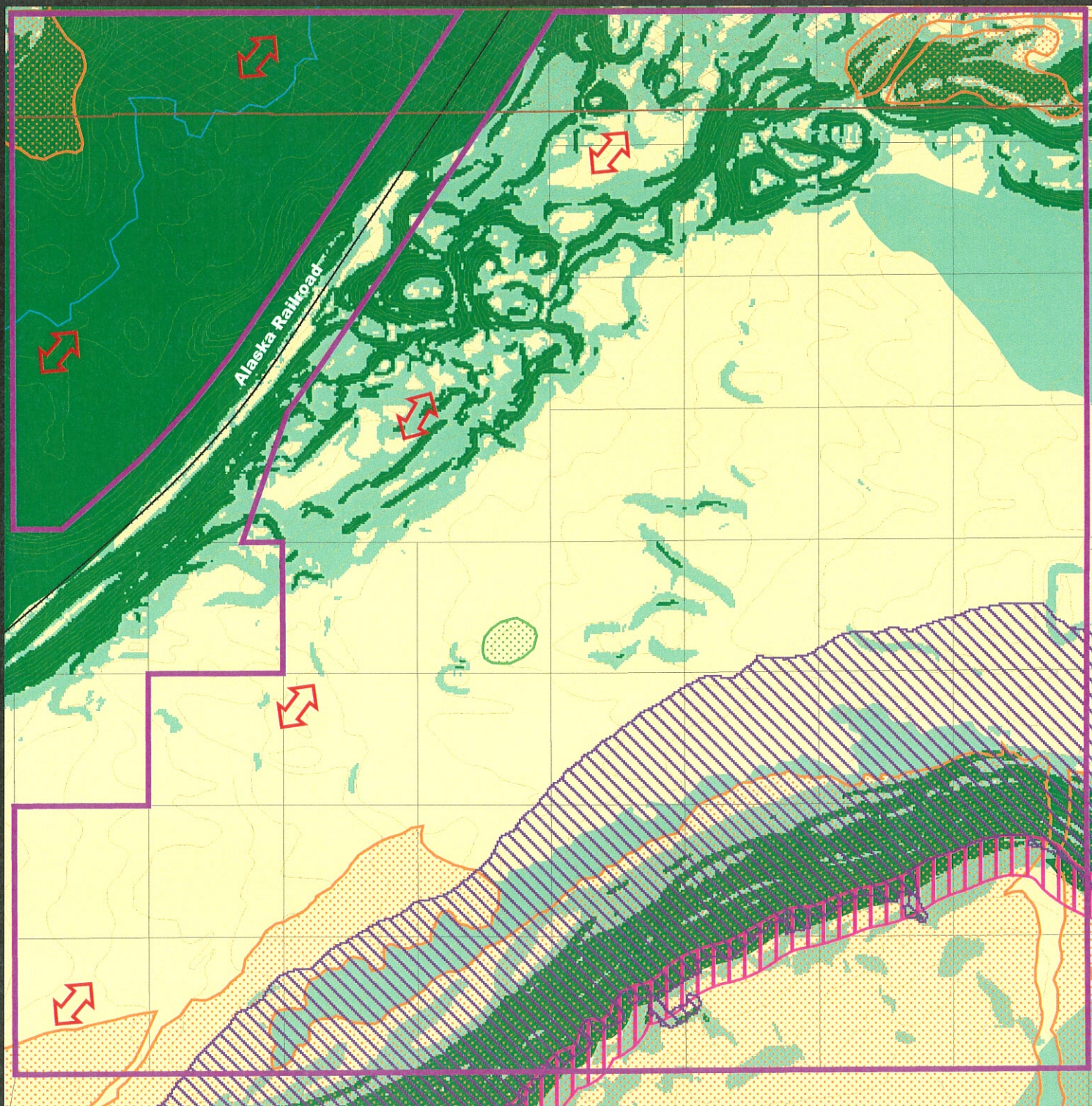
Additional Site Planning Considerations: Vegetation, Microclimate, and Scenic Viewpoints

- Beach Lake Park
Natural Open Space Buffer
- Scenic Viewpoints/
Highly Visible Hill Crest Area
- Shaded North Face of Hill
(Early Feb. / Early Nov. at Noon)
- Aspen Tree Grove
- Large Mature Birch Trees
- Potential Route for Regional
Natural Open Space Corridor

**"Development": buildings, septic, playgrounds, trails, and roads

Study Area Boundary

100 0 100 Feet



Surrounding Land Use, Zoning and Ownership

The Existing Land Use and Zoning Map shows the Study Area is zoned PLI – Public Lands and Institutions. Per AMC 21.40.020.A, the PLI district is intended to include areas of significant public open space, major public and quasi-public institutional uses and activities, and land reserves for which a specific use or activity is not yet identified. To utilize the Study Area for uses not permitted outright or as conditional uses under PLI will require a rezoning.

The NW¼ Section 25 remains undeveloped, except for recreational trail uses, including a 1.5-kilometer (km), maintained multi-use trail loop (Hill Loop Trail) that penetrates the central-northwestern Study Area, and dog mushing trails northwest of the ARRC railroad right-of-way corridor. A variety of informally maintained recreational trails, including the MEA power line trail, an east-west jeep trail, the Eklutna water line trail, and other trails criss-cross the NW¼ Section 25 between Beach Lake Park to the north and the beaver dams to the south. The trails are used for nordic skiing, dog sled mushing, horseback riding, running, and hiking.

Beach Lake Regional Park, zoned PLI, is 1,688 acres in size and provides year-round outdoor recreation. A 160-acre private in-holding, Birchwood Methodist Camp, is also zoned PLI. The military land to the west is zoned Transition (T). Future non-military use of this land is subject to the provisions of the *North Anchorage Land Agreement (NALA)*.

The Existing Land Use and Zoning Map shows a Birchwood neighborhood of about 90 homes on 1 to 2 acre lots to the east-southeast of the Study Area. The neighborhood is one-half mile in width, located between the Study Area and the New Glenn Highway. Like most of Birchwood, it is outside the public water and sewer service area and relies on individual private wells and septic systems. With 20 private lots still undeveloped, this neighborhood is slowly developing to build-out, and trending away from its eclectic mix of vacant land, older homesteads, mobile homes, and semi-rural, multi-family rentals, toward larger, more expensive, single-family homes. The area offers a rural suburban lifestyle a short distance from access to a freeway, schools, and a regional park. The neighborhood resembles most of Birchwood. Lot size, low density per acre, and detached, single-family structures contribute to retention of natural settings and a semi-rural residential lifestyle.

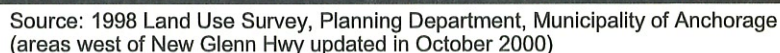
Chugiak High School is located on South Birchwood Loop Road, just north of the neighborhood and one-half mile east-northeast of the Study Area. All of Birchwood falls in the Chugiak High School attendance area. The high school

parking lot serves as trailhead parking for the adjacent Beach Lake Park multi-use and nordic trail system across Birchwood Loop Road.

Changes that are illustrated on the Land Ownership and Management Status Map are expected to triple the size of the Powder Reserve development area south of the Study Area. As shown on the Land Ownership Map, pending land trades with Fort Richardson and the Alaska Railroad could give Eklutna, Inc., control of a contiguous block of 1,500 acres in the Powder Reserve east of the Alaska Railroad alignment.

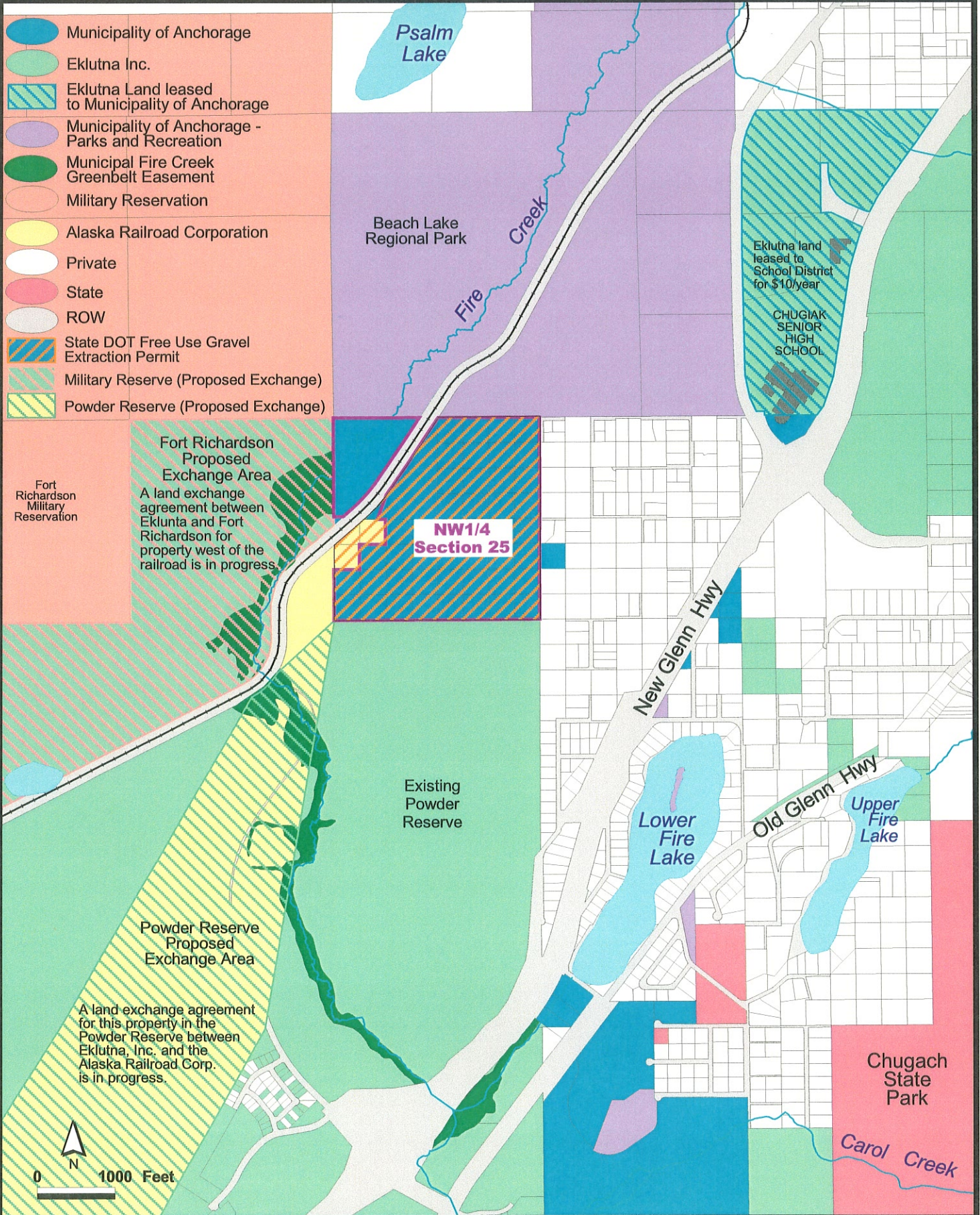
As a result of these changes, Eklutna, Inc., is expected to submit a new master plan proposal for the 1,500-acre Powder Reserve in order to replace the current Tract A *Master Development Plan*. The current master plan area, 532 acres in size, is zoned PC (Planned Community) and envisions 1,790 residential units at a gross density of 3.4 dwelling units per acre. Eklutna, Inc., is expected to dispense with the PC zoning for its new plan, and use more traditional R-1, R-2M, and other zoning districts. A likely range of gross densities for such a development could be from 2.5 to 3.0 residential units per acre, resulting in a population of between 11,000 and 14,000 people when the development reaches build-out.

Given the Powder Reserve and other tracts of buildable residential land, Chugiak-Birchwood is likely to receive a large share of future residential growth in Chugiak-Eagle River. Existing residential areas in Birchwood are also growing because of infill development on vacant lots scattered through the neighborhoods. The total population of Chugiak-Eagle River is projected to increase from approximately 30,000 people today to 54,000 people in 2020.





Land Ownership & Management Status



Public Facilities and Services

Regional Parks and Recreational Trails

Municipally owned Beach Lake Regional Park, 1,688 acres in size, provides year-round recreation opportunities in an undeveloped natural setting. A highly developed system of multi-use and nordic ski trails occupies the 220 acres of the park that lie southeast of the Fire Creek floodplain and parallel to the Alaska Railroad alignment. The 1,470 acres of park to the northwest of the railroad is relatively remote and supports limited uses. It is used primarily for dog sled mushing. Recreational facilities for the disabled are located at Beach Lake and include cabins, a lodge, a fishing dock and walkways.

As shown on the Birchwood Vicinity Map in Chapter 2, the Chugiak Sled Dog Mushers Association has developed and maintains over 20 miles of trail in the Beach Lake Park area, with 10 to 12 miles in the park itself. Mushing trails travel through the Fort Richardson Military Reservation, where the military controls their use, and also through Eklutna, Inc., lands. The trail system supports daily winter use by mushers as well as organized dog sled race events.

Southeast of the railroad track alignment, the Chugiak–Eagle River Nordic Ski Club develops, improves, and maintains the nordic ski trails and trail lighting through an agreement with the municipal Department of Cultural and Recreational Services (CRS), Chugiak–Eagle River Parks and Recreation Division. The CRS provides \$4,000 in funding per year in order for the Nordic Ski Club to maintain the trails. As shown on the Parks, Trails, and Recreational Facilities Map, the park's 13.5 km multi-use and nordic ski trail system is limited in area by the railroad corridor, the Fire Creek floodplain, and conflicts with dog sled mushing trails to the north. The student parking lot at Chugiak High School provides the only trailhead parking. Daytime users must have a paid student parking permit. Voters have approved a \$750,000 bond for a new trailhead and chalet facility. A site for the chalet has yet to be selected.

As shown on the Parks, Trails, and Recreational Facilities Map, the 1.5-km Hill Loop Trail loops into the NW¼ Section 25 from the Beach Lake Park trail system. Constructed by the Nordic Ski Club in 1983, the Hill Loop became a permitted use through an agreement with the HLB in 1996. The agreement also provides for a 22-foot wide trail maintenance easement. The trail is used as part of the Beach Lake Regional Park trail system for running, hiking, and horseback riding in the summer, and nordic skiing in the winter. An informally maintained network of recreational trails in the NW ¼ Section 25 connects the Hill Loop Trail and Beach Lake Park trails to the Fire Creek beaver dams in the Powder Reserve.

Other opportunities for expanding nordic ski trail systems exist in Chugiak-Eagle River. Edmonds Lake Park, 554 acres in size, could support up to 25 km of nordic ski trail, if developed at a trails density similar to Kincaid Park, and taking into account existing uses such as camping and skijoring. The Eagle River Nordic Ski Club has acquired funding to develop and maintain 5 km of trail in Edmonds Lake Park. Also, the *Areawide Trails Plan* identified the Mental Health Trust land on the south side of Hiland Road and Eagle River Loop Road as an ideal location for cross-country ski trails. It stated that this area may have the potential to be the same caliber as Kincaid or Hillside Park, according to the Nordic Ski Club. The Municipality has not acquired this land for development as a nordic ski area.

In addition to municipal parks, Chugach State Park is located in Chugiak-Eagle River approximately three miles east of the Study Area, and contains 495,000 acres. However, access to Chugach State Park is limited, underdeveloped, and controlled and financed by the State of Alaska rather than through municipal parks planning and development.

A municipal greenbelt easement has been defined for Fire Creek in Birchwood by the outer limits of the 100-year floodplain and, where no such floodplain has been defined, by a median line running 50 feet on each side of the creek's centerline. This provides for a public-use corridor through Eklutna lands in the Powder Reserve and Birchwood, and allows the Municipality to construct a recreational trail. The Fire Creek Greenbelt potentially offers wildlife viewing, cross-country skiing, and hiking, as well as regional trail access to Beach Lake Regional Park. Planned trails from the Fire Creek beaver dams to the NW¼ Section 25 and Beach Lake Park appear on the Parks, Trails and Recreational Facilities Map.

Neighborhood and Community Recreational Facilities

There are no neighborhood or community parks in Birchwood. Birchwood ABC Elementary School provides a playground facility, and Chugiak High School has a gymnasium and swimming pool, which is open to the public. The school track-and-field and football stadium is prioritized for high school use.

Community sports fields in Chugiak-Eagle River include a baseball field at Oberg Park, three soccer fields at Oberg Field, and three little league and softball fields in Loretta French Community Park. All of these facilities are located in the Chugiak-Peters Creek Area. The Municipality may acquire Mental Health Trust lands in the Eagle River-Hiland Road Area at the old landfill site north of Eagle River Loop Road for sports field facilities. There are no existing or planned community park sports fields in the Birchwood-Chugiak area.



Parks, Trails and Recreational Facilities

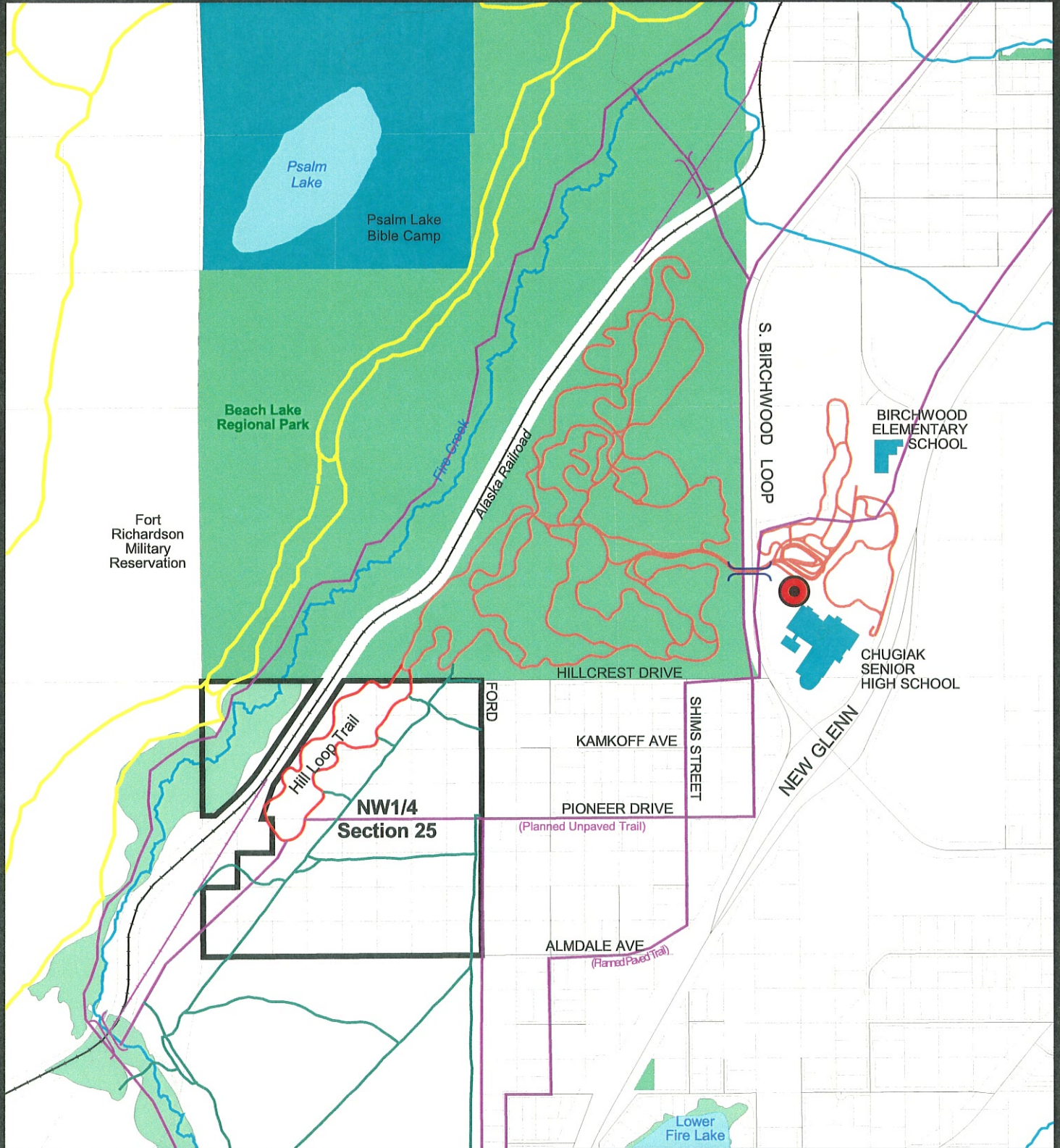
Multi-Use / Cross-country Ski Trails

- Existing, Dedicated Trail
- Existing, Permitted Use Trail
- Planned Trails (Areawide Trails Plan)
- Informal Trails

- Mushing Trails (Approx. Location)
- Existing Railroad Track
- Proposed Railroad Track
- Dedicated, Grade Separated Crossing
- Planned, Grade Separated Crossing

- Trail Head Parking
- Parks
- Fire Creek Greenbelt Easement
- Psalm Lake Bible Camp

Study Area Boundary



Transportation and Site Access

The Transportation and Site Access Map illustrates the Study Area's proximity to South Birchwood Loop Road and the North Birchwood Interchange of the New Glenn Highway. South Birchwood Loop Road, a two-lane residential collector, is the main north-south corridor for Birchwood. It empties into the New Glenn at Chugiak High School.

