

5. Existing Conditions

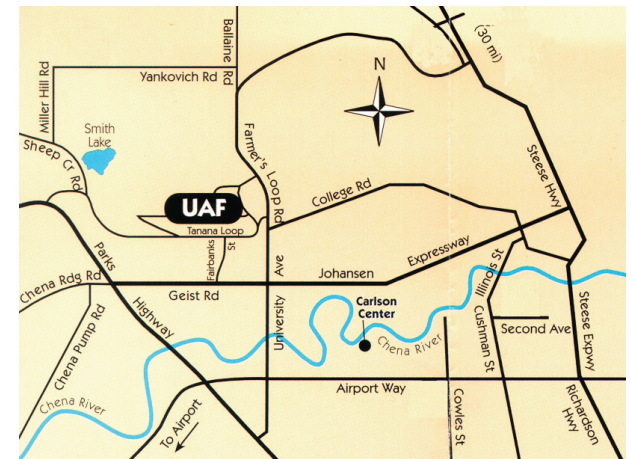
COMMUNITY CONTEXT

The university is located approximately three miles west-northwest of the center of the city of Fairbanks, within the boundaries of the Fairbanks North Star Borough. Situated on a hilltop, the campus is highly visible to the community, but somewhat physically removed. The campus property comprises nearly 2,250 acres between Geist Road to the south and Yankovich Road to the north. The university owns an additional 135 acres northwest of Yankovich Road, occupied by the Large Animal Research Station. On the east, the campus property is bounded by University Avenue and Farmers Loop Road and on the west by Sheep Creek Road and Miller Hill Road.

There is some commercial development along the site's southern boundary on Geist Road and along the east on University Avenue and College Road. The areas southwest, west, north and northeast of the campus property are residential subdivisions, with mostly single-family houses. Because development of the campus is concentrated within the interior of the property, there is very little intrusion by the university into the surrounding community.

The university contributes significantly to the intellectual and cultural life of the community, as well as to its economy and safety. UAF is the largest employer in the Tanana Valley, employing more than 3,500 full- and part-time faculty and staff, including more than 1,100 student workers. The University of Alaska Museum is one of the top visitor attractions in the state, drawing thousands of visitors annually to the Fairbanks area. The University Fire Department, located on campus, provides fire protection and emergency services to the surrounding areas as well as to campus residents and users.

Performing arts events are available to the public on campus. The Georgeson Botanical Garden is a resource to local gardeners and commercial horticulture businesses and a draw to local residents and tourists. The Rasmuson Library, which houses the largest collection of volumes in the state, is available to a wide variety of users. The Patty Center provides community access to its gymnasium, pool and ice rink, as well as admission to UAF athletic events. The campus' vast expanse of forest offers many recreational opportunities to the community, including an extensive system of trails.



Community context plan

UAF LAND

Built Campus

Of the total 2,250 acres, the “built campus,” the area in which the university's academic, research, residential and other related functions are concentrated, occupies approximately 229 acres. The built campus is defined generally by the boundaries of Tanana Loop. As illustrated in the following map of campus property, other areas of development on campus include the power and physical plants, Energy Center, University Park Building, the Agricultural and Forestry Experiment Station and the Large Animal Research Station farm buildings.