The northern portions of Beach Lake Regional Park are accessible from South Birchwood Loop by a gravel road maintained by the rural road service area. Road and trail access to the main park will improve in the near future as part of the Alaska Railroad alignment straightening project. The southeastern park and trails are accessed from the student parking lot at Chugiak High School.

Public Transit Route 76 travels from the Peters Creek Trading Post, with stops at Birchwood Loop, Chugiak High School, Eagle River Transit Center on Business Boulevard, the Fort Richardson Interchange, and Mountain View before terminating at the Transit Center in downtown Anchorage. Its Chugiak High School stop is one-half mile from the Study Area. Across the street from the school, the North Birchwood Park & Ride Lot marks the interchange between Route 76 and Route 102, which travels on the Glenn Highway to Anchorage.

Areawide connectivity south of the North Birchwood Interchange is limited to Shims Street, a north-south neighborhood collector street with a 60-foot right-of-way easement connecting to South Birchwood Loop Road. Shims Street changes names as it winds southward toward the North Eagle River Interchange, providing a likely future access south to the Powder Reserve.

The most direct route to the Study Area is Hillcrest Drive, an east-west, dead-end, local street. Hillcrest is unimproved west of Shims and has as little as 35 feet of right-of-way south of the park boundary. However, Hillcrest is within a 100-foot wide Section Line Easement along the park boundary. Thirteen residential properties front along the south side of Hillcrest Drive. Pioneer Drive, a second dead-end street two blocks south of Hillcrest, provides neighborhood access to the central plain of the Study Area. Pioneer is an improved street with adequate right-of-way, and is unhindered by rugged terrain. Thirty residential properties front the Pioneer Drive route from South Birchwood Loop to the Study Area. The southeastern ridge of the Study Area would receive access via Almdale Avenue.

As shown on the Transportation Map, Almdale Avenue and other existing roads further south are likely access points into the Powder Reserve development area. A master plan or internal circulation plan for the anticipated 1,500-acre Powder Reserve development area was not available at the time of this study.

Utilities

A de-energized, three-phase electrical transmission power line owned by MEA traverses the Study Area in a southwest-northeast direction. There is no load as far south as the Study Area, so the line here has not been maintained for 15 years. Local two-phase distribution lines in the residential neighborhood to the east could be extended to serve any future local area needs of residential, park, or other uses in the Study Area. A school facility in the Study Area may require extension of a three-phase line using the existing distribution line easements through the residential neighborhood.

The Anchorage Water & Wastewater Utility (AWWU) Eklutna Transmission Main water pipeline from the Eklutna Water Treatment Plant runs along the east boundary of the Study Area. There is no local water service access to this water pipeline. Residences in the large-lot neighborhood east of the Study Area have on-site water and septic systems. Chugiak High School and Birchwood Elementary School also use on-site systems, although a future connection to serve the high school is planned.

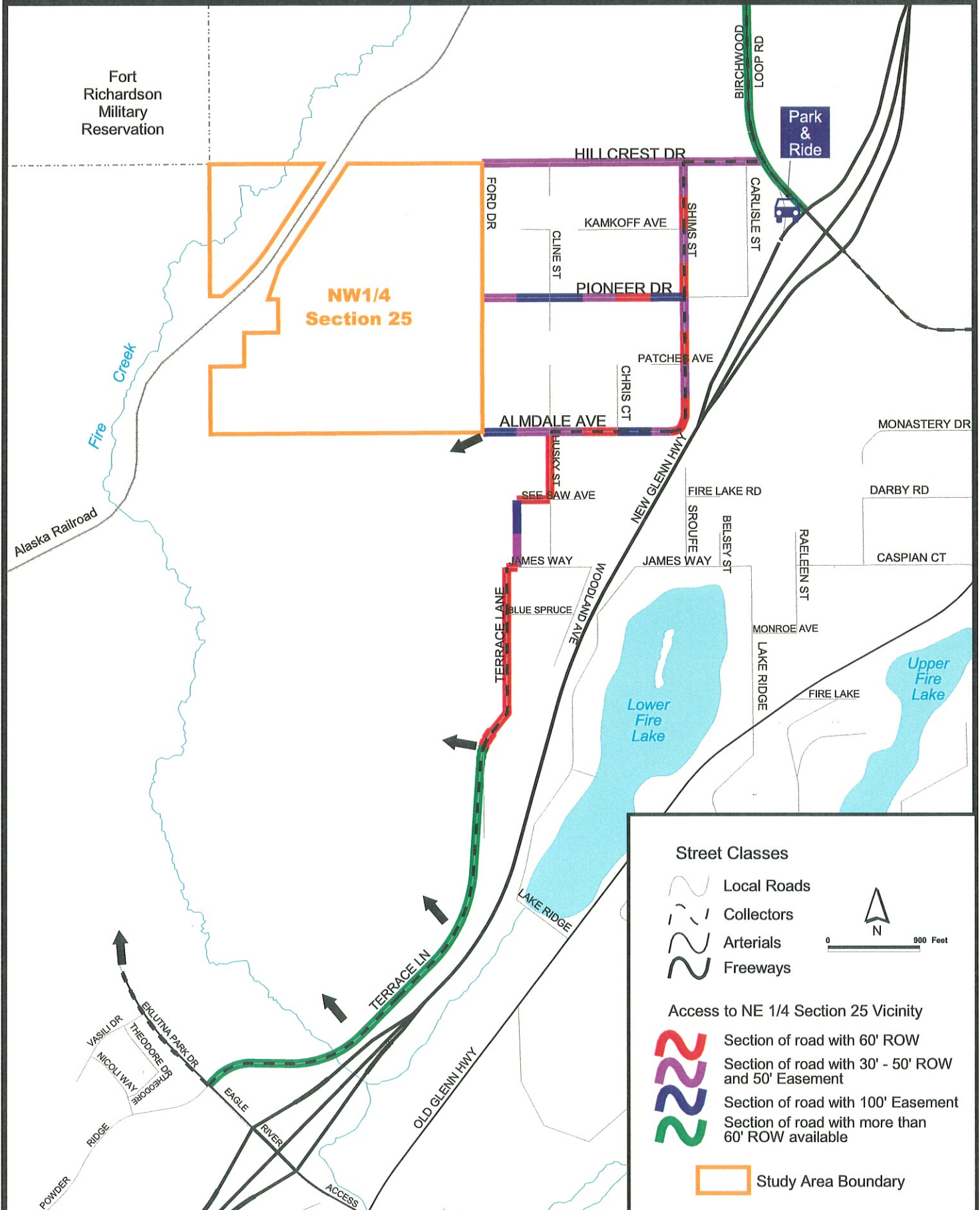
There are two inspection vaults on the water pipeline in the vicinity, from which there is potential to attach a water main to serve the area. One inspection vault is at the intersection of Birchwood Loop and Hillcrest Drive at Chugiak High School, one-half mile east of the Study Area.

The Powder Reserve will receive water service via a main line attached to a second inspection vault near the Powder Ridge subdivision, about three miles south of the Study Area. Eklutna, Inc., intends to provide water to the Powder Reserve subdivisions, building its system to AWWU standards, with a capacity adequate for the development. While it might be physically possible for these water lines to eventually serve the Study Area from the south, Eklutna may size its lift station to serve only Powder Reserve developments. Limits to future water delivery from the south depend on the size of the lift station, and on whether the Powder Reserve develops to maximum capacity.

There are no existing sewer lines in the vicinity west of the New Glenn Highway. Sewer lines exist as far north as Lower Fire Lake. There is a sewer line connection to developments at Powder Ridge, more than one mile south of the Study Area. As with its water service, Eklutna, Inc., intends to provide sewer to the Powder Reserve subdivisions, building its system to AWWU standards, with a capacity adequate for the Powder Reserve at build-out.





Transportation and Site Access

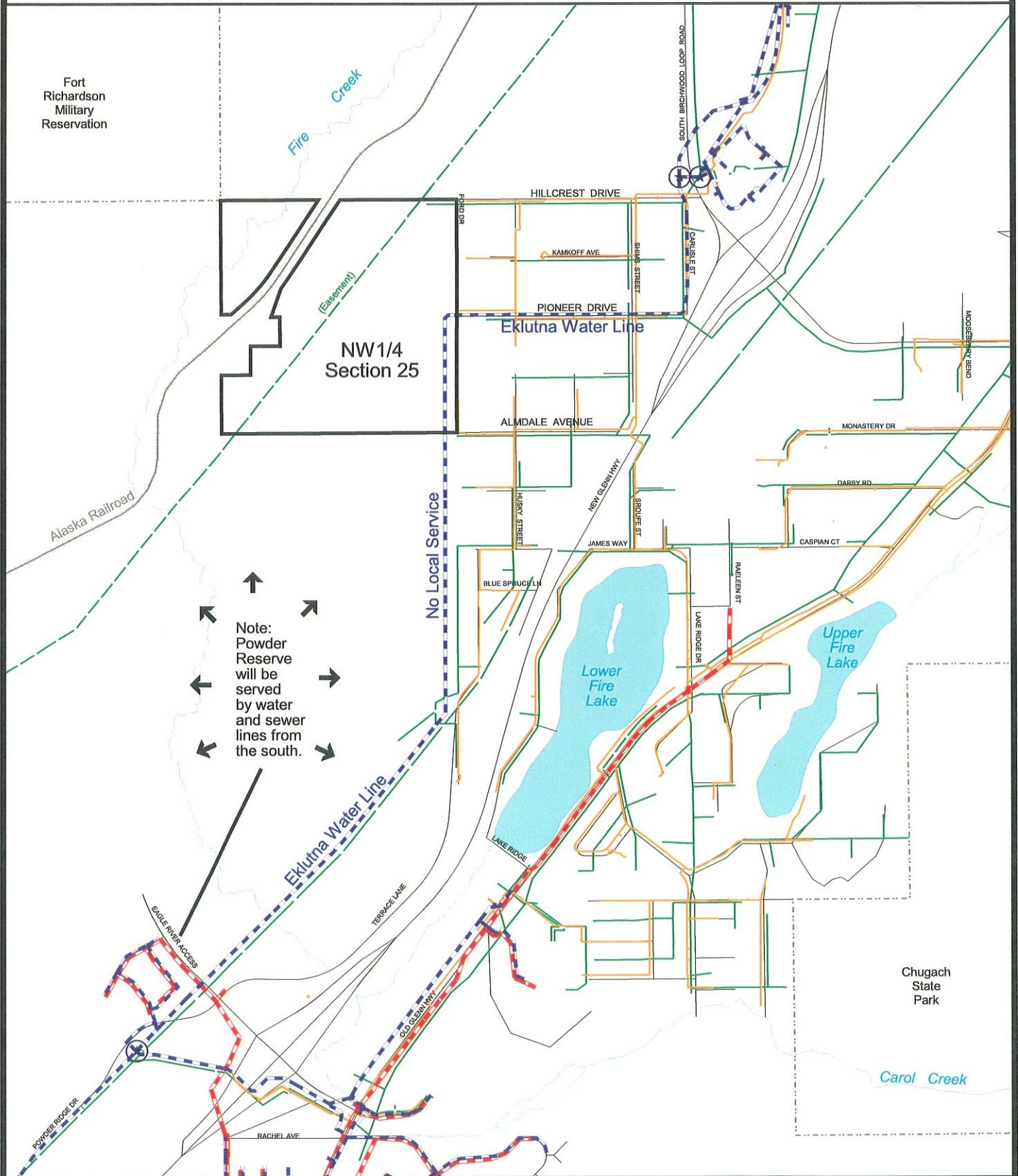




Utilities

-  Water Vaults (AWWU)
-  Water Lines (AWWU)
-  Sewer Lines (AWWU)

-  Electric Lines (MEA)
-  Gas Lines (Enstar)



Related Plans and Policies

Following is a review of plans that are related to the Study Area, to address the need for consistency with appropriate policies and recommendations.

Chugiak – Eagle River Comprehensive Plan

Adopted in 1993, the *Chugiak–Eagle River Comprehensive Plan* is intended to be a guide for community development. The *Comprehensive Plan* designates the NW¼ Section 25, as Residential/Park, with Environmentally Sensitive Lands in the Fire Creek Floodplain, as shown on the following map. The *Comprehensive Plan* does not specify which areas should be a certain use, nor what density of residential dwellings per acre that NW¼ Section 25 should support.

The *Comprehensive Plan* designates lands east of the Study Area as Residential, with a recommended density of less than one dwelling unit per acre. The Powder Reserve is designated Mixed Use – a mix of interrelated residential, commercial, institutional, open space, or light industrial uses – with no recommended density of residential dwellings. A large tract of land in the Powder Reserve is designated Transportation Related. This land is planned for exchange with Eklutna, Inc.

The *Comprehensive Plan* establishes goals for parks and recreation facilities in Chugiak–Eagle River. These include: (a) establish an integrated open space and greenways network which effectively links parks, recreational facilities, schools, residential and commercial areas, and which includes ecologically valuable open space lands; (b) establish a system of parks, from the neighborhood to the regional level, to serve all segments of the community, and (C) provide a wide range of recreational opportunities to all segments of the community. Specific objectives, policies, and strategies for parks and recreation related to the Study Area include:

- Protect open space corridors along streams, rivers, and ridge crests.
- Meet community needs for park space by bringing the area up to National Recreation and Parks Association standards for parks
- Provide a continuous system of creek greenbelts with pedestrian trails to link schools, parks, and residential neighborhoods.
- Neighborhood and community park land shall be acquired in anticipation of population growth and community development.
- Provide large field areas for sports, such as soccer and additional facilities, at the Fire Lake Recreation Center.
- Update the *Edmonds Lake Park* and *Beach Lake Park Master Plans*.

The *Comprehensive Plan* also provides direction for evaluating large undesignated HLB lands in Chugiak–Eagle River. Its specific criteria for a land use study in reference to the NW¼ Section 25 are detailed in Chapter 1.

Anchorage Coastal Management Plan

The intent of this plan is to benefit the general public by guiding the development and protection of areas within the Anchorage coastal boundary. Adopted in 1979, it designates Fire Creek as a Class II/III waters, and the adjacent lands as River Floodplain. Class II and III waters have the following public values: propagation of fish, water quality, recreation, management, aesthetics, parks, open space, greenbelts, fishing, and environmental considerations.

Anchorage Wetlands Management Plan

The purpose of this document, updated in 1996, is to identify those wetlands that provide important ecological or hydrological functions and to provide a management plan for their protection. The Plan identifies an "A" (Preservation) Wetland for preservation in the Fire Creek floodplain, and a "C" (Developable) Wetland in the northwest corner of the Study Area. The "C" wetland is developable under General Permit authorization from the Municipality.

Anchorage Park, Greenbelt, and Recreational Facility Plan: Volume 2, Eagle River-Chugiak-Eklutna

This document was adopted by the Assembly in 1985. Together with the *Areawide Trails Plan*, it provides the basic planning framework for parks and greenways in Chugiak-Eagle River. Elements of this plan that apply to the Study Area are discussed in the Parks and Recreation section of Chapter 3.

Areawide Trails Plan

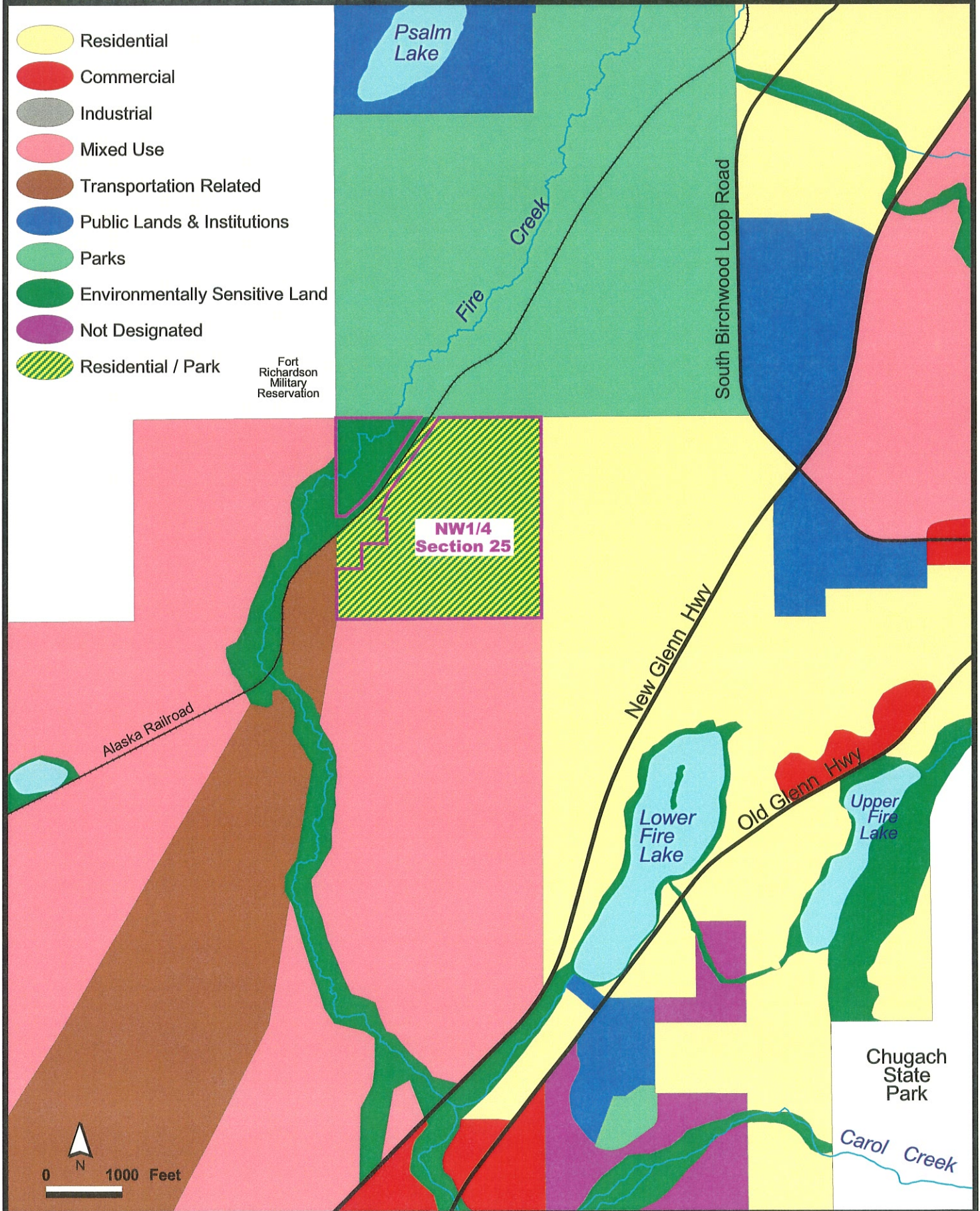
Adopted in 1996, the *Areawide Trails Plan* is a component of the *Chugiak-Eagle River Comprehensive Plan* that guides the development of trail facilities as part of the overall transportation system. The *Areawide Trails Plan* recommends a number of improvements for non-motorized trails in the Beach Lake Park area. The Parks, Trails, and Recreational Facilities Map shows the planned trails.

A paved multi-use recreational trail along Fire Creek is recommended as a regional connection to Beach Lake Park and the planned coastal trail in the northern Municipality. Priorities for construction of ski trails include connections from the Hill Loop Trail to Fire Creek Greenbelt. The *Areawide Trails Plan Map* shows a planned grade-separated crossing allowing greenbelt trail access across the Railroad at the beaver dams, ¼ mile south of the Study Area. That map also shows a planned, unpaved multi-use trail through the Study Area from the Hill Loop Trail to Pioneer Drive.

Chugiak - Eagle River Comprehensive Plan: Recommended Land Uses



Planning Department
Municipality of Anchorage



The *Areawide Trails Plan* recommends that the integrity of the ski trails at Beach Lake Park, including the Hill Loop Trail which loops into the Study Area, be protected. The Hill Loop appears, although not to true scale and location, on the *Areawide Trails Plan Map* as a protected, dedicated multi-use recreational trail.

According to the *Trails Plan*, the trail system and visitors center and staging area within Beach Lake Park should continue to be designated by the Municipality for dog mushing. The plan states that while joint use of an area may be possible where sight distance would allow visibility, the topography and vegetation prevent adequate sight distance in Beach Lake Park. The railroad provides a strong demarcation between the users and it is recommended that the railroad be maintained as the separation between skiers and mushers within Beach Lake Park. The plan recommends that the loops of trail extending out of Beach Lake Park south to Clunie Lake, which cross through the northwestern corner of the Study Area, be dedicated for dog sled mushing use.

Beach Lake Regional Park Master Plan

This plan was approved in June 1973 by the Parks, Recreation, and Open Space Advisory Board and the Greater Anchorage Area Borough (GAAB) Assembly. Its recommendations include a swimming beach with related facilities at Beach Lake, future road access at the north end of the park, and an integrated park trail system. Because the plan predates municipal unification, its recommendations were based on the now outdated condition that Beach Lake Park was outside of the parks service area. Its recommendations related to trail improvements were superseded by the *Areawide Trails Plan*.

Long-Range Transportation Plan (LRTP)

One of several implementation tools of the *Comprehensive Plan*, the *LRTP* guides the development and implementation of transportation system improvements. Near-term implementation of goals, objectives, and strategies in the *LRTP* occurs through the *Official Streets & Highways Plan (OS&HP)*. The *OS&HP* for Chugiak-Eagle River is scheduled to be updated by December 2001.

The road connectivity policy contained in the *LRTP* for Chugiak-Eagle River is: “to provide an interconnected network of streets for ease and variety of travel. Connections between new and existing subdivisions should be required except in the following cases: excess slope, the presence of a wetland or other body of water which cannot be bridged or crossed, existing development on adjacent property prevents a street connection, or the presence of a freeway or railroad.”

North Anchorage Land Exchange Agreement (NALA)

The *North Anchorage Land Agreement (NALA)* is a contract that was signed by the State, the Municipality, and Eklutna, Inc., in 1982. The intent of *NALA* is to implement provisions of Section 1425 of the Alaska National Interest Lands Conservation Act (ANILCA), enacted by Congress in 1980.

Section 1425 provided for resolution of a number of land interests among the three parties, including planned use of Fort Richardson lands in the event these lands are declared excess to military needs. Under the *NALA* contract, the State will receive certain specific areas, while the Municipality and Eklutna, Inc., will receive land as tenants in common until specific conveyances are identified through a land use planning effort. The land use planning effort will address appropriate areas for residential, commercial, and industrial development; for roads and other transportation needs; and for public facilities, such as schools, parks, and recreation areas.

Powder Reserve Master Development Plan

The current master plan for Tract A of the Powder Reserve is expected to be superceded by a new plan encompassing a much wider area. The anticipated plan for the 1,500-acre Powder Reserve is not yet available at the time of this study.

The current master plan may be of use for projecting what may occur in the expanded Powder Reserve. For example, it is likely that an updated plan will designate specific areas for parks, open spaces, and local schools. However, the locations of these facilities that appear on the current master plan are subject to change. Moreover, the new proposal may abandon the Planned Community district in favor of traditional zoning and lower gross residential densities.

Legal Encumbrances

Utility Easements

Patent #817 conveyed the Study Area to the Anchorage Borough in 1968 with several reservations and exceptions, including a 100-foot wide electrical transmission line easement, owned by MEA, which traverses the Study Area in a northeast-southwest direction. In addition, a public utility easement runs along the southern half of the eastern boundary of the Study Area. The centerline of this 40-foot public utility easement is located 130 feet from the eastern boundary of the Study Area. The AWWU Eklutna Transmission Main and a Matanuska Telephone Association fiber optic telephone cable are buried in this easement.

Free Use Permit for Gravel Extraction

A Free Use Gravel Permit (ADL Serial 33019) was issued to the state Department of Highways (now ADOT&PF) for an “indefinite term”. The area affected includes Lots 15 through 22, 39 through 46, 63 through 78, 95 through 110, and the NW¼NW¼ portion lying southerly and easterly of the Alaska Railroad right-of-way. The Alaska Department of Transportation and Public Facilities (ADOT&PF) inherited the Free Use Gravel Permit.

The Study Area has long been known to hold a plentiful source of good quality gravel. The municipal Department of Public Works failed twice in attempting to gain approval to use the NW¼ Section 25 as a gravel material site. In 1976, Public Works appealed the decision of the Planning and Zoning Commission (PZC) to the Assembly. The Assembly remanded the case to the PZC for a second public hearing (Case P77-50). After the public hearing was closed, PZC postponed their decision to allow Public Works to respond to new gravel extraction criteria. The case was never rescheduled with the Commission.

At the time of Public Works’ initial application, the State Department of Highways objected, claiming they had exclusive rights to the gravel material under the Free Use Permit. Neither the State nor the Municipality has resolved this longstanding issue. It is the Municipality’s position, as owner of the property, that the permit may be revoked pursuant to its terms, if it appears in the best interests of the Municipality to do so.

AMC 21.40.020 – Conditional Use Permit

The Study Area is zoned PLI Public Lands and Institutions. Natural resource extraction is a conditional use in the PLI district, subject to the land use regulations contained in AMC Title 21. Alaska State Statutes, Title 35.30.010 - 040 makes state agencies such as ADOT&PF subject to municipal zoning regulations, including conditional use regulations. Recommendations in this land use study should be considered as municipal conditions of approval for gravel extraction under a conditional use application review.

Any proposal to extract gravel will have to establish satisfactory access for gravel hauling. According to AMC 21.50.070(B)(1), conditional use standards for natural resource extractions, principal access to gravel sites shall minimize the use of residential streets. At this time, only residential streets are available to access the gravel.

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CHAPTER 3. COMMUNITY FACILITY NEEDS

The Heritage Land Bank is responsible for the management, transfer, or disposal of undedicated municipal land in a way that best meets the various facility needs of the community. Given this mandate, AMC 25.40.025 requires that a site-specific land use study for an HLB parcel shall address the need for community facilities at that location. Community facilities can include roads, parks, trails, schools, satellite municipal offices, etc. To help meet that requirement for the *NW¼ Section 25 Land Use Study*, various municipal departments and other agencies were contacted and asked to identify any specific facility needs that might be suitable for location on HLB NW¼ Section 25. In response to the request, several needs were identified by municipal and state agencies. Comments and suggestions regarding the future of the site were also requested and collected from community councils, community organizations, and the general public. Agency and community comments are documented in the Appendices.

Municipal Community Facility Needs

Anchorage School District

The Anchorage School District has requested that public land in the Study Area be reserved for a potential elementary school site, based on the growth potential and likely development of the Powder Reserve area.

The current Master Plan for the Powder Reserve Tract A could generate as many as 595 elementary school students. The anticipated new master plan for the entire proposed 1,500 acre Powder Reserve may generate between 1,400 and 1,700 elementary school children¹—a demand for 3 elementary schools (between 55 and 66 classrooms).² The current rate of development here is slow. However, within a metropolitan context of continued population growth and increasingly scarce vacant land, the pace of development is likely to change.

To meet the eventual need for a new elementary school, the Municipality would likely have to purchase a school site from Eklutna, Inc., at market rate value. *Anchorage 2020 Anchorage Bowl Comprehensive Plan* Policy #13 includes Strategies through which private development would help pay its own way in such circumstances. These Strategies, including *Development Impact Assessments*, *Impact Fees*, and *Development Rights Transfer*, have yet to be implemented.

¹ See table of Powder Reserve population and facility needs in *Appendix C*.

² See School District memorandum available in *Appendix C*.

Most of the Study Area may be inappropriate for an elementary school. Site selection standards for elementary schools favor a central location in the neighborhood so that children may walk to school. An elementary school traditionally serves as a neighborhood civic center and library also, as well as a local park and playground. A 100-foot high ridge physically isolates most of the Study Area from the Powder Reserve. At the foot of the ridge, the central and southwestern Study Area is nearly 900 feet north of the Powder Reserve. A school site on the central plain would possibly be shifted even further north, to ¼ mile north of the neighborhood boundary in order to avoid the dark, cool microclimate and poor drainage at the foot of the ridge. Proper infrastructure is also lacking. The School District will not select a school site that does not have existing or planned connections to water and sewer service.

Only the southeast corner of the Study Area shares the ridge-top plateau with the Powder Reserve. As a result, it is physically more related to the Powder Reserve than it is to the rest of the Study Area. It is within the same drainage basin as the planned Powder Reserve water and sewer service area. The ridge top is physically suitable for development, gets good sun exposure, and offers scenic views of the region. It fronts directly on the planned Powder Reserve street network and could be accessible to the neighborhood to the east via Almdale Avenue. The ridge top, an area of 9 acres, is the most, and perhaps only, appropriate location in the Study Area for an elementary school. With acquisition of additional acres to the south, it could accomplish the 15-acre elementary school site standard.

Parks and Recreation

Chugiak-Eagle River Parks and Recreation has requested that the Study Area be added to Beach Lake Regional Park. Parks and Recreation recommended the addition in order to expand the area available for multi-use and nordic ski trails, provide a chalet and recreation center site that will improve access to the park without consuming existing parkland, and reserve land for community park sports fields to adequately serve Birchwood. Also, a need for a neighborhood park is considered in the pages to follow, to address *Anchorage Park, Greenbelt and Recreation Facility Plan* recommendations for the Study Area.

The 1985 *Anchorage Park, Greenbelt and Recreation Facility Plan* describes neighborhood, community, and regional parks. **Neighborhood parks** are intended to provide local recreational opportunities in a residential neighborhood setting. They include such facilities as playgrounds, ball courts, and picnic areas. Intended to be readily accessible to pedestrians without the need of crossing an arterial street, neighborhood parks serve the local population within a ¼- to ½-mile radius.

Community parks range in size from 20 to 100 acres and serve a population of 10,000 to 50,000. Automobile access is important as these parks serve an area within a ½- to 3-mile radius. Community parks act as a supplement to neighborhood parks by emphasizing recreational activities that require larger amounts of space, such as softball and soccer fields. **Regional parks** are reserves of natural open space, habitat, and scenery. While they may include the same types of facilities as community parks, regional parks emphasize recreational activities in a relatively undeveloped natural environment. Typical activities might include boating, swimming, golfing, archery, wildlife and nature viewing, camping, and trail uses such as nordic skiing, biathlon, skijoring, dog sled mushing, horseback riding, bicycling, running, and hiking.

Regional Park Needs

In terms of gross acreage, the 2,242 acres of regional park in Chugiak–Eagle River is enough to support a population of 110,000 people, according to adopted service level standards. Beach Lake Regional Park alone is 1,688 acres in size. For this reason, the adopted parks plan does not recommend acquisition of more regional parkland. Instead, it recommends that existing regional parks, including Beach Lake Park and Edmonds Lake Park, be more fully developed and made more accessible for a greater variety of recreational activities. The 1993 *Chugiak-Eagle River Comprehensive Plan* recommends updating the *Edmonds Lake Park* and *Beach Lake Park Master Plans*.

In addition, Beach Lake Park and Edmonds Lake Park have 20 kilometers (km) of existing or planned ski trails, and together could accommodate approximately 23 additional km. This alone could provide Chugiak-Eagle River with a level of service of 1 km of trail per 1,080 residents in 2020. Currently, the Anchorage Bowl has approximately 1 km of regional park trails for every 1,621 residents.

A need for additional regional parkland becomes more arguable in relation to the specific situation of Beach Lake Regional Park. For the 6 months of winter, approximately 1,450 out of 1,688 acres in Beach Lake Park are inaccessible to cross-country skiing, skijoring, and most other winter recreation activities. Most winter recreational activities in Chugiak-Eagle River must share only 800 acres of multi-use regional parkland. Given the existing arrangement of uses in Beach Lake Park, Chugiak-Eagle River will, during the winter, be 280 acres short of service level standards for the projected population in 2020.

Beach Lake Park's 15-km nordic trail system is highly developed but constrained to about 220 acres to the north of the Study Area. The trails are heavily used for daily recreation, practice, and for competitions. The student parking lot at Chugiak High School provides the only trailhead parking. This results in poor access and under-utilization of the system, and also results in conflicts between

trail user groups, high school students, and other events. Voters have funded the location and development of a trailhead and chalet facility.

The NW¼ Section 25 would be a strategic acquisition to buffer the existing trail system and provide acreage for its expansion. The easterly plain of the NW¼ Section 25 (east of the Hill Loop Trail) could provide a trailhead, chalet and multi-use recreation center site without consuming existing parkland for the nordic trail system. The plain is centrally located and accessible to the adjacent trail system and provides a plentiful area of upland flats for a chalet. The entire Study Area could provide space for as much as 7 km of additional nordic ski trails, a 40 percent increase over the existing system of 13.5 trails in the park, the 1.5 Hill Loop Trail, and 2.9 km on the Chugiak High School campus. The Study Area could also provide a strategic regional corridor for natural open space, trails, and wildlife habitat that could link the Hill Loop Trail and the Fire Creek beaver dams.

Aside from a strategic addition of acreage, the Study Area also offers unique terrain that is not available in the existing park. Existing nordic trails in Chugiak-Eagle River do not offer advanced-level hilly terrain that compares to some trails in Anchorage. The southeastern ridge in the Study Area has a vertical climb of 30 to 40 meters, possibly enabling Beach Lake Park to be certified by International Ski Federation standards, making it a favorable international competition site. The ridge has adequate space for perhaps four trails and has natural draws, ridges, and benches that would add variety to the trails winding up and down the hill. The crest of the ridge would offer recovery trail sections, as well as scenic views to the region. The ridge could also provide a sledding hill for Chugiak-Eagle River.

Community Park Needs

The Parks and Recreation Facility Needs Map shows that the inventory of community park sports fields in Chugiak-Eagle River amounts to 3 soccer fields, 3 little league fields, and 1 baseball field. All of the fields are located near Peters Creek, more than three miles north of the Study Area vicinity. According to service level standards, Parks and Recreation should have 10 softball/little league fields and 5 full-sized ball fields. It is assumed that the service level need for soccer fields is similar to that of baseball, softball, and little league fields. As shown on the map, the needs are expected to increase significantly by 2020.

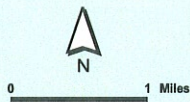
Community Parks should serve an area of a maximum of a three-mile radius. However, there is no existing, planned, or anticipated community sports field in central Chugiak-Eagle River. Birchwood, including the 1,500-acre Powder Reserve, and central Chugiak-Eagle River, in general, are expected to experience a large share of community growth to 2020. Given the future Powder Reserve population of between 11,000 and 14,000 persons at build-out, Birchwood Community Council alone would need the following community sports fields:



Parks and Recreation Facility Needs

Land Uses

- Existing Parks
- Floodplain / Wetlands
- Vacant Land
- Study Area Boundary



**Birchwood, Chugiak,
and Eklutna:**

Chugach State Park

**Future (Projected)
Powder Reserve:**

Chugach State Park

**Eagle River, South Fork,
and Eagle River Valley:**

Fort Richardson

Recreational Facilities

Community Sports Fields

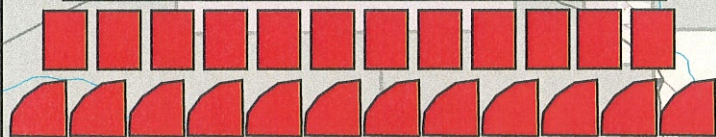
- Soccer / Football Field
- Baseball / Softball Field
- Existing Fields
- Current Deficiency / Need
- Anticipated Future Need

Neighborhood Parks

- Location and Number of 5 acre neighborhood parks needed

Source: 1993 Chugiak-Eagle River Comprehensive Plan

Projected Total Additional Need by 2020:



Regional Park Acreage

Existing Acres:	Acres Needed in 2020 to meet service level standards:
2,242	1,080
Existing acres in Anchorage Bowl:	Multi-use acres available in winter:
6,550	800

- 4 softball/little league fields
- 2 full-sized baseball fields.
- 4 recreational soccer fields (assuming a similar demand as for little league)
- 2 full-sized soccer fields (assuming a similar demand as ball fields)
- 4 outdoor ice rinks.
- a 5-acre parking lot area, given the importance of motorized access

A compact site plan could conceivably pack these facilities onto a minimum of 35 acres. A comparative example sports facility is Javier de la Vega Park, a community park in the Anchorage Bowl with a compact, efficient site plan containing 4 championship soccer fields, 4 full sized baseball fields, and a 5-acre entry and parking area on approximately 40 acres.

It is likely that 35 acres will not satisfy the need. However, the Powder Reserve development could provide scattered sports facilities to make up most of the difference. To the extent that a Powder Reserve plan can provide facilities, 35 acres in the Study Area could become adequate. Sports fields here would be on an upland plain central to Birchwood and the Powder Reserve. It can double as a trailhead staging area and associate with a chalet/multi-use recreation center.

Neighborhood Park Needs

Birchwood Elementary serves as Birchwood's only neighborhood park. The adopted parks plan recommends the acquisition of a series of neighborhood parks along the Fire Creek Greenbelt. The plan specifically recommends that a portion of the NW¼ Section 25 near Fire Creek become a neighborhood park. However, the NW¼ Section 25 may be a poor location for a neighborhood park. It is located at the periphery of Birchwood, outside of walking distance from most residences. In spite of the park plan's recommendation, the area of the NW¼ Section 25 adjacent to Fire Creek Greenbelt is particularly unsuitable for a neighborhood park, given its physical isolation and the floodplain wetland.

Two locations for neighborhood park facilities could be the southeast ridge top and the easterly plain at the dead-end of Pioneer Drive. Park facilities on the ridge would most likely serve the Powder Reserve to the south. The parks plan states that a neighborhood park may be combined with an elementary school. The recommended size for the combined neighborhood park and school is 20 acres.

The second location at the west end of Pioneer Drive is too far removed from most of the population of Birchwood to serve as a neighborhood park. However, it may serve the adjacent residential neighborhood as a local gateway into the regional park, providing a small trailhead and perhaps even some picnic or playground facilities at the dead-end of Pioneer Drive.

Transportation Planning

The Transportation Planning Division of the Traffic Department recommends that an 80-foot collector right-of-way be reserved through the Study Area, roughly along the same alignment as the MEA transmission line easement, connecting to Hillcrest Drive. A corollary recommendation would be to designate Hillcrest Drive as a collector street in the *Official Streets & Highways Plan*. The new street system is recommended in order to serve future north-south connectivity needs, and to provide site access for proposed park facilities in the NW¼ Section 25.

The Study Area is located between existing neighborhoods in Birchwood to the east and northeast, and the Powder Reserve to the south-southwest. Connectivity is poor between these two areas because of the lack of a good collector system. When the Powder Reserve develops, the lack of a collector is likely to have three negative effects on the road system. The lack of direct north-south connections will cause trips to be unnecessarily circuitous. Local roads, including Almdale and Shims, will be forced to function as collector streets, and the neighborhood around Shims will be impacted by increased traffic. Finally, the lack of connectivity will result in use of the New Glenn Highway for local trips.

Traffic between the neighborhoods will be generated by future residents of the Powder Reserve. The primary attraction would be Chugiak High School (CHS). Between 700 and 850 high school students could live in the Powder Reserve and attend CHS, generating 1,250 to 1,500 trips between the Powder Reserve and CHS on the average weekday. In addition to students driving or taking the bus to school, there will be personal travel between households north and south of the Study Area. Moreover, the high school is used for community functions at night and during the weekend.

The existing road system would connect the Powder Reserve to Birchwood Loop Road (at CHS) via a zigzag route composed of Almdale, Shims, and Hillcrest. Although these roads along the route are designated as collectors, they are less than ideal collector roads. Almdale, Shims, and Hillcrest are not constructed to collector standards nor do these streets limit the number of residential driveways. Driveway access is in conflict with the purpose of a collector, which is to conduct traffic from local residential areas to larger arterial streets or to local destinations such as CHS. Almdale, Shims, and Hillcrest have multiple residential driveways.

A new collector road through the NW¼ Section 25 could provide a more direct route between the Powder Reserve and South Birchwood Loop Road. This will have the advantage of allowing traffic from the Powder Reserve to bypass the existing neighborhood and local road system of Almdale and Shims. These roads could then function as local roads as originally intended.

Proposed community sports field facilities on-site in the NW¼ Section 25 could generate significant traffic. Residents of Birchwood, whether they live in the Powder Reserve or the lower density areas of Birchwood, should have good site access to community park or chalet facilities in the NW¼ Section 25. The access should be as direct as possible and not circuitous, and not unduly rely on the local road system. Access from only one direction would create the need for circuitous trips through the local road system. As a result, it will be important to provide access from both the southwest and northeast. A chalet and multi-use recreational facility would also best be served by a collector road running diagonally from southwest to northeast with a connection to Hillcrest Drive.