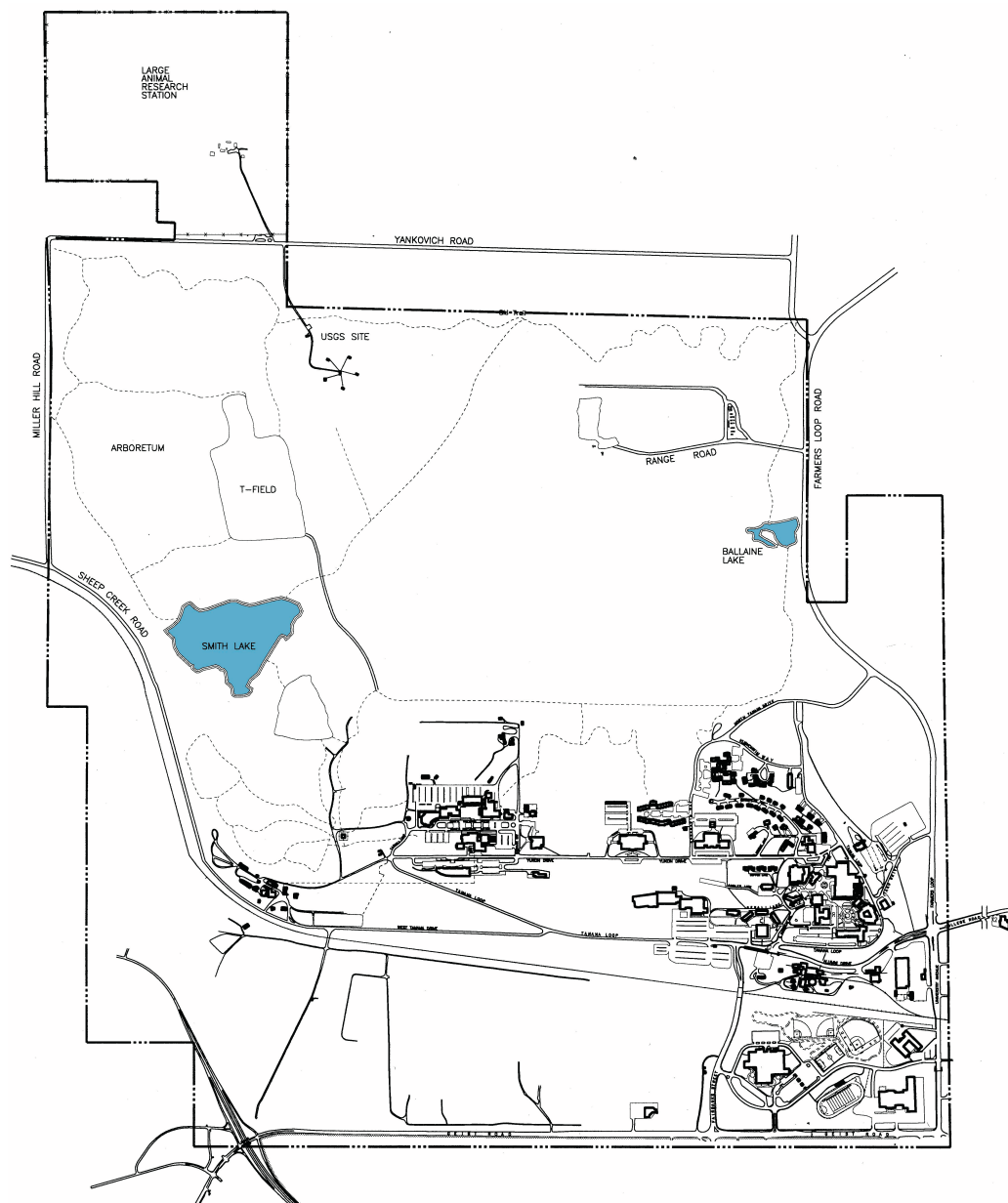
Land use within the built campus falls into fairly distinct zones. Topography has helped dictate an east-west alignment to the campus. Generally, academic and administrative uses are concentrated at the eastern end and research at the western end, with the two areas connected by Yukon Drive. The majority of both faculty and student housing is concentrated north of Yukon Drive, although the earliest residence life facilities and Lola Tilly Commons are located in the southwest area of Lower Campus. Recreation and athletic facilities and fields are located immediately to the west of Lower Campus.

Off-Campus Facilities

In addition to UAF's community campuses and rural sites, there are a number of facilities located outside the campus property that directly support the activities of the main campus. Some, such as the Ester Dome Observatory and the Poker Flat Research Range, are in locations where they can best perform specific functions. Others, such as the Administrative Services Center on College Road, have moved off campus due to lack of adequate space.

Leased Land

South of the built campus and the Alaska Railroad tracks, 72 acres of land are leased by the university to the Fairbanks North Star Borough (FNSB) for educational uses, which include West Valley High School and Hutchison Career Center. The lease runs until 2020. The university, in turn, leases some space in the Hutchison Center for vocational/technical programs. The University Park Building was originally University Park Elementary School but was vacated in 1994 by FNSB at the termination of the lease. Recently renovated, it is heavily used for university vocational, academic and extension service training programs and meetings.



UAF Campus

Undeveloped Land

The remaining undeveloped land is used for outdoor research, education and recreation, including an extensive system of trails, prized and widely used by the campus and Fairbanks communities. The land southwest, north and northwest of the built campus is used extensively for outdoor research. In particular, the 1,300 acres to the north and northwest are representative of interior Alaska with soils, slope, plants and wildlife typical of the boreal forest.

TOPOGRAPHY

The built campus sits on a ridge-hilltop commanding spectacular views across the Tanana Valley. The campus can be seen at a considerable distance from the highway and approach roads and it has a strong visual presence in the community.

The site's topography, coupled with an administrative decision in the late 1960s to locate research separately from the academic core, led to the present east-west alignment of the campus. From the top of the ridge just above Yukon Drive, the site slopes gradually to the north and dramatically to the south and east. Below the ridge, the land slopes gradually southward toward Geist Road. The steep bluff along the eastern edge creates dramatic views to and from the campus.

The difference in elevation from the highest point on the site, between the museum and the Natural Sciences Facility (el. 625), to the lowest point at the intersection of Fairbanks Street and Geist Road (el. 430), is approximately 200 feet. The steep topography can make pedestrian access a challenge.



Aerial view of the campus looking west and north

VIEWS

The university's ridge-top location offers panoramic views both from and to the campus. From many vantage points on campus, there are spectacular views across the Tanana Valley to Denali and the Alaska Range. Unfortunately, parking lots are also often part of the view in the fore or middle ground. The view from Geist Road across the open slope north toward Butrovich and the West Ridge provides a broad view of the western end of campus. Protecting views of the extraordinary beauty of the interior Alaskan landscape is vital.

CLIMATE

The subarctic climate of Fairbanks can be extreme: 80° F days in July coupled with 24 hours of daylight to temperatures plunging to -50° F with extended twilight in January. Snow and ice are usually in abundance for seven months of the year, spanning most of the regular academic year. Students, faculty and staff move around campus regularly, often by foot, in weather conditions that many people would find quite challenging. Due to these extreme conditions, the planning and design of the campus, from its buildings to its walkways, demand special consideration.

DRAINAGE AND RUNOFF

The campus does not have a comprehensive storm drainage system. Generally, a ditch and swale system is used for site drainage. There are modest storm sewer systems for some building complexes, but only a few for parking areas. Underground systems for site drainage must be carefully designed because the ground freezes to at least 10 feet and open storm inverts allow super cold air to freeze the lines, making them non-operational during surface thaws without substantial steam thawing of the pipes.

Campus storm lines empty into local ditches and into existing wetlands. The wetlands on the east side of campus are the receiving area for storm water and melt water from Lower Campus. The roof drainage of many of the older buildings (1950s and 1960s) connect to the sanitary sewer lines, contrary to contemporary regulations and will have to be modified as they are renovated. Due to the lack of storm sewer access, a drywell system with a surface swale back-up is being used for several building renovations.



View of the Alaska Range



Parking lots are often part of the view



Snow covers campus seven months of the year



Grove of trees along Cooper Drive



The rugged topography offers long views



The campus needs more planting along roads...