Non-municipal Community Facility Needs

Alaska Department of Transportation & Public Facilities

In 1966, the Alaska Department of Transportation and Public Facilities (ADOT&PF) identified the NW¼ Section 25 as having potential for supplying gravel material for public construction projects. Since that time, the ADOT&PF has considered the NW¼ Section 25 to be a significant gravel reserve for construction projects in the Anchorage metropolitan area. ADOT&PF has requested that the Municipality take no land use action that will adversely affect the future extraction of gravel reserves from the Study Area.

Geologic exploration confirmed the presence of over two million cubic yards of high quality gravel reserves underlying the NW¼ Section 25. ADOT&PF was issued a Free Use Gravel Permit by the Alaska Division of Lands for a quantity of four million cubic yards. Since that time other material sites have been depleted, and now the NW¼ Section 25 has the remaining ADOT&PF gravel reserve in Chugiak-Eagle River.

The ADOT&PF has identified a need for 341,500 cubic yards of gravel in the NW¼ Section 25 for Chugiak-Eagle River road projects in construction years 2002-2006. Identified in the *Long-Range Transportation Plan*, these include improvements to the Old Glenn Highway, Eagle River Road, and Eagle River Loop Road. Haul cost comparisons with other gravel sites show that this gravel could provide a savings of \$7,495,000. The gravel material in the NW¼ Section 25 is confirmed down to an average depth of 8 to 12 feet. A contemporary materials site study would bore deeper and may confirm the high-quality material in the Study Area to be 20 feet deep or more. Assuming an average gravel layer of 12 feet, an area of 18 acres would be needed to extract 341,500 cubic yards. Operational space needs and other contingencies require that 50 percent more area is mined than is needed by volume. As a result, the area needed for gravel extraction by 2006 is 27 to 30 acres or less of the NW¼ Section 25.

ADOT&PF anticipates many public construction projects over the next 50-70 years, for which the NW¼ Section 25 represents the lowest cost source of gravel material. Such projects have not been programmed, so an amount of needed gravel is unknown. However, an extrapolation of the haul cost savings calculated for the initial 341,500 cubic yards shows a potential savings of \$44 million in today's dollars from the 2 million confirmed cubic yards in the Study Area. Because funding for road projects is limited, material cost savings could have a positive ripple effect on transportation improvements throughout the Municipality.

The closest alternative ADOT&PF gravel sources are in the Mat-Su Valley. Remaining sources of gravel in Chugiak-Eagle River are privately owned and subject to limitations. A portion of Loretta French Park is an active gravel pit. A private contractor has rights to this gravel. Another potential site lies in northern Chugiak-Eagle River, where Cook Inlet Region, Inc. (CIRI), owns the subsurface rights to a large tract of Eklutna, Inc., property. However, the amount and quality of gravel material at this site is unproven. Other private gravel pits may still exist.

The character of a gravel extraction operation would probably be as follows. The extraction area would include a truck haul route, truck ingress and egress, temporary gravel processing facilities, and the extraction operation. Extraction would likely progress from the southwest corner of the Study Area toward the northeast, depleting one "cell" at a time, a cell being at least 10 acres in size. Overburden may be placed in the "worked out" portions of the gravel site. This process could continue for decades. When the operation depletes one cell, it would then proceed to the next.

The extraction would lower the existing central alluvial plain of the Study Area by anywhere from 20 to 40 feet in elevation. The plain would still drain into Fire Creek to the southwest. The gravel pit walls would have a 22 percent slope. A site reclamation plan could eventually enhance the Study Area as a recreation resource. Re-contouring could provide undulating ski trail terrain and flat areas for sports fields. Re-vegetation could hasten the reclamation of the site as a park. However, the ongoing gravel hauling, stockpiling, and equipment storage on site will limit what can be reclaimed until extraction operations cease. Reclamation for most of the site may therefore be 50 to 75 years into the future.

The Alaska Railroad has offered to allow ADOT&PF to construct a gravel haul road along the railroad up to Beach Lake Road. The Railroad has also offered to move the gravel by railroad. However, a railcar loading facility may be economical only if ADOT has access to all 2 to 4 million cubic yards of gravel. Neither Hillcrest nor Pioneer Drive is a viable haul route because of impacts to existing neighborhoods. A Powder Reserve haul route depends on Eklutna, Inc.

Community Needs and Aspirations

Area community councils, the Eagle River Parks Board, and local recreational user groups have for decades supported the use of the NW¼ Section 25 as park. Members of the community, past and present, have argued that the Study Area should be added to Beach Lake Regional Park in order to provide for a buffer and future expansion of the existing multi-use nordic trail system and to preserve open space for future generations.

The first known request by the Birchwood Community Council for annexation of the NW¼ of Section 25 into Beach Lake Park occurred in 1978. Since that time, local community representatives have periodically repeated the request. Statements supporting the transfer of the HLB lands to Beach Lake Park were filed through the 1980s when the issue surfaced in 1984, 1985, 1986, and 1988. In 1988 the Birchwood and Chugiak Community Councils issued a joint letter with the Chugiak-Eagle River Parks Board requesting that the Municipality add the NW¼ Section 25 to Beach Lake Park.

During the *Comprehensive Plan* and *Areawide Trails Plan* public planning processes in the early to middle 1990s, community participants argued for park annexation and trails expansion. Another formal request was made to the HLB for areas around the Hill Loop Trail in 1996. In the meantime, recreational uses from Beach Lake Park bled into the undeveloped woodlands of the NW¼ Section 25.

In 2000, the Eagle River and Eagle River Valley Community Councils each requested that the entire NW¼ Section 25 be retained as park in order to provide a buffer and future expansion for the existing ski trail system. In May 2000, the Birchwood Community Council unanimously renewed its 1996 request that the Municipality add the NW¼ Section 25 to Beach Lake Park.

Members of the community have provided a number of arguments in support of adding the Study Area to Beach Lake Regional Park. Arguments having to do with the specific needs of the nordic ski trail system include:

- protection and expansion of the geographically constrained Beach Lake Park ski trails, the only maintained, illuminated trail system in Chugiak-Eagle River;
- trailhead or chalet site to provide better access to this system;
- the unique topography for nordic skiing, scenic views, and a sledding hill that are unavailable or inaccessible in Beach Lake Park; and
- regional open space connections to the Fire Creek beaver dams.

Other more general arguments from community participants emphasize that Chugiak-Eagle River is a young city and has a unique opportunity to designate

natural open space for the benefit of future generations. If developed for housing, natural open spaces are lost. As the population grows and more land is developed, the remaining areas of parkland will become increasingly valuable and will have to serve increasing demands.

In particular, participants say, the needs for a park will take on a greater importance in this area when a much higher population density occurs in the Powder Reserve south of the Study Area. Future Powder Reserve residents can benefit from adjacent parkland and connections to Beach Lake Regional Park.

Others arguments include the following: the character and aspirations of much of Chugiak - Eagle River, including Birchwood, are defined by natural open spaces, scenery and a semi-rural lifestyle. Also, the community reaps economic, social, and health benefits from open space. Another recurring argument is that the will of so many members of the local community, community councils, parks board, and user groups has been so rarely as unified on an issue as they have become on the issue of the NW¼ Section 25. Another suggestion is that the natural ecology and scenery of the site are inherently worth preserving. Many have argued that site constraints, such as the gravel extraction permit, utility easements, poor existing road access via Hillcrest, and environmental constraints diminish the area available for residential development so much that disposal is nearly worthless.

Some participants have suggested looking at other potential recreational needs for the site other than for cross-country ski trails. Some want to save the current, informal system of multi-use trails, including the trail along the power line easement, that allow for a range of activities such as walking, dog sled mushing, skijoring, or horse riding that are not tolerated in the winter by nordic ski trails. Others have suggested consideration of the site for a range of recreational uses, including skijoring, sledding, and sports fields and ballparks, in addition to ski trails. Others argue the potential of the north-facing ridge slope as a beginners' downhill skiing hill or lighted sledding hill, noting that local children equipped with sleds already have christened the ridge slope along the cleared AWWU water pipeline easement as "Dead Man's Hill".

CHAPTER 4. EVALUATION OF LAND USE ALTERNATIVES

The Land Use Alternatives in this chapter do not necessarily cover all possible combinations of land uses for the Study Area. Nor do they represent a limited set of alternatives from which the community must choose either one or another. Land Use Alternatives serve to illustrate key issues for discussion and evaluation. How well a land use choice—or a combination of choices that comprises a Land Use Alternative—addresses the key site planning and land use issues of the NW¼ Section 25 has implications for the final Land Use Recommendations.

The study of site conditions, surrounding land uses, available facilities, adopted plans, legal encumbrances, and community facility needs in Chapters 2 and 3 of this report provided the information for the development of Land Use Alternatives. Each Alternative also results from a consideration of the compatibility of each **potential land use** with neighboring land uses.¹ How well a Land Use Alternative addresses the key land use issues is the basis for evaluating its effectiveness and implications.

A set of Land Use Alternatives was presented to the community for discussion. The Land Use Alternatives evaluated in this chapter reflect that discussion. Based on public comment, the evaluation of *Alternative 1 – All Regional Park* includes an “*Alternative 1-a*” which illustrates the implications of a regional park without a collector street. Members of the public also suggested consideration of a school in the southwestern rather than southeastern corner of the Study Area. Such a variant of *Alternative 2* is included for evaluation. Community participants pointed out that *Alternatives 2* and *3* seemed to represent the same set of choices. As a result, they have been merged to simplify the evaluation. Other comments led to map improvements to clarify potential chalet locations, gravel haul routes, and acreage and distances. The Land Use Alternatives in this chapter help to form the basis for the final Land Use Recommendations. The resulting Land Use Recommendations for the NW¼ Section 25 may combine land use choices from this chapter in order to best serve community needs and aspirations.

Layout of Chapter 4

There are seven Land Use Alternatives. Each alternative consists of a narrative and a map. Following the narrative-map set is an evaluation table. The evaluation table summarizes how well the alternative addresses key land use issues, and shows the implications for possible land use recommendations. Chapter 4 concludes with a summary of all evaluation results for the Land Use Alternatives.

¹ See *Appendix C*, “Menu of Potential Land Use Types (Table)”.

Land Use Alternative 1: All Regional Park

Natural Open Space and Trails	(131.5 acres ²)
Chalet / Trailhead Warm-up Facility	(5 acres)
Collector / Chalet Access Street	(8.5 acres)

In *Land Use Alternative 1*, the entire NW¼ Section 25 is zoned PLI-p (park), and added to Beach Lake Regional Park. The Study Area becomes a 145-acre expansion area for Chugiak-Eagle River's central multi-use trail system, maximizing the acreage of natural open space and diversity of terrain for trails.

Community aspirations have long favored the addition of the NW¼ Section 25 to Beach Lake Regional Park. Beach Lake Park is the site of Chugiak–Eagle River's 220-acre, 15-km multi-use and nordic ski trail system. The Study Area represents an opportunity to expand the area and improve trailhead access. It promises a greater diversity of terrain and forest, including a major hill climb and a mature birch forest on the southeast ridge.

A warm-up chalet facility could be sited on the flat central plain of the Study Area, proximate to the Beach Lake Park trail system. Its trailhead, parking, park maintenance facility, and picnic areas would improve park access without consuming trail system acreage in the existing park. Surrounding the chalet area, approximately 7 km of multi-use and nordic ski trails would loop through the NW¼ Section 25, connecting to the Beach Lake Park trail system to the north, and the ridge climb to the southeast. In southwest, a regional open space corridor and trail would link Beach Lake Park to the beaver dams and Fire Creek Greenbelt in the Powder Reserve.

The ridge crest in the southeast offers scenic views across the rolling forests of Beach Lake Park to the Knik Arm, Mt. Denali, and the Talkeetna Mountains. The distant scenery could be matched in beauty by the mature birch and spruce forest on the ridge top itself. The ridge may also have potential for a lighted sledding hill and serve as a neighborhood trailhead access for the Powder Reserve.

A two-lane collector with a separated paved trail through the Study Area would provide chalet access for Birchwood including the Powder Reserve neighborhood. It would also provide north-south connectivity in Birchwood. It could use transmission line easement as an alignment and connect to Hillcrest Drive.

Following the map is the evaluation table for this alternative. The evaluation table illustrates how well the key land use issues are addressed, and the implications.

² The 131.5 acres includes the approximate 4.5-acre AWWU water pipeline easement as a trail.

Land Use Alternative 1 - Regional Park



Planning Department
Municipality of Anchorage



Regional Park

Natural Open Space and Trails (127 acres)



Study Area Boundary



Chalet Warm-up Facility

with Parking, Trailhead, and Picnic Area
exact location not yet determined (5 acres)



Neighborhood Collector / Chalet Access Street

(100' Easement) connecting Powder Reserve
and Chugiak High School (8.5 acres)

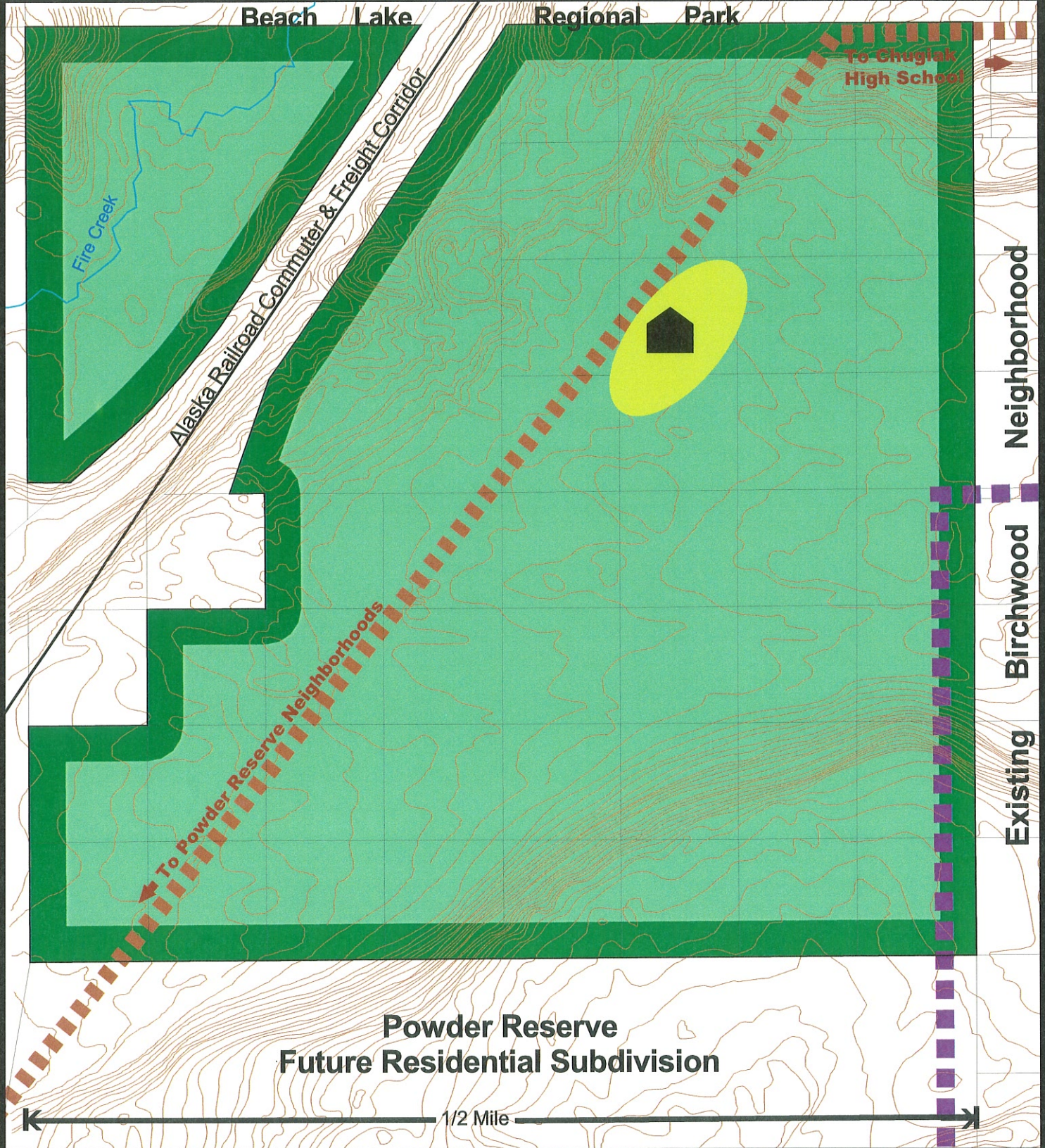


AWWU Eklutna Water Pipeline Easement

(4.5 acres)



100 0 100 Feet



Land Use Alternative 1 Evaluation Sheet

	Key Issues	Evaluation	Implications
Site Planning Issues	<i>Site suitability and environmental constraints - slope, wetlands, soils</i>	Trails may cause soil instability on the ridge in the southeast. Chalet access road will cut through a hill in the northeast.	Locate and design trails and sled hills to avoid ridge slope erosion. A road to Hillcrest should use the existing pass through the NE hills.
	<i>Conservation of unique site features - trees, scenic views, terrain</i>	Nearly the entire Study Area is preserved for trail facilities.	Other needs may be addressed while preserving unique terrain for trails.
	<i>Optimum site locations for proposed land uses</i>	The central plain is not a scenic or central chalet site for the main park.	Consider alternative chalet sites in a <i>Beach Lake Park Master Plan</i> .
Land Use Compatibility	<i>Compatibility with surrounding neighborhoods</i>	Chalet and access road can impact residential neighborhood.	Buffer residences with forest. Use Hillcrest, not Pioneer, for access.
	<i>Compatibility with Beach Lake Regional Park</i>	There is greater access, acreage, and terrain for skiers, but access to main regional park is not improved.	Add key terrain from Study Area to the park, and update the <i>Beach Lake Park Master Plan</i> .
	<i>Compatibility with other land uses proposed in the NW1/4 Section 25</i>	Access road and parking benefit the trail uses. Collector street brings through traffic and noise.	Use park-sensitive road design with grade-separated crossings. Consider <i>Land Use Alternative 1-a</i> or traffic calming road design.
	<i>Compatibility with available road infrastructure and water and wastewater</i>	On-site well and septic is practical. Hillcrest is underdeveloped and is on a Section Line Easement.	Facilities can use onsite water/septic. Use the Section Line Easement as north half of Hillcrest ROW.
Community Facility Needs	<i>Need for regional park open space, multi-use trails, chalet and trailhead</i>	There is a 40% expansion of the ski trail system and improved terrain. Public access to 1450 acres of regional park is left unimproved.	Location of any non-trail uses should minimize impacts on trails. Locate park facilities through a <i>Beach Lake Park Master Plan</i> .
	<i>Need for community park with sports fields</i>	The need for 35 or more acres in Birchwood is not addressed.	Reserve an appropriate portion of the Study Area for sports fields.
	<i>Need for an elementary school</i>	The need for 15 or more acres is not addressed.	Reserve an appropriate portion of the Study Area for a school.
	<i>Need for north-south collector system and site access road for park facilities</i>	Connectivity is improved; chalet and trailhead facilities receive access from north and south.	Reserve a collector corridor through the Study Area from the southwest to Hillcrest Drive.

Land Use Alternative 1-a: Regional Park without a Collector Street

Natural Open Space and Trails (140 acres³)
Chalet / Trailhead Warm-up Facility (5 acres)

Participants of the public discussion regarding the Land Use Alternatives requested inclusion of an alternative without a collector street in order to consider a less intrusive road access. *Land Use Alternative 1-a* illustrates the implications of maximum regional park expansion without a through collector street.

As with the previous alternative, the emphasis is expansion of regional park. The multi-use trail system gains acreage, unique terrain, and especially a chalet and trailhead site to improve user access. However, in *Alternative 1-a*, Hillcrest Drive extended is a dead-end access road to the chalet site the central Study Area. The single-entry access into the park keeps through-traffic out of the natural open space area. It also reduces the physical presence of a roadway through the nordic trail system. In this way it might be similar in function to Raspberry Road which winds through Kincaid Park.

Future Powder Reserve residents would access the trailhead via a circuitous route through Almdale and Shims to Hillcrest. A chalet site on the southeast ridge top off Almdale Avenue could offer dual access to the Powder Reserve and Birchwood. However, the ridge is isolated from the Beach Lake Park multi-use trail system. Trail users and event spectators would also have to negotiate the 110-foot high, 30 percent slope to get to the main system. By comparison, the slope from the Kincaid chalet to its trailhead area is a 27-foot, 10 percent slope.