...and around buildings

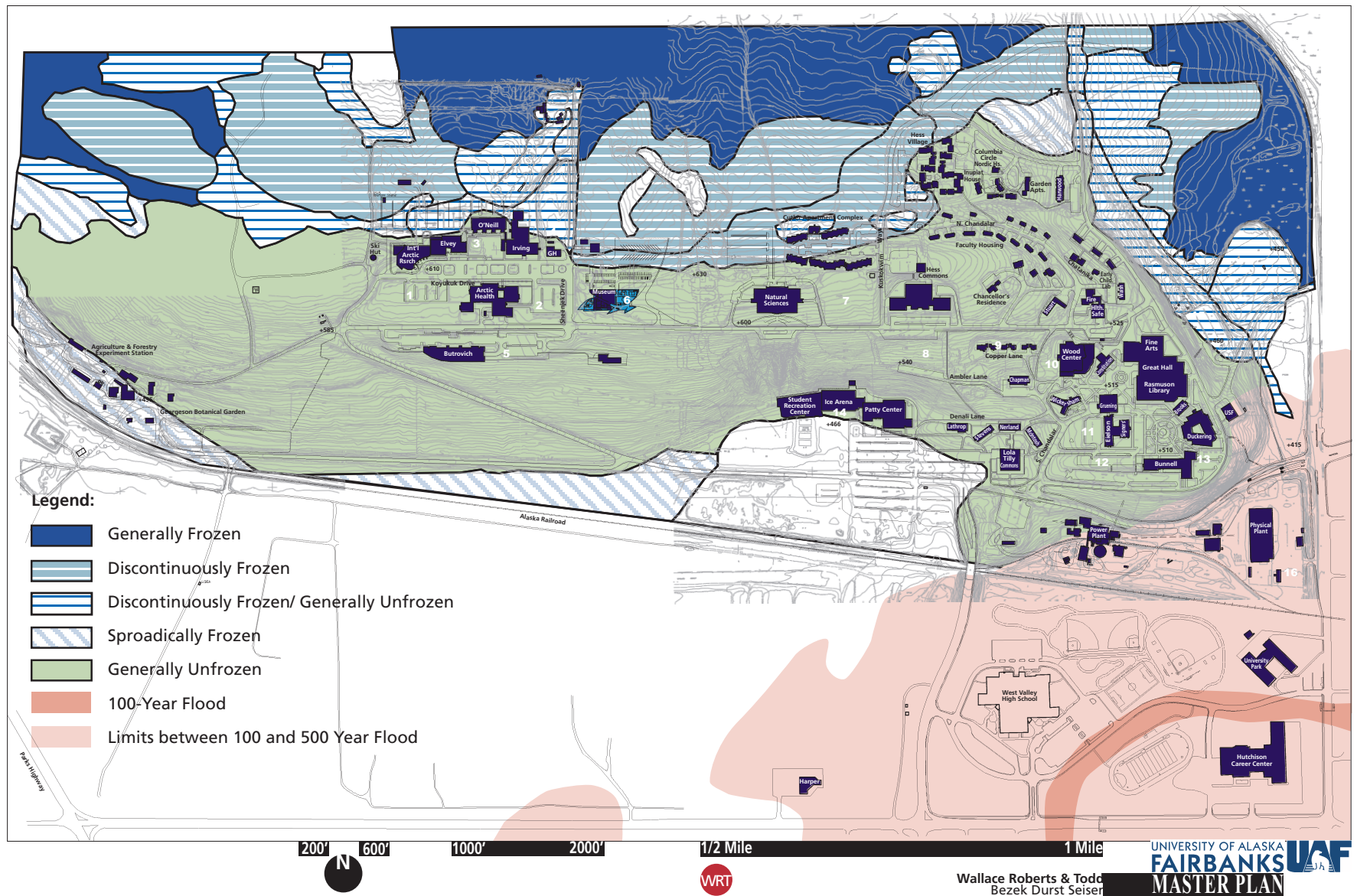
It is a challenge to use natural filtration methods for parking lot runoff because of the tremendous melt water when the ground is still frozen and plants are dormant. Drainage and contamination are also an issue in the areas used for dumping snow removed from roads and parking lots. Depending on the year, the piles can be quite massive. The dirty snow leaves concentrations of debris and contaminants when it melts. Currently, UAF uses vacant areas adjacent to the Taku and Nenana parking lots and along the right-of-way of the future north Tanana Loop as snow dump disposal sites.

SOILS AND FLOODING

As illustrated in the accompanying diagram, soil conditions and the proximity of the campus to the 100-year flood plain pose significant constraints to campus development. Most of the built campus falls within the zone of generally unfrozen soils, the area in which construction can occur most readily without risk of collapse. The discontinuous frozen soils along the northern edge of the built campus limit new construction in this zone. Further study of this area will be necessary to determine the alignment of the northern segment of the Tanana Loop, since some soil compression has already occurred along the northern edge of the parking area behind the International Arctic Research Center. The major flood of 1967 suggests that development should be kept well above the limits of the 100-year flood plain.

LANDSCAPE CHARACTER

The rugged topography offering long views across miles of boreal forest gives the campus its distinctive look and sense of openness. Within the built campus, however, the lack of vegetation around buildings, parking lots and roadways makes many areas feel barren and without scale.



Soils and Flooding Conditions



Constitution Park

OPEN SPACE

Campus open space falls into four general categories:

- ***Gathering spaces***, such as plazas, are designed for pedestrians and are shaped by the surrounding buildings. The Fountain of Flags and Constitution Park are the only spaces of this type in Lower Campus and there is the West Ridge plaza. In warmer weather, Constitution Park is actively used, given its comfortable scale, planting and proximity to Wood Center, the library and bookstore. The Fountain of Flags, however, has a vacant feeling, except during the summer months when the fountain and surrounding flags give it some focus and vertical definition. The intrusion of parking along the plaza's western edge and the general lack of enclosure and scale make it uncomfortable as a pedestrian environment. Similarly, parking in the West Ridge plaza area makes it less attractive as an



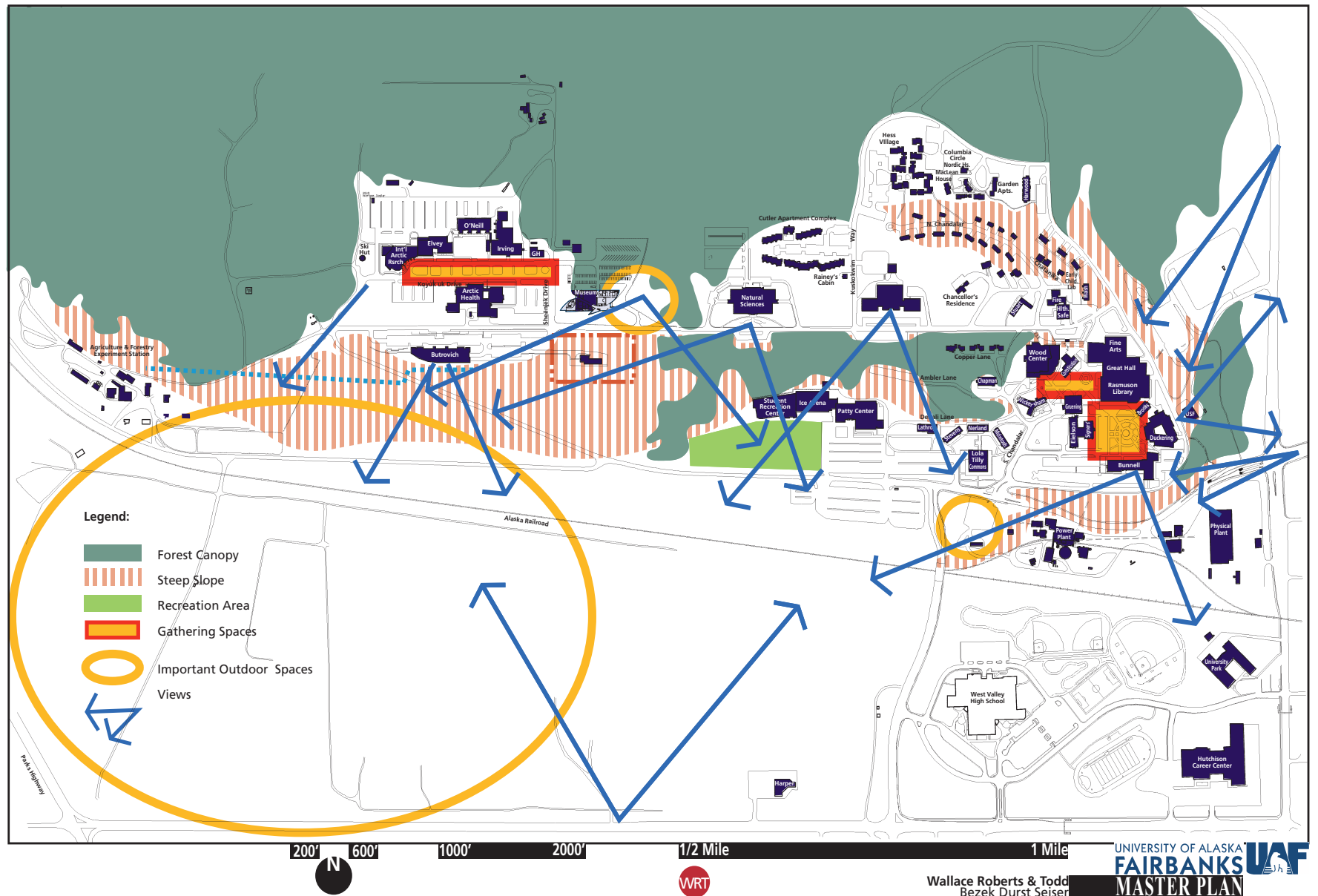
Heritage Park



Fountain of Flags in winter...



and in summer!