Future Powder Reserve residents will generate north-south traffic to Chugiak High School. The lack of a new, more direct collector system will increase traffic impacts on Almdale Avenue and Shims Street and its surrounding residential neighborhood. These roads are not constructed to collector standards to accommodate the traffic load between a 1,500-acre Powder Reserve and Chugiak High School. The Glenn Highway would also be more impacted by Birchwood area traffic between the Powder Reserve and Chugiak High School. The impacts may warrant eventual reconstruction and upgrade of the zig-zag Almdale-Shims-Hillcrest route.

Following the map is the evaluation table for this alternative. The evaluation table illustrates how well the key land use issues are addressed, and the implications.

³ The 140 acres includes the approximate 4.5-acre AWWU water pipeline easement as a trail.

Land Use Alternative 1-a - Regional Park without Collector Street

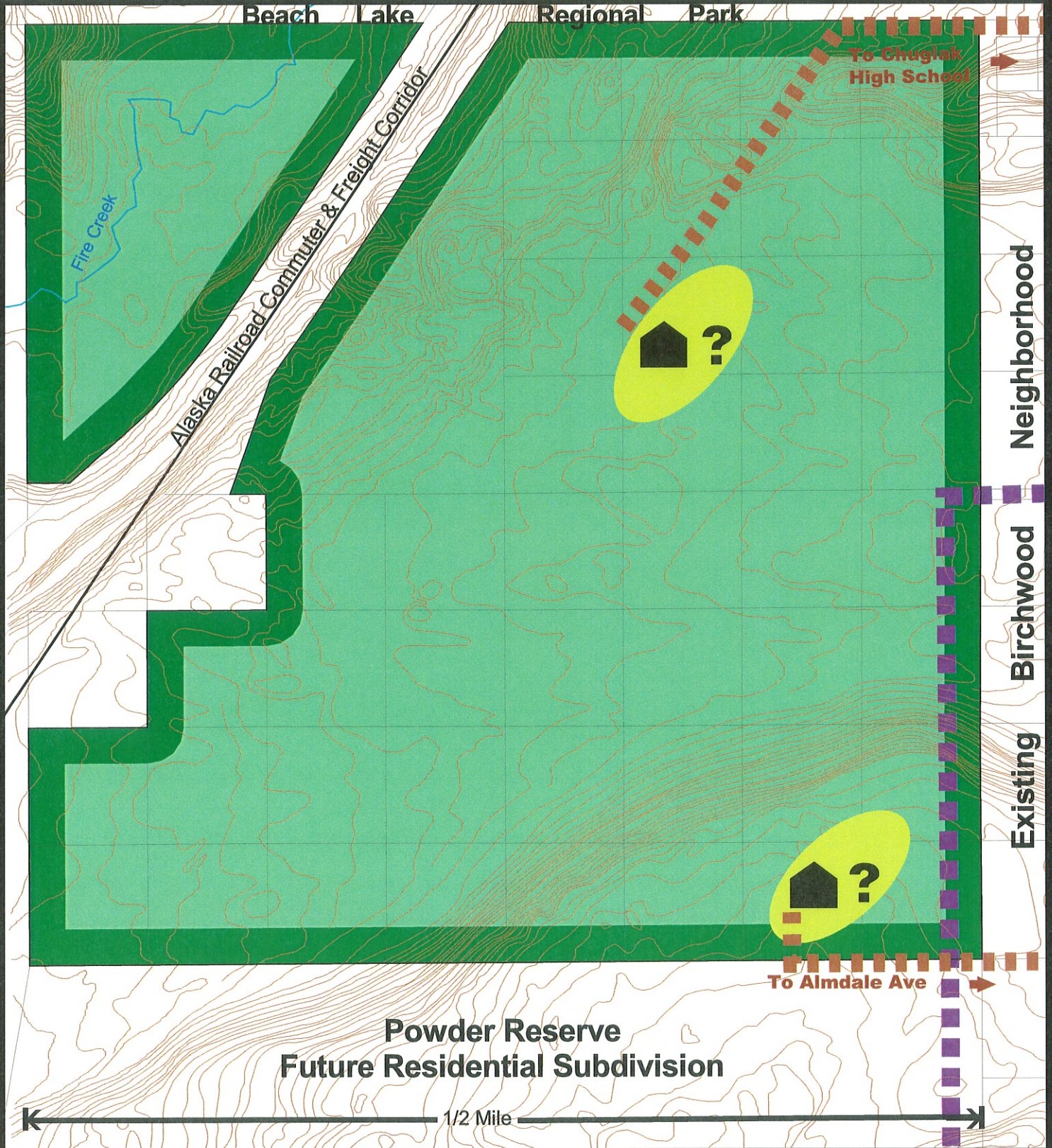
 **Regional Park**
Natural Open Space and Trails (135.5 acres)

 Study Area Boundary

 **Chalet Warm-up Facility**
with Parking, Trailhead, and Picnic Area
exact location not yet determined (5 acres)

 **Chalet Access Road**

 **AWWU Eklutna Water Pipeline Easement**
(4.5 acres)



Land Use Alternative 1-a Evaluation Sheet

	<i>Key Issues</i>	Evaluation	Implications
Site Planning Issues	<i>Site suitability and environmental constraints - slope, wetlands, soils</i>	Chalet access road will cut through the hills in the NE Study Area even if it is just a dead-end chalet access.	Concern for the NE hills is not a factor in the choice between a collector street or a dead-end chalet access road.
	<i>Conservation of unique site features - trees, scenic views, terrain</i>	A chalet on the SE ridge would remove mature birch woods. NE chalet access road would cut through strategic trail terrain.	Locate chalet facilities through a <i>Beach Lake Park Master Plan</i> . Use park sensitive road design, alignment, grade separated trails.
	<i>Optimum site locations for proposed land uses</i>	SE ridge is next to residential and isolated from the main trail system.	Avoid the SE ridge as a chalet site.
Land Use Compatibility	<i>Compatibility with surrounding neighborhoods</i>	Powder Reserve loses direct access to the park and CHS; the existing neighborhood gets increased traffic.	Reserve a collector corridor through the Study Area from the southwest to Hillcrest Drive.
	<i>Compatibility with Beach Lake Regional Park</i>	Reduced traffic near the trail system comes at the cost of a circuitous, single-access route to the chalet.	Potential to reduce traffic impacts on the park must be weighed against improved trailhead access.
	<i>Compatibility with other land uses proposed in the NW1/4 Section 25</i>	The road impacts trail development, but its traffic is limited to park users.	Concern for trail crossings is not a factor in the choice between a collector and a dead-end street. Traffic is.
	<i>Compatibility with available road infrastructure and water and wastewater</i>	Shims is not intended to be a collector; New Glenn is not meant for local area traffic.	Consider a two-lane collector, in order to avoid traffic impacts on the existing road system.
Community Facility Needs	<i>Need for regional park open space, multi-use trails, chalet and trailhead</i>	This alternative offers the least possible improvement in public access to Beach Lake Park.	Increase open space, trails, and public <i>access</i> for Beach Lake Park, as per the facility need.
	<i>Need for community park with sports fields</i>	Dead-end access is incompatible with accessible sports fields.	A community park will need road access to the south.
	<i>Need for north-south collector system and site access road for park facilities</i>	Poor connectivity lengthens trips from Powder Reserve, increases traffic on Shims and New Glenn.	Reserve a collector street corridor to avoid circuitous trips, impacts on the existing neighborhood and roads.

Land Use Alternative 2&3: Regional and Community Park with School Reserve

Natural Open Space and Trails	(98.5 acres ⁴)
Community Sports Fields	(20 acres)
Neighborhood Park Facilities	(5 acres)
Multi-use Chalet / Recreation Center	(5 acres)
Neighborhood Collector Street	(8.5 acres)
School Reserve Lands:	(9 acres)
<i>Elementary School Site, or</i>	
<i>R-7 Urban Residential</i>	

Participants of the public discussion regarding the Land Use Alternatives pointed out that *Land Use Alternatives 2 and 3* seemed to represent the same set of choices. *Alternative 2* showed school reserve lands in blue, implying a future school site, while *Alternative 3* showed the school reserve lands in orange, implying the land would be zoned residential and traded for another school site. Based on public comment, *Alternatives 2 and 3* were merged into a single alternative to simplify the evaluation.

Land Use Alternative 2&3 introduces a balance between the multiple legitimate community facility needs that are appropriate for the Study Area. While providing most of the *Alternative 1* expansion of natural open space and trails, *Alternative 2&3* also designates a portion of the property to satisfy needs for community sports field facilities and an elementary school.

The Hill Loop Trail area west of the power line easement, and the rugged northeastern corner of the Study Area, are priority areas for natural open space acquisition. Trail corridors connect the Hill Loop Trail to the southeast ridge and southward toward Fire Creek. A warm-up chalet and maintenance facility with a parking lot and a trailhead is located in the northeasterly plain of the Study Area. A trail runs along the southeastern ridge crest, offering scenic views to the region.

An area adjacent to the chalet is designated for community sports fields. Centrally located in Chugiak-Birchwood, the community sports fields co-locate with the chalet and trailhead staging area, and serve central Chugiak-Eagle River. In addition, five acres near Pioneer Drive provide a neighborhood trailhead and park.

[The narrative continues following the map and evaluation table]

⁴ The 98.5 acres includes the approximate 4.5-acre AWWU water pipeline easement as a trail.

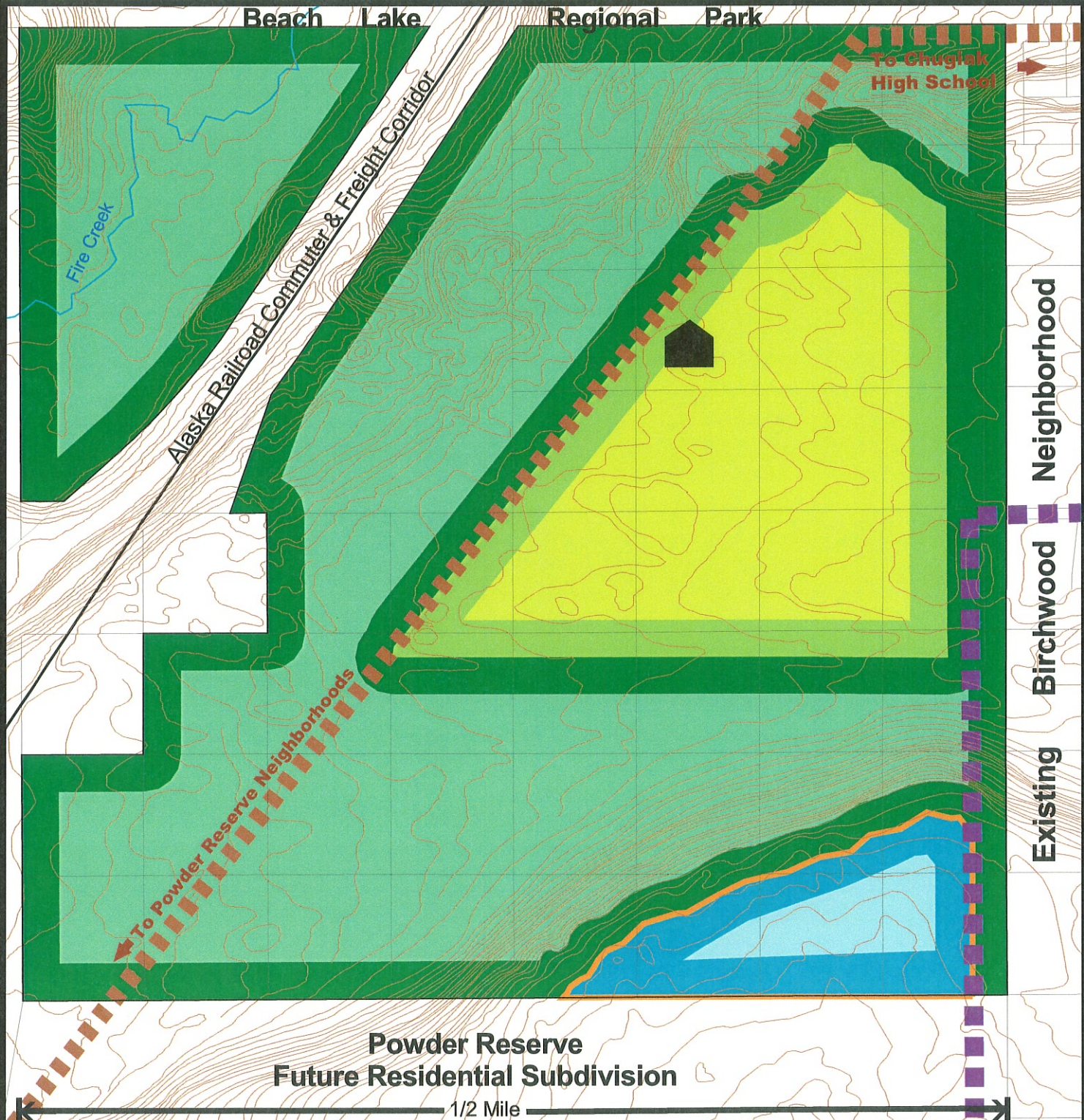


Land Use Alternative 2 & 3 Combined - Regional / Community Park with School Reserve

- | | | | |
|---|--|--|--|
|  | Regional Park
Natural Open Space and Trails
(94 acres) |  | Chalet Warm-up / Multi-use Recreation Facility
exact location not yet determined (5 acres) |
|  | Community Park
Sports Fields and Neighborhood Park
(25 acres) |  | Neighborhood Collector / Chalet Access Street
(100' Easement) connecting Powder Reserve
and Chugiak High School (8.5 acres) |
|  | School Reserve Land
Elementary School Site or R-7 Residential
(8 acres) |  | AWWU Eklutna Water Pipeline Easement
(4.5 acres) |
| | |  | Study Area Boundary |



100 0 100 Feet



Land Use Alternative 2 and 3 Evaluation Sheet

	<i>Key Issues</i>	Evaluation	Implications
Site Planning Issues	<i>Site suitability and environmental constraints - slope, wetlands, soils</i>	Development may cause soil instability on southeast ridge.	Preserve a natural vegetation buffer along ridge top.
	<i>Conservation of unique site features - trees, scenic views, terrain</i>	Development blocks trail access to SE ridge and its scenic views.	Annex a buffer for trail access along the ridge crest.
	<i>Optimum site locations for proposed land uses</i>	This co-locates the chalet, trailhead and sports fields. Elementary school is accessible to the Powder Reserve.	Co-locate chalet and sports fields if practical. The southeast ridge meets some of basic school site criteria.
Land Use Compatibility	<i>Compatibility with surrounding neighborhoods</i>	Community park generates traffic from Powder Reserve. Community sports fields may impact adjacent residential.	South access road will reduce traffic in Shims St. neighborhood. Preserve natural open space buffer east of community park.
	<i>Compatibility with Beach Lake Regional Park</i>	Concentration of facilities here leaves the main park underdeveloped.	Consider location of multi-use trailhead and chalet facilities further north into the park.
	<i>Compatibility with other land uses proposed in the NW1/4 Section 25</i>	Sports fields can impact the multi-use trail system. Sports fields can co-locate with trailhead and chalet.	Locate sports fields to the SW; preserve key areas with a master plan. Maximize efficient use of land and facilities through co-location.
	<i>Compatibility with available road infrastructure and water and wastewater</i>	Powder Reserve access to sports fields reduces traffic impacts on Shims and New Glenn. School is adjacent to planned water/sewer service area.	Provide equal road access for Birchwood and Powder Reserve to the community park. Southeast ridge meets a basic criteria for school site selection.
Community Facility Needs	<i>Need for regional park open space, multi-use trails, chalet and trailhead</i>	Concentration of multi-use facilities SE of railroad avoids greater access to most of park.	Locate park facilities through a <i>Beach Lake Park Master Plan</i> .
	<i>Need for community park with sports fields</i>	Twenty of thirty-five needed acres is reserved.	Increase the acreage; locate facilities to avoid impacts to trails or residential.
	<i>Need for an elementary school</i>	Nine of fifteen needed acres are reserved.	Acquire more land just to the south.
	<i>Need for north-south collector system and site access road for park</i>	The collector street also serves as Powder Reserve access to sports fields.	Reserve a collector corridor if there will be community sports fields.

[This narrative continues from before the map and evaluation table]

Also in *Alternative 2 & 3*, a north-south collector and chalet access street increases in importance because of the community sports fields. Automobile access is required because, unlike a neighborhood park, a community park-type facility generally serves 10,000 or more residents within a ½- to 3-mile radius. A large share of users will also come from the future Powder Reserve neighborhoods, warranting road access to the south as well as to Birchwood Loop Road.

The southeast ridge top, an area of nine (9) acres, is favored as an elementary school site. With additional acres to the south, it could accomplish the 15-acre elementary school site standard. The elementary school shares the ridge with its neighborhood to the south, providing a walking-distance school, civic center, library, and playground.

If this site is not selected for an elementary school, it would be rezoned R-7 Suburban Residential, disposed of, and developed for approximately 15 homes.

Land Use Alternative 2-a: School Reserve in the Southwest Corner

School Reserve Lands: (15 acres)
? Elementary School Site, or
? R-6 Suburban Residential

Members of the public suggested reconsideration of a school reservation in the southwest rather than the ridge top in the southeast corner of the Study Area, in order to preserve the forested ridge top and provide a full 15 acre school site.

Land Use Alternative 2-a examines a school reservation in the southwest corner.

Alternative 2-a is similar to *Alternative 2 & 3*, however in this case the southwesterly plain becomes the elementary school site serving the Powder Reserve. If this site is not selected for an elementary school, it is rezoned R-6 Suburban Residential, disposed of, and developed for 15 homes or less. The collector street alignment would accommodate the school site and serve as neighborhood access to the school. Meanwhile, the southeastern ridge is added to Beach Lake Park.

The evaluation and implications of *Land Use Alternative 2-a* appear in the table following the map.

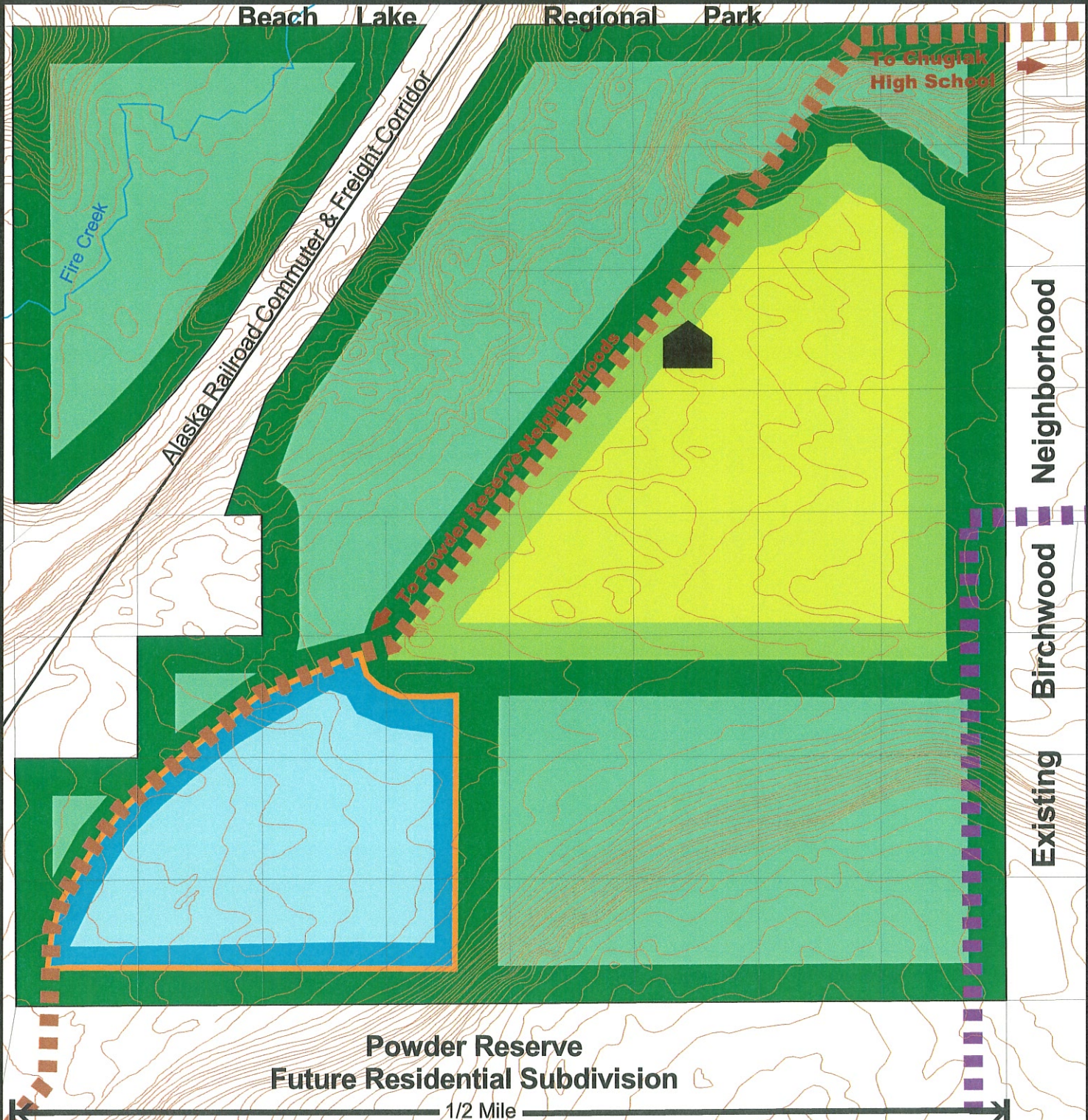
Land Use Alternative 2-a - School Reserve in the Southwest Corner



Planning Department
Municipality of Anchorage



100 0 100 Feet



Land Use Alternative 2-a Evaluation Sheet

	Key Issues	Evaluation	Implications
Community Facility Needs	<i>Need for an elementary school</i>	The need for a full 15-acre school site is addressed.	Determine whether the southwestern Study Area meets the basic school site selection criteria.
Site Planning Issues	<i>Conservation of unique site features - trees, scenic views, terrain</i>	The southeast ridge top with the mature birch forest and scenic views is preserved as parkland.	Annex a buffer for trail access along the ridge crest.
	<i>Optimum site locations for proposed land uses</i>	The SW Study Area is isolated from the neighborhood by a 100-foot high ridge and .2 mile walk through a forest.	The southwestern Study Area is not accessible enough to be a central neighborhood school, civic center, library, and playground.
Land Use Compatibility	<i>Compatibility with surrounding neighborhoods</i>	The school and neighborhood are physically isolated from one another.	The neighborhood school loses some of its potential to serve the neighborhood as a civic center, central library, and playground.
	<i>Compatibility with other land uses proposed in the NW1/4 Section 25</i>	Community sports park and neighborhood school co-locate, but are out of scale with each other.	The opportunity to co-locate with the community park is less important than the need to co-locate with the school's neighborhood.
	<i>Compatibility with available road infrastructure and water and wastewater.</i>	Public water and sewer is unlikely from the east and uncertain from the south.	School site selection standards would likely find this site to be inappropriate.