Recreation fields



*Getting around campus
in winter on foot*



Covered walkway

area for pedestrians and gathering.

- ***Boreal forest*** covers much of the upper campus and part of the slope south of Yukon Drive, as well as most of the land north of the built campus. With expansive stands of spruce, birch, balsam poplar and aspen, the campus forest is a resource for research, teaching and recreation and a visual asset that gives the campus its uniquely Alaskan character. Aging trees on the built campus point to a need for enhanced maintenance and re-planting.
- ***Open slopes*** occupy much of the southwest portion of the campus, creating a strong visual contrast with the surrounding forest.
- ***Recreation areas***, located southwest of the recreation and athletics complex, are used for recreation and intramural sports.

PEDESTRIAN CIRCULATION

The campus lacks sufficient walkways to move people around in safely and directly. Sidewalks typically are located directly adjacent to roadways. Since pedestrians mostly share the same circulation routes with cars, there are few places where they can walk, particularly in groups, without concern for passing vehicles. Until recently, Yukon Drive, the primary connection between Lower Campus and West Ridge, had discontinuous sidewalks on both its north and south sides, forcing students and others into the street at certain points. During the summer of 2001, a continuous sidewalk on the north side was completed from Wood Center to the UA Museum. Although still not extending to both ends of Yukon Drive and of unequal width in sections, it is a significant improvement. Another concern is that spring meltwater flows from the higher ground next to the sidewalks and turns to ice overnight, creating dangerous conditions.

In general, as pedestrians move east-west, they compete with cars and as they move north-south, they compete with topography. An ill-defined pedestrian network, steep slopes, silty soils and constant competition with personal and Facilities Services vehicles makes getting around campus on foot a challenge. The connecting links between major outdoor spaces appear to be aligned and surfaced primarily for the convenience of vehicles.

TRAILS SYSTEM

An extensive system of trails, used widely by the campus and Fairbanks communities, winds through the land north and west of the built campus. The trails and the land that they occupy are a prized resource of the campus. The draft UAF Skarland Trail System Management Plan, dated May 2000, will be used by the newly formed North Campus Subcommittee as part of a comprehensive plan to be developed for the North Campus area. The North Campus plan will become part of the comprehensive campus master plan upon its completion and approval by the Master Planning Committee and the chancellor.

VEHICULAR CIRCULATION AND SERVICE ACCESS

Vehicular Circulation

Land has been cleared to complete the north central segment of Tanana Loop. However, east-west traffic continues to be concentrated along Yukon Drive at the center of campus where it causes the greatest conflict with pedestrians. In general, the road system is fairly circuitous, in part due to topography. Several intersections need to be improved, both for vehicular and pedestrian traffic, including the intersections of Alumni Drive, Tanana Loop and South Chandalar; Taku Drive and Tanana Loop; and Yukon Drive and Tanana Loop.

Campus Entrances

Currently, there are five entrances into the campus. The new Thompson Drive entrance from Geist Road will replace the existing entrance at Fairbanks Street, which presently is the most heavily used from the Parks Highway, Geist Road and areas to the south.

- *Thompson Drive* will serve as the primary approach from the south and the highway.
- The *Alumni Drive* entrance from University Avenue is the most direct connection to the campus as one travels west from Fairbanks. Although a beautiful rock face greets the visitor on the north side of Alumni Drive, the approach is dominated by functional elements—the physical plant, power plant and expansive parking lots south of the Patty Center. Landscaping is also limited on the south side of Alumni Drive. The intersection of Alumni Drive, Tanana Loop and South Chandalar could be improved with better signage and pedestrian access.



Alumni Drive entry



View from the Taku parking area



North Tanana Loop entry

- The ***Taku Drive*** entrance is used primarily by commuter students and community members to access the parking lots off Taku Drive. Free parking with shuttle service to Wood Center is offered from the two lots. These unpaved lots with no landscaping give a utilitarian and unattractive first impression of the campus.
- Tree-lined ***North Tanana Loop*** is the most picturesque but least used entrance into the campus. It primarily serves faculty and staff living north of the campus. However, once the north segment of Tanana Loop is completed, it may be much more actively used by traffic going to the West Ridge.
- The ***west entrance***, at the intersection of Sheep Creek Road and West Tanana Loop, was redesigned and completed in 1989 to encourage traffic from Sheep Creek to proceed onto the Parks Highway and Geist Road and bypass the university rather than driving through campus. The west entrance provides a very beautiful entry into the campus, passing by the farm fields and the botanical garden.

Emergency and Service Access

In response to emergencies in the community south of campus, the fire department uses the pedestrian segment of South Chandalar to access Fairbanks Street. The Thompson Drive addition and closing of Fairbanks Street will have a negative impact on emergency response times until the safety services building is relocated from the core of campus. Service access is intermixed with other types of circulation. Buildings are typically serviced from parking lots and dumpsters are in full view.

PARKING

Currently, there are 4,090 parking spaces on campus, all in surface lots. Of these, 3,386 are electrified, a necessity in Fairbanks' winters. The ratio of parking spaces per student, based on an FTE enrollment of 3,062 students at the Fairbanks campus, is 1.34. The standard for an institution with a mix of traditional and non-traditional students ranges between .5 and .7 spaces per student. Even with UAF's large research component, high percentage of part-time and commuter students and location outside town, this is an unusually high parking ratio. Yet, despite the large number of spaces, there is a perceived shortage.



Parking area at center of West Ridge

Surface lots are scattered throughout the campus. The numerous small lots in Lower Campus make inefficient use of space, are difficult to maintain especially for snow removal and detract from the safety and appearance of the pedestrian environment. The same is true for on-street parking, which is scattered throughout campus in non-residential areas. Most of the Lower Campus lots are within a 5-10 minute walking distance of academic buildings. However, where steep slopes occur, particularly from the lot off Taku Drive, walking time increases and winter cold can add to the perception of distance. Campus shuttle buses serve the Ballaine and Nenana lots on the perimeter of Tanana Loop, where free parking is available. Visitor parking is provided in the lot east of Signers' Hall. Accessible parking is provided west of the Eielson Building and in lots throughout the campus.

Parking Services administers a campus-wide decal system that gets mixed reviews. Specifically, the gold decals, which allow members of the campus community to purchase reserved spaces in lots throughout campus, are a continuing source of debate. Further analysis of parking needs and an evaluation of the decal system is needed.

Parking Survey

To place parking in a broader context, eight comparable institutions (or nearly comparable, since UAF is unique in its far northern location) were surveyed. All are small universities in northern climates, with a mix of undergraduates and graduates and some level of research. All are public universities and all have students living on campus.

As illustrated in the following chart, while UAF has a greater percentage of part-time students than the universities surveyed, its parking ratio is considerably higher than the others. Moreover, among the universities surveyed, there does not appear to be a direct relationship between percentage of part-time students (or FTE as a percentage of headcount) and the number of parking spaces provided. Compared with the other schools, UAF seems to have an abundance of parking spaces, some of which could be removed with considerable benefit to the overall campus environment.



Visitor lot at Signers' Hall



UNIVERSITY OF ALASKA FAIRBANKS MASTER PLAN

PARKING SURVEY

Institution	Carnegie Classification	Overall Campus Acreage	Developed Campus Acreage	Head Count	FTE	%FTE	% Students Living on Campus	Transit Availability	Total Parking Spaces	Surface Parking Spaces	Structured Parking Spaces	Parking Ratio
UAF	Doctoral II	2,600	230	4,938	3,061	62%	23%	Y	4,090	4,051	0	1.34
University of Wisconsin, Green Bay	Master's II	700		5,505	4,436	81%	30%	Y	4,080	4,080	0	0.92
University of New Hampshire, Durham	Doctoral II	2,600	200	13,426	12,120	90%	50%	Y	6,566	6,566	0	0.54
University of Vermont, Burlington	Research II	4,054	438	10,118	8,732	86%	36%		4,707	4,707	0	0.54
State Univ. of New York, College of Buffalo	Master's I	114	114	11,399	8,674	76%	14%	Y	3,737	3,737	0	0.43
University of Minnesota, Duluth	Master's I	244	40	9,087	7,664	84%	32%	Y	2,800	2,800	0	0.37
Michigan Technological University	Doctoral II	700	200	6,336	5,762	91%	41%	Y	4,500	4,500	0	0.78
University of Montana, Missoula	Doctoral II	1,028	495	12,406	10,565	85%	18%	Y	5,207	4,864	343	0.49
University of Wisconsin, Parkside	Master's II	750	100 (?)	4,969	3,561	72%	14%	Y	2,130	2,130	0	0.60