Land Use Alternative 4: Regional and Community Park with Elementary School Reserve and Conservation Subdivision

Natural Open Space and Trails	(68 acres ⁵)
Community Sports Fields	(20 acres)
Neighborhood Park Facilities	(5 acres)
Multi-use Chalet / Recreation Center	(5 acres)
Conservation Residential Subdivision	(26 acres)
Neighborhood Collector Street	(8.5 acres)
School Reserve Lands:	(9 acres)

Land Use Alternative 4 is a variation of *Alternatives 2 and 3* that represents a compromise between park and residential uses on the NW¼ Section 25. A portion of the central northeastern plain of the Study Area deemed excess to public needs, is zoned R-6 Suburban Residential (large lot), and disposed of for development. This alternative illustrates implications of mixed park and residential uses.

Alternative 4 is based on the argument that the easterly plain is excess to municipal needs. Chugiak-Eagle River will enjoy two times as many acres of regional park per person as will the Anchorage Bowl in 2020. Beach Lake Regional Park is 1,688 acres in size. As Chugiak-Eagle River grows and Birchwood approaches build-out, there may be increasing pressure for greater access to more recreational activities in the main body of Beach Lake Park.

The southwestern extent of residential development is limited because of a legitimate public facility need for community sports fields. A chalet site is illustrated on the map, but has less significance here because a chalet site has already been identified north of Section 25, and this Land Use Alternative is based on future increased access to the main body of the park to the north.

The Hill Loop Trail, northwestern hills, and southeastern ridge slope remain strategic additions to the regional park. The Hill Loop and the rugged northeastern Study Area are natural extensions of the adjacent Beach Lake trails. Their terrain, prized for nordic ski trails, is relatively difficult for housing development. Trail corridors connect the Hill Loop Trail and Beach Lake Park to the southeastern ridge. Incentives could encourage the proposed residential to preserve 11 of its 26 acres as greenbelts linked to Beach Lake Regional Park. Such “conservation subdivision” incentives are explained on page 47.

⁵ The 68 acres includes the approximate 4.5-acre AWWU water pipeline easement as a trail.



Land Use Alternative 4 - Regional / Community Park and Conservation Subdivision

- Regional Park**
Natural Open Space and Trails (68 acres)
- Community Park**
Sports Fields and Neighborhood Park (25 acres)
- Conservation Subdivision**
1 house per acre; 65% conserved open space (16 acres)
and 35% residential with 15,000sf lots (10 acres)
- School Reserve Land**
Elementary School Site or R-7 Residential (8 acres)



Chalet Warm-up / Multi-use Recreation Facility
exact location not yet determined (5 acres)



Neighborhood Collector / Chalet Access Street
(100' Easement) connecting Powder Reserve
and Chugiak High School (8.5 acres)

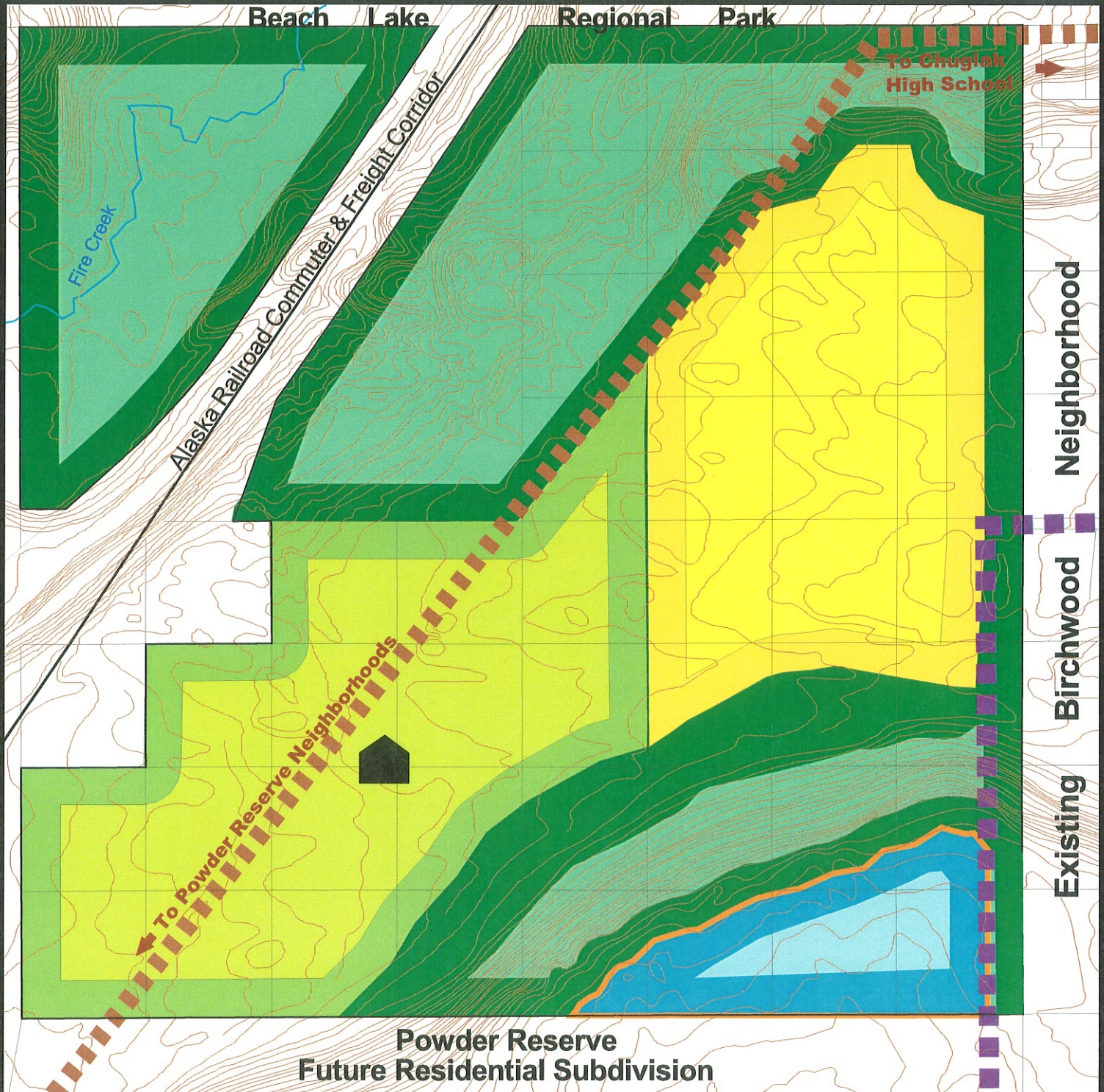


AWWU Eklutna Water Pipeline Easement
(4.5 acres)



100 0 100 Feet

— Study Area Boundary



Land Use Alternative 4 Evaluation Sheet

	<i>Key Issues</i>	<i>Evaluation</i>	<i>Implications</i>
Site Planning Issues	<i>Site suitability and environmental constraints - slope, wetlands, soils</i>	Developable wetland in NE corner may not be compatible with on-site water and wastewater.	Residential development near the NE corner may require replacement of some existing soil with gravel fill.
	<i>Conservation of unique site features - trees, scenic views, terrain</i>	Trails, ridge top views, attractive ski terrain are preserved.	The easterly plain of the Study Area may be developed without loss of unique terrain, vegetation, or views.
	<i>Optimum site locations for proposed land uses</i>	The central upland plain is a natural extension of the existing neighborhood to the east.	The central plain, if surplus to public needs, is an appropriate location for residential.
Land Use Compatibility	<i>Compatibility with surrounding neighborhoods</i>	Limited extension of R-6 residential is compatible with the existing neighborhood.	Proposed residential land use in the Study Area should be at R-6 (large lot) density.
	<i>Compatibility with Beach Lake Regional Park</i>	Residential and park land uses are generally compatible. Chalet is too far to the southwest to be central to ski trail system.	The easterly plain, if surplus, may be appropriate for residential. Favor a chalet site in the north-northeasterly Study Area.
	<i>Compatibility with other land uses proposed in the NW1/4 Section 25</i>	Community sports fields and the chalet may impact residential. Residential development encroaches on the chalet site and trail system.	Buffer residential development with natural open space. Residential is not compatible with a chalet in Study Area. Preserve strategic trail corridors.
	<i>Compatibility with available road infrastructure and water and wastewater</i>	Pioneer Drive can be extended; onsite well/septic is practical. There is no existing infrastructure that is sized to serve future housing in the Study Area.	Low density residential is compatible with available public infrastructure. There are no efficiencies of public infrastructure gained by new housing development in the Study Area.
Community Facility Needs	<i>Need for regional park open space, multi-use trails, chalet and trailhead</i>	A need to maximize regional park expansion is not recognized. The chalet is pushed south of Hill Loop Trail, away from most ski trails.	<i>A Beach Lake Park Master Plan</i> should determine if there is a need for maximum regional park expansion in the Study Area.
	<i>Need for community park with sports fields</i>	Twenty of thirty-five needed acres is reserved.	Increase the acreage; locate facilities to avoid impacts to trails or residential.

Land Use Alternative 5: Conservation Subdivision with Regional Park and Elementary School Reserve

Regional Park: Natural Open Space and Trails	(80 ac. ⁶)
Conservation Subdivision, with Open Space and Trails	(44 ac.)
Neighborhood Collector Street	(8.5 acres)
School Reserve Lands:	(9 acres)

Land Use Alternative 5 represents an opposite pole from *Alternative 1* along the range of possible compromises between park and residential uses. It illustrates a municipal disposal of nearly as much land in the NW $\frac{1}{4}$ Section 25 for residential development as possible, given physical constraints and encumbrances. It also incorporates a "conservation subdivision" design for the residential development in order to provide public-access greenbelt and trail easements.

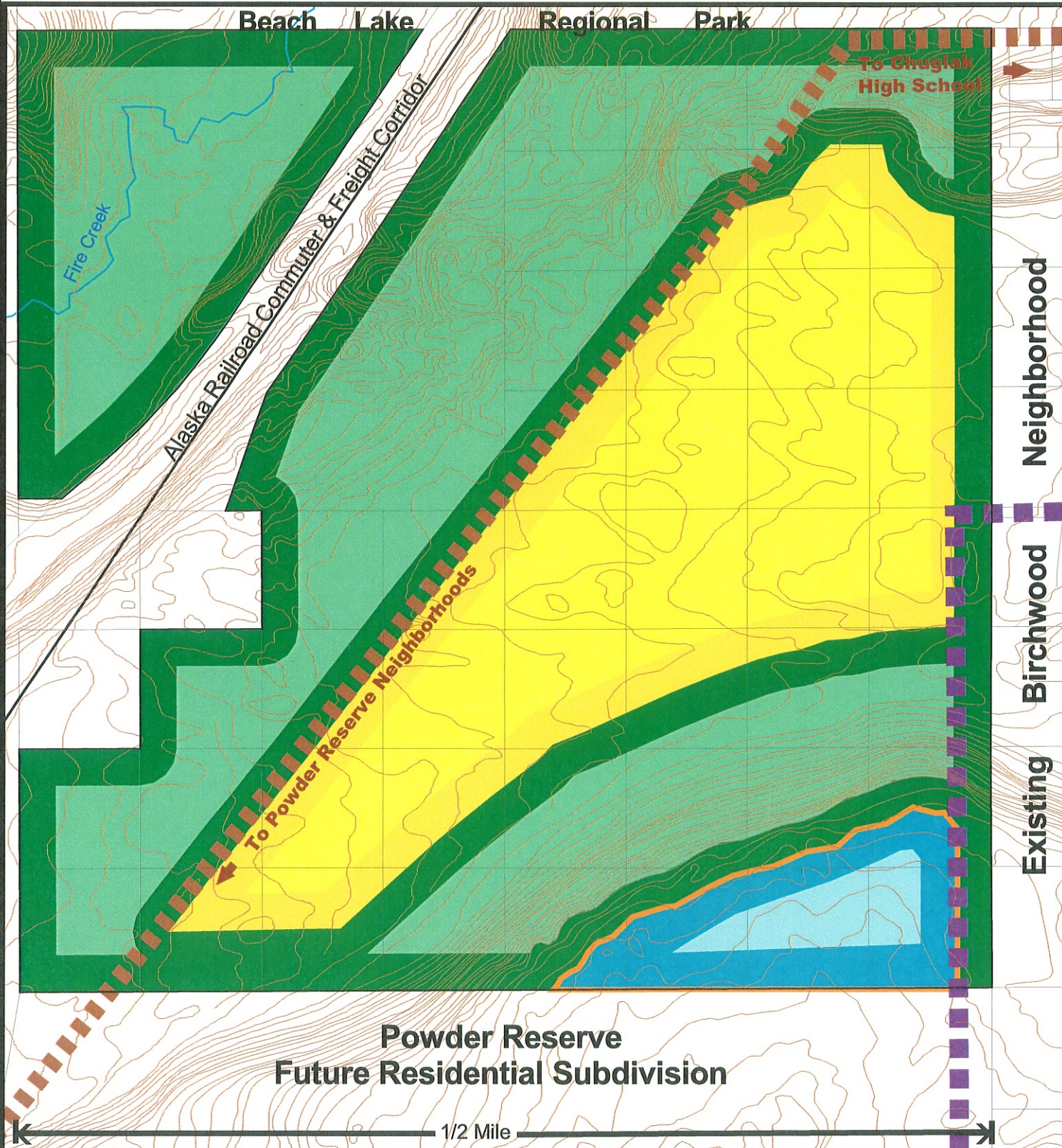
Natural open space and forest still predominate in *Alternative 5*. As in previous alternatives, the Hill Loop Trail, northwestern hills, and southeastern ridge slope are priority acquisitions to the regional park. Multi-use trails still loop through the Study Area. The trails connect the Hill Loop Trail and Beach Lake Park to the ridge in the southeast corner, via forest greenbelts through the sports park and residential subdivision. The transmission line alignment serves as a collector street and a boundary between the Hill Loop Trail and the conservation subdivision. A natural open space corridor extends from the Hill Loop toward the beaver dams in the Powder Reserve.

The central plain of the Study Area is zoned for R-6 residential, one dwelling unit per 1 $\frac{1}{4}$ acres, and disposed of for development. "Conservation subdivision" incentives preserve natural open space greenbelts, and provide public trail links for the surrounding park. Density incentives encourage conservation set asides and public usage easements. The easements permit residents of the public to use the trail greenbelt linkages as part of the surrounding regional park.

Residences are secluded in "villages" of 10,000 to 15,000 square-foot (1/3-acre) home sites. In this way, home sites occupy 35 percent of the subdivision land, and are surrounded by the network of public and private natural open spaces and trails. The home sites share both community water well and wastewater (septic) on-site.

⁶ The 80 acres includes the approximate 4.5-acre AWWU water pipeline easement as a trail.

Conservation Subdivision with Regional Park and School Reserve



Land Use Alternative 5 Evaluation Sheet

	<i>Key Issues</i>	<i>Evaluation</i>	<i>Implications</i>
Site Planning Issues	<i>Conservation of unique site features - trees, scenic views, terrain</i>	Scenic views, hilly ski terrain, and open space corridors to beaver dams are preserved.	The central plain of the Study Area may be developed without loss of unique terrain, vegetation, or views.
	<i>Optimum site locations for proposed land uses</i>	<p>The toe of the SE ridge is poorly drained, offers little sunlight.</p> <p>The central upland plain is lost as a potential chalet site.</p>	<p>Reserve the black spruce area at toe of ridge for ridge trail use.</p> <p>Housing should not be developed in the central plain if there is not an alternative chalet site.</p>
Land Use Compatibility	<i>Compatibility with surrounding neighborhoods</i>	Gross residential density is the same as in the R-6 neighborhood, but the "Conservation Subdivision" site plan may reduce lot sizes to 1/3 acre.	Buffer existing residences from any "village" of 1/3 acre home sites of a "Conservation Subdivision".
	<i>Compatibility with Beach Lake Regional Park</i>	Residential and park land uses are compatible, particularly with incentives for conservation.	The plain can be an appropriate location for residential, and even provide open space and trails.
	<i>Compatibility with other land uses proposed in the NW1/4 Section 25</i>	Incentives encourage conservation set asides and greenbelt corridors.	Conservation subdivision greenbelts and trails complement the park.
	<i>Compatibility with available road infrastructure and water and wastewater</i>	On-site water and wastewater as well as community systems are practical.	Low density residential with on-site systems is compatible with existing infrastructure.
Community Facility Needs	<i>Need for regional park open space, multi-use trails, chalet and trailhead</i>	The need for additional regional park acreage for trails or a chalet site is not recognized.	Add key terrain from Study Area to the park, and update the <i>Beach Lake Park Master Plan</i> .
	<i>Need for community park with sports fields</i>	The need for 35 or more acres in Birchwood is not addressed.	Reserve an appropriate portion of the Study Area for sports fields.
	<i>Need for north-south collector system and site access road for park facilities</i>	There is no need in this alternative for an access road for park facilities in the NW1/4 Section 25. However, a road is still needed for areawide connectivity.	Without sports fields or a chalet in the Study Area, the need for a north-south collector needs to be weighed against impacts to trails.

Overlay Alternative: Gravel Extraction with Temporary Park Use and School Reserve

Natural Open Space and Trails	(64 acres)
Gravel Extraction Pit / Temporary Park Uses	(60 acres)
Neighborhood Collector Street	(8.5 acres)
Gravel Truck Haul Route	(? acres)
School Reserve Lands:	(9 acres)

The *Overlay Alternative – Gravel Extraction* provides a way to evaluate the effects of gravel extraction on the proposed land uses in the previous alternatives.

ADOT&PF identified a need for gravel material underlying the Study Area. In this alternative, gravel is extracted from the NW¼ Section 25 over a number of decades. Extraction would be likely to progress from the southwestern corner of the Study Area toward the northeast, depleting one “cell” at a time. The extraction would lower the existing central alluvial plain of the Study Area by 20 or more feet in elevation. Ongoing operations will limit site reclamation until all extraction operations cease. Reclamation of most of the site for park use may therefore be 50 to 75 years into the future. A more limited extraction area would reduce the delay before reclamation, providing for timely development of sports fields or trails.

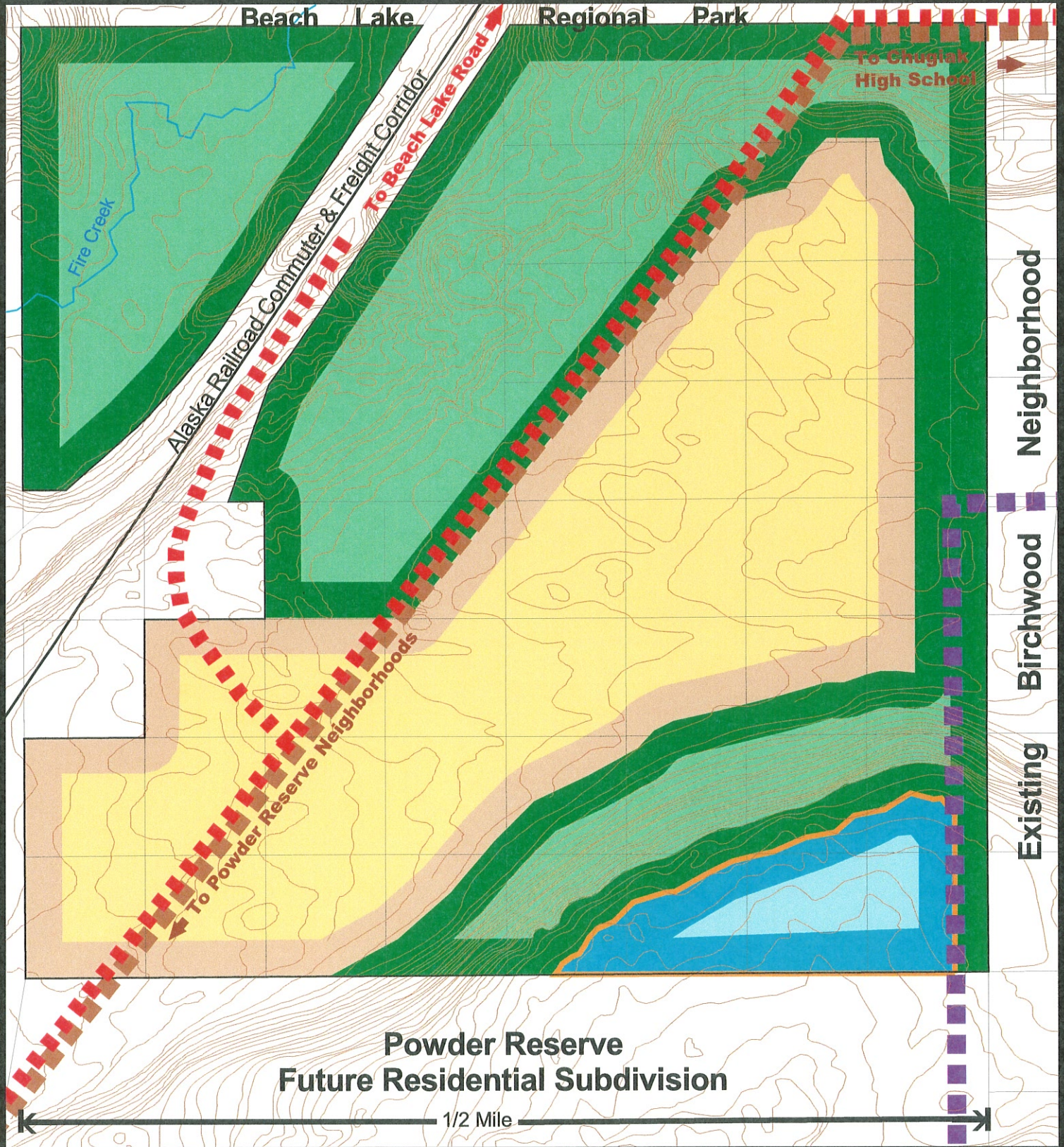
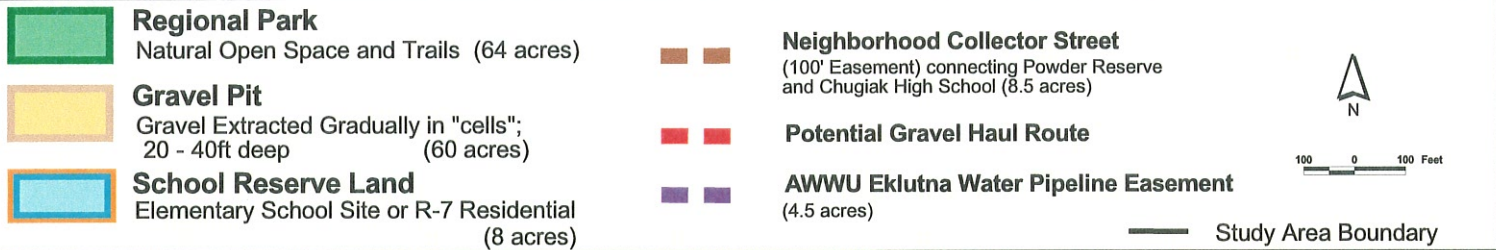
The map shows certain preservation and buffer areas. The Hill Loop Trail and northeastern corner of the Study Area are preserved. The Hill Loop Trail is an established, popular trail integral to Beach Lake Park and designated as a Multi-use Trail in the Areawide Trails plan. The natural terrain under this trail and in the northeastern Study Area is undulating, challenging, unique, and a natural extension of the Beach Lake trails system, as well as a buffer for the park against gravel extraction noise and visual impacts. On-site water for a recreation building is contingent on preservation of the gravel material on a portion of the Study Area.

There are three known potential gravel haul routes by which gravel trucks might haul gravel from the site. The first is a Hillcrest Drive route to Birchwood Loop Road, via Hillcrest Drive through an existing neighborhood. The second is south through the Powder Reserve development area, and depends on an agreement with Eklutna, Inc., to allow access. The Powder Reserve will gradually develop and this second route will also eventually impact a neighborhood. Finally, the Alaska Railroad has offered to allow ADOT to construct a haul road along the railroad alignment up to Beach Lake Road. This route through the regional park would be along the northwest border of the existing ski trail system. It would increase gravel truck traffic on South Birchwood Loop Road at Chugiak High School.

Land Use Overlay Alternative - Gravel Pit with Temporary Park Use and School Reserve



Planning Department
Municipality of Anchorage



Overlay Alternative (Gravel Extraction) Evaluation Sheet

	<i>Key Issues</i>	<i>Evaluation</i>	<i>Implications</i>
Site Planning	<i>Conservation of unique site features - trees, scenic views, terrain</i>	Hill Loop Trail and NE corner of Study Area offer good natural terrain for trails and a park buffer.	The natural terrain in the north and hills in the NE should be preserved for trails and to buffer existing park.
Land Use Compatibility	<i>Compatibility with surrounding neighborhoods</i>	Heavy industrial activity would deliver noise, dust, and truck traffic impacts to adjacent residential neighborhood.	Preserve a minimum buffer along the east boundary of the Study Area. Focus gravel processing and extraction in the SW Study Area. Avoid gravel haul route to the NE.
	<i>Compatibility with Beach Lake Regional Park</i>	Heavy industrial activity would deliver noise, dust, and truck traffic impacts to adjacent park, and force chalet facilities north.	Preserve the Hill Loop and the NE corner to buffer the existing park. Focus gravel processing and extraction in the SW Study Area.
	<i>Compatibility with other land uses proposed in the NW1/4 Section 25</i>	Noise, dust, and truck traffic impacts adjacent trails, delays development of a chalet or sports fields, and would leave a deep, barren valley.	Limit timing, depth, extent of extraction for park/chalet needs. Contour and vegetate depleted areas for park uses.
	<i>Compatibility with available road infrastructure and water and wastewater</i>	Extraction removes opportunity for on-site water / wastewater.	Adequate gravel should be left for chalet on-site water / wastewater.
Community Facility Needs	<i>Need for regional park open space, multi-use trails, chalet and trailhead</i>	Permanent trails and chalet in the northeastern Study Area could be delayed by half a century or more. Hill Loop Trail is a popular, designated, and challenging trail integral to Beach Lake Park.	Gravel extraction in NE would force permanent chalet investments north into Beach Lake Park. The Hill Loop Trail must be preserved for trail use and a buffer for the park from gravel extraction.
	<i>Need for community park with sports fields</i>	Extraction for a limited period can be compatible with subsequent, relatively timely development of sports fields.	Overlay the gravel extraction with subsequent development of a community park in the SW Study Area.
	<i>Need for an elementary school</i>	The SE ridge top has relatively poor gravel and is a favored school site.	Preserve the SE ridge, toe, and ridge top from gravel extraction, to accommodate the needed school.

Evaluation Summary

The evaluation tables for the Land Use Alternatives provide a basis for a land use recommendation. Following is a summary of themes that underlie the evaluations.

Balance of Community Facility Needs

It is basic to provide for a legitimate community need that is appropriate for location in the Study Area and that can accommodate other needs on the site. In the case of the NW¼ Section 25, a balanced solution could add the majority of the Study Area to Beach Lake Park for open space and trails expansion, and still provide certain portions of the site to accommodate other needs.

Land Use Alternatives 2&3 and 4 provide a balance of the multiple legitimate community facility needs that are appropriate for the Study Area. Among the needs are a community sports fields, possibly co-located with the potential chalet on the central upland plain, and an elementary school.

Alternative 4 begins to compromise the regional park public facility needs stated for the Study Area. It removes the easterly plain from the park acquisition area because of an unresolved issue regarding future availability of land in the main park. An updated master plan for Beach Lake Park would be required to resolve the question of whether more parkland is needed. A park master plan would identify the long-term needs of recreational user groups for future facilities in the park. *Alternative 4* also pushes the potential chalet site to the southwest, away from the bulk of the existing ski trail system north of Section 25.

Alternatives 1 and 1-a do not address public facility needs such as a community park sports fields or an elementary school. Likewise, the *Overlay Alternative (Gravel Extraction)* illustrates an extent of gravel extraction that could delay permanent chalet and community park facilities for as much as 50 to 75 years.

The need for a collector street must be balanced with the need for expansion of regional open spaces and trails. A compromise may be achieved through a road alignment and design that is sensitive to the park setting, including traffic calming features, narrow lanes and clear zones, and grade-separated trail crossings.

Strategic Site Conservation and Facility Location

Sensitive areas and unique terrain, scenic views, and attractive woodlands are priorities for conservation. Proposed facilities other than natural open space and trails should incorporate strategic greenbelt corridors such as the Hill Loop Trail, the southeastern ridge crest, and regional corridors to the Fire Creek beaver dams.

Most Land Use Alternatives seem able to incorporate these strategic conservation areas. A park facility master plan can help to carefully locate and design facilities in a way to preserve nearby strategic open spaces and trail corridors.

Facility location should also be strategic in relation to other proposed uses in the NW¼ Section 25. For instance a chalet site in the central-eastern Study Area is preferable, because it would be relatively central to the existing ski trail system. A community park with sports fields may work best to the southwest of the chalet, so that there is less impact on the trail system to the north. Gravel extraction in the southwestern Study Area could be compatible with timely development of sports field facilities. However, extraction in the northeastern Study Area would be longer-term, in conflict with near-term chalet development.

Compatibility with Surrounding Areas

The evaluation of Land Use Alternatives also explored the impacts of proposed land uses on Beach Lake Park as a whole, and on residential neighborhoods to the east and south. Community sports field and chalet activity centers may impact adjacent residential neighborhoods. However, in general, park, school, and residential land uses are very compatible.

The central-western Study Area could provide an upland corridor for natural open space and trails connecting Beach Lake Park and the Fire Creek beaver dams. However, a concentration of chalet and trail improvements on the NW¼ Section 25 may avoid greater access for more recreational activities in the main body of the park. The future availability of land in the main park is an unresolved issue.

Most of the alternatives provide a north-south collector street. A lack of north-south connectivity would impact the road system and neighborhoods to the east and south. Trips to the park facilities and to CHS from the Powder Reserve would be circuitous, and would force local roads including Shims Street to function as collector streets. The neighborhood on Shims would be impacted by the traffic. A new collector through the Study Area could provide a more direct route between the Powder Reserve and Birchwood Loop Road, allowing collector traffic to bypass the existing neighborhood and local roads.

Site reclamation after gravel extraction featured in the *Overlay Alternative (Gravel Extraction)* could eventually provide for enhanced park facilities. However, the timetable for gravel extraction is decades-long. Gravel extraction should be limited as much as possible to the central-southwestern Study Area, because of potential impacts on the park, and on neighborhoods to the north and east, and the greater number of years it will take for extraction to progress to the northeast. Another major limitation to gravel extraction could be haul road access to the site.

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CHAPTER 5. CONCLUSION AND RECOMMENDATION

Chapter 5 presents a set of land use recommendations and options for the NW¼ Section 25. The recommendations are based on community facility needs, community aspirations, environmental characteristics, compatibility with surrounding land uses, access and infrastructure, recommendations of the *Chugiak-Eagle River Comprehensive Plan* and relevant satellite plans, and HLB responsibilities. The outcome (1) balances the multiple community facility needs, (2) incorporates trail corridors into areas given to uses other than natural open space, and (3) provides a set of options in the easterly plain of the NW¼ Section 25, pending resolution of outstanding issues. By accommodating clear and legitimate public facility needs for community sports fields and an elementary school, the recommendations resemble *Land Use Alternative 2* from Chapter 4. *Alternative 1*, although favored by community participants, failed to address community needs other than natural open space and trails.

The land use recommendations seek to accommodate and balance the multiple legitimate community facility needs that are appropriate for the Study Area. First, it is recommended to add the majority of the NW¼ Section 25 to Beach Lake Regional Park, primarily for trails and natural open space. Within the regional park there is also specific provision for community sports field facilities in the southwestern Study Area. A park access and collector street is required to provide site access and north-south connectivity in Birchwood. The ridge slope in the southeast is reserved for open space, nordic ski trails, and a sledding hill. A walking trail up the slope links the park to an elementary school that is favored for location on the crest of the ridge. The land use recommendations also accommodate a need for limited gravel extraction. A final recommendation for the easterly plain of the Study Area is contingent on the resolution of several outstanding issues beyond the scope of the *Land Use Study*. For this reason, there are three (3) land use options for the easterly plain area of the NW¼ Section 25.

Integral to the land use recommendation is the preparation and formal adoption of an updated *Beach Lake Park Master Plan* to guide and coordinate the development of community sports fields, trails, and other park facilities in the NW¼ Section 25. The plan should site recreational uses other than natural open space and trails in the Study Area to accommodate strategic trail corridors. The *Park Master Plan* is also for the entire regional park, an overall strategy to coordinate long-term development of the NW¼ Section 25 and Beach Lake Regional Park as a whole. The plan should review the present and future needs of recreational user groups for the park, and coordinate, balance and preserve recreational uses through policy statements and location and design of facilities.

Land Use Recommendations

The *NW¼ Section 25 Land Use Study* makes the following seven (7) Land Use Recommendations for the Study Area, *except for the easterly plain area*:

1. **Add the Study Area northwest of the Alaska Railroad including the Fire Creek floodplain to Beach Lake Park, as a natural habitat and potential regional trail corridor.** The wetland and coastal floodplain are protected resources, and are relatively inaccessible because of steep topography and the railroad alignment.
2. **Add the Hill Loop Trail and the very northeastern corner (5 acres) of the Study Area to Beach Lake Regional Park for the multi-use and nordic ski trail system.** The Hill Loop Trail is an established, popular trail in the Beach Lake Park trail system, and designated for protection by the Municipality. The undulating natural terrain makes the Hill Loop and adjoining northeastern corner of the Study Area a natural extension of the adjacent Beach Lake Park trails. The 330-foot buffer (one HLB parcel) south of the existing park preserves an existing, 40-foot high, east-west hill as a buffer from potential gravel extraction. Integral to the existing park, these northern areas merit protection from gravel extraction.
3. **Add the ridge slope in the southeast Study Area to Beach Lake Regional Park for a nordic ski climb, a sledding hill, and a scenic viewpoint.** Because the ridge slope is highly valued for the terrain it could offer the ski trail system, trail corridors between existing trails and the ridge must be reserved on the central plain. A pocket of black spruce along the toe of the slope has poor sunlight and drainage, making it less useful or desirable for development than for trail access to the ridge. A 100-foot buffer on the crest of the ridge should be added to Beach Lake Park as part of the ridge slope acquisition. The buffer is needed to protect stabilizing vegetation along the ridge slope, and to secure access for trails and a potential sledding hill. The buffer will also preserve an attractive birch wood and a public access trail with scenic viewpoints to the Knik Arm, Alaska Range and Talkeetna Mountains.
4. **Add the southwesterly plain of the Study Area to Beach Lake Park, primarily for use as community sports fields.** There is a need for a minimum 35 acres of sports field facilities central to Birchwood. The community sports fields area will be a part of Beach Lake Park. However, it will address a recreational need that is distinct from natural open space and trails. A *Beach Lake Park Master Plan* should determine the exact location and site plan of community sports fields within the southwesterly plain of the Study Area. The *Park Master Plan* should ensure that the location of the community sports fields will preserve two strategic natural open space and trail corridors in the NW¼ Section 25. First, corridors should remain intact

between the Hill Loop Trail and the Fire Creek beaver dams to the south of the site. Second, trail corridors should be provided from the Hill Loop to the ridge in the southeast corner of the Study Area. To the extent practical, the mature birch wood on the southwesterly plain below the toe of the ridge should be considered a priority for preservation.

5. **Reserve an 80-foot corridor for a 2-lane neighborhood collector and park access street.** The street should traverse the Study Area southwest-northeast to Hillcrest Drive. It will provide north-south connectivity in Birchwood, and access to park facilities on the site. It should provide a paved separated trail, grade-separated ski trail crossings, with a road design that is complementary to the park setting. An example of a context-sensitive street is the road design for Kincaid Park.
6. **Accommodate the need for 30 acres of gravel extraction in the southwestern Study Area.** Extraction should be limited in geographic extent, depth, and time period to minimize neighborhood impacts and to facilitate subsequent development of community sports fields. The southwestern corner of the Study Area is the most appropriate location because gravel extraction here has fewer impacts on the regional park and existing residential, and is compatible with relatively timely development of sports fields. Also, possible gravel haul routes are to the southwest. Extraction further northeast, or a northeast haul route, would impact the existing neighborhood and regional park. Gravel extraction is not compatible with a chalet on the southeasterly plain. An extraction pit should also be located at least 150 feet away from the ridge slope, to preserve a natural open space corridor. To the extent practical, the mature birch wood on the southwest plain along the toe of the ridge should be considered a priority for preservation.
7. **Reserve for school purposes the southeast ridge top, an area of 9 acres, as an elementary school site.** With additional acres to the south, the southeast ridge could accomplish the 15-acre elementary school site standard. It is an appropriate site to address school needs because it shares the ridge with the future neighborhood to the south, and is accessible to the existing neighborhood to the east via Almdale Avenue. It offers valuable scenic views of the region. A school is compatible with trail and sledding hill connections down the hill into the recommended community park facilities. If a selection process finds a critical failure in this site even if expanded south, the site is appropriate for a land exchange for a school site elsewhere, and is recommended for residential development at an R-7 density. The developable area available for residential may be somewhat less than what is available for a school site, because school grounds incorporate the AWWU Eklutna Transmission Main (water pipeline) on the southeast ridge top.

Outstanding Issues for Resolution

A final recommendation for the easterly plain of the Study Area is contingent on the resolution of the following outstanding issues:

Gravel Extraction Agreement

A land use recommendation regarding the easterly plain of the Study Area depends on the extent of gravel extraction in the NW¼ Section 25. The Municipality and the State should negotiate an agreement that sets limits to extraction, in order to minimize impacts on parks and neighborhoods, and to accommodate other legitimate community facility needs in the Study Area. The agreement should address:

- Limits to the geographic extent, depth, and time period of the gravel extraction in specific areas.
- Location and development of haul routes for gravel trucks.
- Site reclamation, including recontouring and revegetation, that provides for long-term park facilities in the Study Area.

A gravel agreement would clarify whether the easterly plain of the NW¼ Section 25 can be the focus of near-term investment in a chalet with an access street, trailhead, parking and trail maintenance facilities. The easterly plain provides ample space for permanent chalet facilities adjacent to the existing trails system. However, a gravel extraction agreement that preserves a 5-acre portion of the easterly plain is prerequisite to selecting the NW¼ Section 25 as a chalet site. In the meantime, the nordic ski club has identified a suitable chalet site to the north of Section 25, in the existing Beach Lake Regional Park.

Beach Lake Regional Park Master Plan

A land use recommendation regarding the easterly plain of the Study Area also should rely on the preparation and adoption of an updated *Beach Lake Park Master Plan*. The stated facility need for maximum regional park expansion into the NW¼ Section 25, including trails and a potential chalet, results not from a lack of gross regional park acreage in Beach Lake Park. It is a consequence of the piecemeal division of use of the regional parkland. This has affected the ability of the park to be a multi-use recreational resource. The situation has led to proposed investments in chalet and trail facilities on the easterly plain of the NW¼ Section 25, rather than in a more central location in Beach Lake Park. The *Chugiak-Eagle River Comprehensive Plan* also recommends an update of the park master plan.

As Chugiak-Eagle River grows, and the Birchwood community reaches build-out, community pressure for multi-use recreation access for the main park is likely to

increase. Physical accessibility will also improve because of the coming grade-separated railroad track crossing in Beach Lake Park. A park master plan will review the present and future needs of recreational user groups in the park, and coordinate, balance and preserve recreational uses through policy statements and location and design of facilities. The plan should take into account changing conditions in Chugiak-Eagle River when evaluating future public facility needs.

A plan will clarify whether the easterly plain of the NW¼ Section 25 should be the focus of trail investments. If a master planning process were to result in acreage becoming available north of the railroad, then the easterly plain of the NW¼ Section 25 may become less critical for trails expansion. In such a case, a chalet could be well-located north of Section 25, on the north end of the existing ski trail system, off Beach Lake Road, central to the trail systems. A master planning process that takes into account the community growth and other changing conditions to the year 2020 is prerequisite to a clear determination regarding the public facility need for the easterly plain.

Options for the Easterly Plain Area

Three options were developed to address the unresolved status of the easterly plain area. Options A and B incorporate the seven basic land use recommendations, but do not address a gravel extraction agreement or park planning issues in the easterly plain. Option C also incorporates the seven land use recommendations, but is based on resolution of the outstanding issues affecting the easterly plain.

While Options A and B are legitimate choices, Option C is recommended. A final decision for the easterly plain is contingent on gravel extraction and a *Beach Lake Park Master Plan*. These outstanding issues are beyond the scope of the *Land Use Study*. If, however, it is the will of the decision-making bodies to take immediate action on the easterly plain, Options A and B represent legitimate alternatives.

Option A –

Concentration of Beach Lake Park Facilities in the NW¼ Section 25

If the northern 1,450 acres of Beach Lake Park remain unavailable to multi-use recreational trails, then there is an arguable public facility need for the easterly plain of the Study Area to be used for trails and potentially a chalet and trailhead. A chalet could be located to the north of Section 25. However, the easterly plain provides ample space for chalet facilities adjacent to the existing trails system. Co-location with community sports fields is also advantageous. The easterly plain is deemed undesirable for gravel extraction, in part because of conflicts with the timely development of a chalet, and because of impacts on existing residential.

Community support runs strong for addition of this area to Beach Lake Park. The easterly plain could address community aspirations for developing multiple trails to the southeast ridge, and for expanding the park's open spaces for future generations. Even if it is the will of decision making bodies to recommend the easterly plain of the NW¼ Section 25 as park, a gravel extraction agreement remains prerequisite to selection of the easterly plain for a chalet site.

Option B –

Master Planned, Shared Recreation Use of Beach Lake Park

The easterly plain is deemed surplus to public need because a portion of the northern 1,450 acres of Beach Lake Park may eventually become more accessible to multi-use trails. With acreage available in the central park, the easterly plain of the NW¼ Section 25 becomes less critical for trails expansion over the next 20 years. A chalet is recommended to be located north of Section 25, instead of adjacent to gravel extraction or residential. The easterly plain of the NW¼ Section 25 is considered less than optimal for a chalet and multi-use recreational gateway to Beach Lake Park. The easterly plain has limited scenic views, in comparison to chalet sites in Kincaid or Russian Jack Springs Park, or to scenic sites that may exist within Beach Lake Park. The easterly plain is also deemed undesirable for gravel extraction, due to impacts on park and residential.

As a result, 20 acres of the easterly plain is deemed surplus to municipal needs, rezoned to R-6 (large lot) residential, and disposed of for private development. The 80-foot wide road corridor must be accommodated on the disposed lands. Also, a pedestrian access easement from Pioneer Drive extended provides neighborhood access into the regional park. The western extent of the residential disposal is limited by a buffer of 330 feet from the limited gravel extraction in the southwest corner of the Study Area. The 35 acres of community sports fields also limit the amount of land to dispose of for residential.

Option C (Preferred Option for the Easterly Plain) –

Limited Action Pending a Gravel Extraction Agreement and Park Plan

Prior to making a decision regarding the easterly plain of the Study Area, the community should prepare and adopt an updated *Beach Lake Park Master Plan*, and the Municipality and the State should reach an agreement regarding gravel extraction. A portion of the "No Action Area" should be used to complete the 35 acres of sports fields. The extent of gravel extraction here remains unclear, pending an agreement. A chalet facility in the easterly plain is either delayed, pending a gravel extraction agreement, or located elsewhere.

Land Use Recommendations, with Option A

-  **Regional Park**
Natural Open Space and Trails (87 acres)
-  **Community Sports Fields**
Exact location to be determined (35 acres)
-  **School Reserve Land**
Elementary School Site or R-7 Residential (9 acres)
-  **Gravel Extraction Area**
Depth of 12 - 20 ft (30 acres)



Potential Chalet / Recreation Facility
Location to be determined (5 acres)



Grade Separated Trail Connections



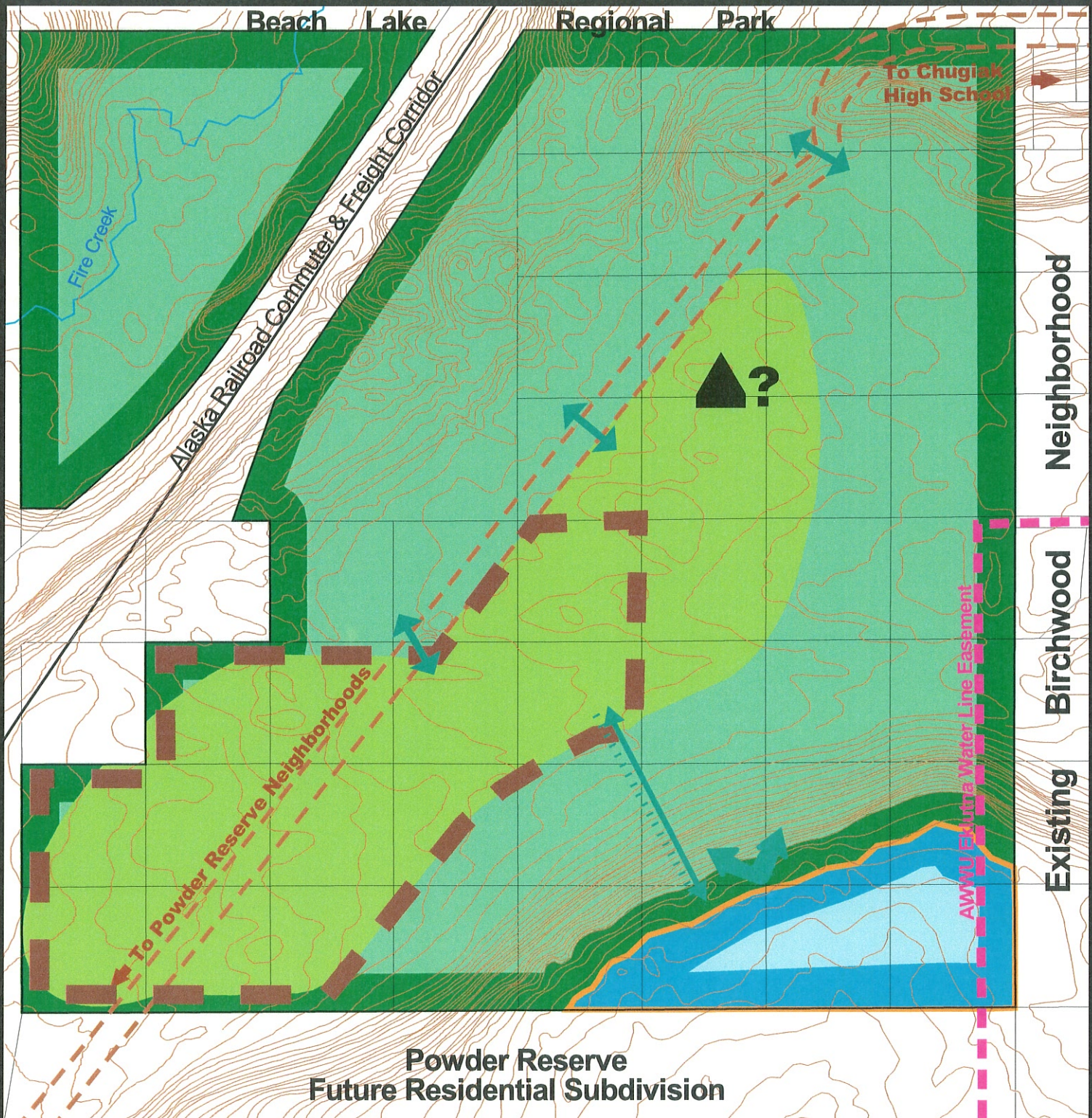
Trail and Sledding Hill



Scenic View Points



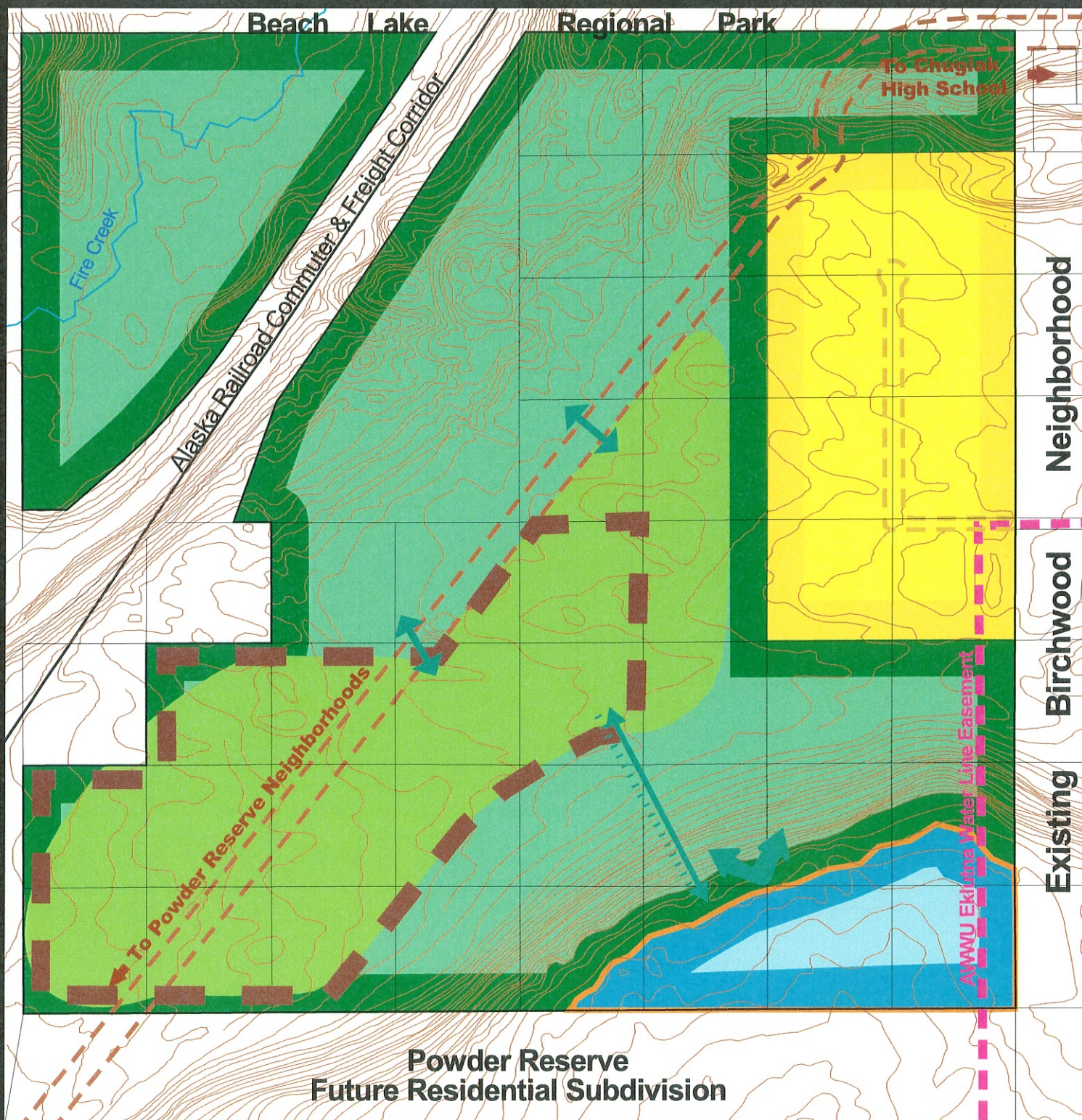
Neighborhood Collector / Park Access Street
Exact alignment and design to be determined
(80' easement; 9 acres)



Land Use Recommendations, with Option B

- Regional Park**
Natural Open Space and Trails (72 acres)
- Community Sports Fields**
Exact location to be determined (35 acres)
- School Reserve Land**
Elementary School Site or R-7 Residential (9 acres)
- R-6 Suburban Residential (large lot)**
Max. density 1 house per acre (20 acres)

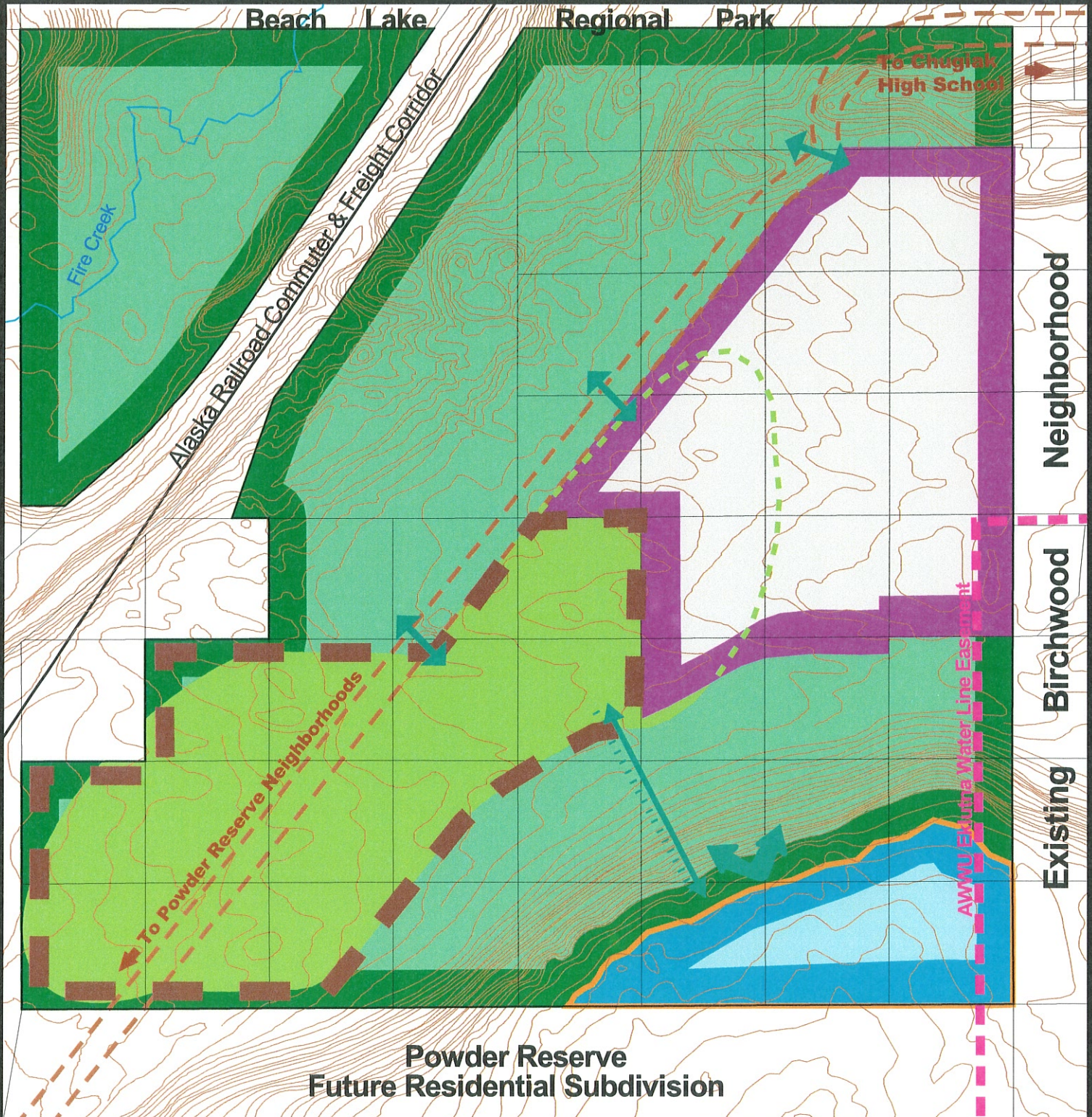
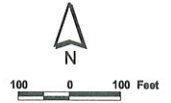
- Gravel Extraction Area**
Depth of 12 - 20 ft (30 acres)
- Grade Separated Trail Connections**
- Trail and Sledding Hill**
- Scenic View Points**
- Neighborhood Collector / Park Access Street**
Exact alignment and design to be determined (80' easement; 9 acres)



Land Use Recommendations, with Option C

- Regional Park**
Natural Open Space and Trails (68 acres)
- Community Sports Fields**
Exact location to be determined (35 acres)
- School Reserve Land**
Elementary School Site or R-7 Residential (9 acres)
- No Action Area**
Pending gravel extraction agreement and park plan (30 acres)

- Gravel Extraction Area**
Depth of 12 - 20 ft (30 acres)
- Grade Separated Trail Connections**
- Trail and Sledding Hill**
- Scenic View Points**
- Neighborhood Collector / Park Access Street**
Exact alignment and design to be determined (80' easement; 9 acres)



Implementation

Land use designations approved by the Assembly are considered amendments to the *Chugiak-Eagle River Comprehensive Plan*. The land use designations are replacements for the “Residential / Park” land use category that has been applied to NW¼ Section 25. Following is a summary of recommended implementation measures for the NW¼ Section 25.

Upon adoption of Option C, a land use designation of “Park” will replace the “Residential / Park” category for most of the Study Area, excepting the 30-acre “No Action Area” and the 9-acre Elementary School Reservation. The PLI – Public Lands and Institutions land use zoning district remains for all areas. Approval conditions for a new Powder Reserve master plan should include the accommodation of a potential school site acquisition south of and adjacent to the Elementary School Reservation on the southeast ridge of the Study Area.

The Municipality will reserve an 80-foot wide transportation corridor for a collector street and separated paved trail, and designate Hillcrest Drive and the future transportation corridor as a collector street in the next update of the *Official Streets and Highway Plan*.

Development of new park facilities southeast of the railroad is contingent on an agreement between the Municipality and State regarding the extent, depth, and period of time of gravel extraction. The agreement must set limits to extraction, as per the recommendations of this study, and include plans for re-contouring and re-vegetating the depleted gravel pit for sports fields, trails, and other park facilities.

Until the extent of gravel extraction is agreed upon, designation of any specific boundaries for addition into Beach Lake Park is deferred. Physical development of sports field, trail, sledding hill, and other facilities should rely on an updated *Beach Lake Park Master Plan*. First, the *Master Plan* will do site planning and design to maximize the efficient use of land and facilities on the NW¼ Section 25. For example, the location and design of the sports fields should accommodate open space and trail corridors as recommended in this chapter. Also, trail and sledding hill design should be sensitive to the potential instability of the ridge slope in the southeasterly corner. Second, the *Master Plan* should result in an evaluation of future recreational facility needs in Beach Lake Park as Chugiak–Eagle River grows and Birchwood reaches build-out.

Following the resolution of the gravel extraction agreement, and the adoption of a *Beach Lake Park Master Plan*, the Municipality should revise the *Land Use Study* with a specific recommendation for the easterly plain. Until that time the easterly plain remains as municipal reserve land under HLB management.

Revision Process

The *NW¼ Section 25 Land Use Study* is based on current, available information. Because the Land Use Recommendations include specific, long-range uses, it is possible that some factors affecting land management and future uses that were considered in this study may change in the future. Additional study and analysis may be required in the future, if, for example, the Municipality and State come to an agreement regarding gravel extraction, or a new *Beach Lake Park Master Plan* is adopted. Depending on the circumstances, it may be appropriate to revise an approved land use designation in response to new developments or conditions that may occur. In such a case, it may be appropriate to amend a land use designation through the formal public review process. Any re-evaluation of an approved land use designation should apply the same general criteria used in this study. Any future land uses amendments to this plan approved by the Assembly will constitute an amendment to the *Chugiak–Eagle River Comprehensive Plan*.