FTE: Full Time Equivalent

HC: Head Count

Parking Ratio=Parking Spaces per FTE



Shuttle stop at IARC



Shuttle hut



Fairbanks Street entry

TRANSPORTATION

Campus Shuttle System

The university operates an on-campus shuttle bus system, which is a critical component of the campus circulation system, given the dispersed layout of the campus and steep topography. As of spring semester 2002, eight different shuttle routes serve campus, including the Tanana Valley Campus. Since instituting the parking shuttles and express route between Lower Campus and West Ridge at the recommendation of the 1991 master plan, shuttle service has improved considerably. However, headways continue to be longer than the desirable 10 minutes. The system continues to evolve and improve.

SIGNAGE

Existing campus signage is confusing, as well as inconsistent in style and placement, making it very difficult to find one's way around campus. A comprehensive signage and wayfinding plan that addresses campus identification at entrances, building identification and directional and enforcement signage is needed. Information and directional signage is also essential inside all buildings.

LIGHTING

Natural light changes dramatically throughout the year in the subarctic. From summer's brilliant light to the long hours of darkness in winter, Alaskans experience the full spectrum of natural light conditions. Since the winter months dominate the academic year, interior and exterior lighting of campus is extremely important. Both practical and esthetic reasons can be cited for providing adequate lighting throughout campus. In particular, lighting needs to emphasize safety throughout the entire campus.

Current campus lighting standards were set in 1994 for roadways, walkways, parking lots and stairways as a result of an evaluation of campus lighting levels prepared by the university. However, no standards exist for pole heights and fixture types. Lighting fixtures tend to be vehicular in scale and utilitarian in design, even in pedestrian areas such as the Fountain of Flags and Constitution Park. An exception is the row of small-scale fixtures along the path-

way leading from Fairbanks Street just north of the railroad tracks, which together with planting creates a pleasant pedestrian experience.

Although the campus is well lit for the most part, lighting is not consistent. The utilitarian design of the lighting fixtures on most of the campus tends to be “cold,” rather than providing some visual warmth. The design of most buildings on campus has not maximized the unusual effects of the arctic lighting on building surfaces.

HOUSING

As of fall 2000, 1,143 students, or 23 percent of headcount enrollment, were living on campus, with a 93 percent occupancy rate for all campus housing. With a potential occupancy of 1,227 beds on campus, the university can house 25 percent of the current student headcount population. In recent years, the campus has had a fall vacancy rate ranging from 7 to 15 percent, due partially to continuing remodeling, buildings being pulled off-line for alternative uses, response to requests for different living space arrangements and off-campus options. In 1999, deferred maintenance for campus housing accounted for 13 percent of the campus total.

The university has moved forward aggressively in the past decade to upgrade and renovate current facilities. Both exterior faces and internal systems have been modernized and associated space has been developed to add to a more student-centered atmosphere. Emphasis has been placed on creating comfortable, informal meeting spaces, while also modernizing large event facilities. The university foresees a need for more modern apartment-style housing and is exploring partnerships with private companies to develop housing alternatives to meet the broad spectrum of potential users—single students, students with families, faculty housing, summer conference visitors and other miscellaneous groups.



Campus lighting



Path lighting on campus

UTILITIES AND INFRASTRUCTURE

The following Utilities Map illustrates the existing distribution of utility lines. The underground utilidor system carries steam, condensate return, domestic water and chilled water, electrical distribution lines and communications cable. Construction of new space on West Ridge will require significant investment in expanding campus utilities, which are currently at capacity and will impact the location and capacity of parking in this area of the campus. The utilities at the Fairbanks Experimental Farm are in extremely poor condition and will need to be upgraded to accommodate new labs and a visitor center. UAF has current utility infrastructure studies (electrical distribution, water, sewer and steam distribution) that guide expansion and upgrades on the UAF campus. All development on campus must include utilities and infrastructure accommodations. The majority of utilities are run within the extensive utilidor system.

FACILITIES

Academic and Research Facilities

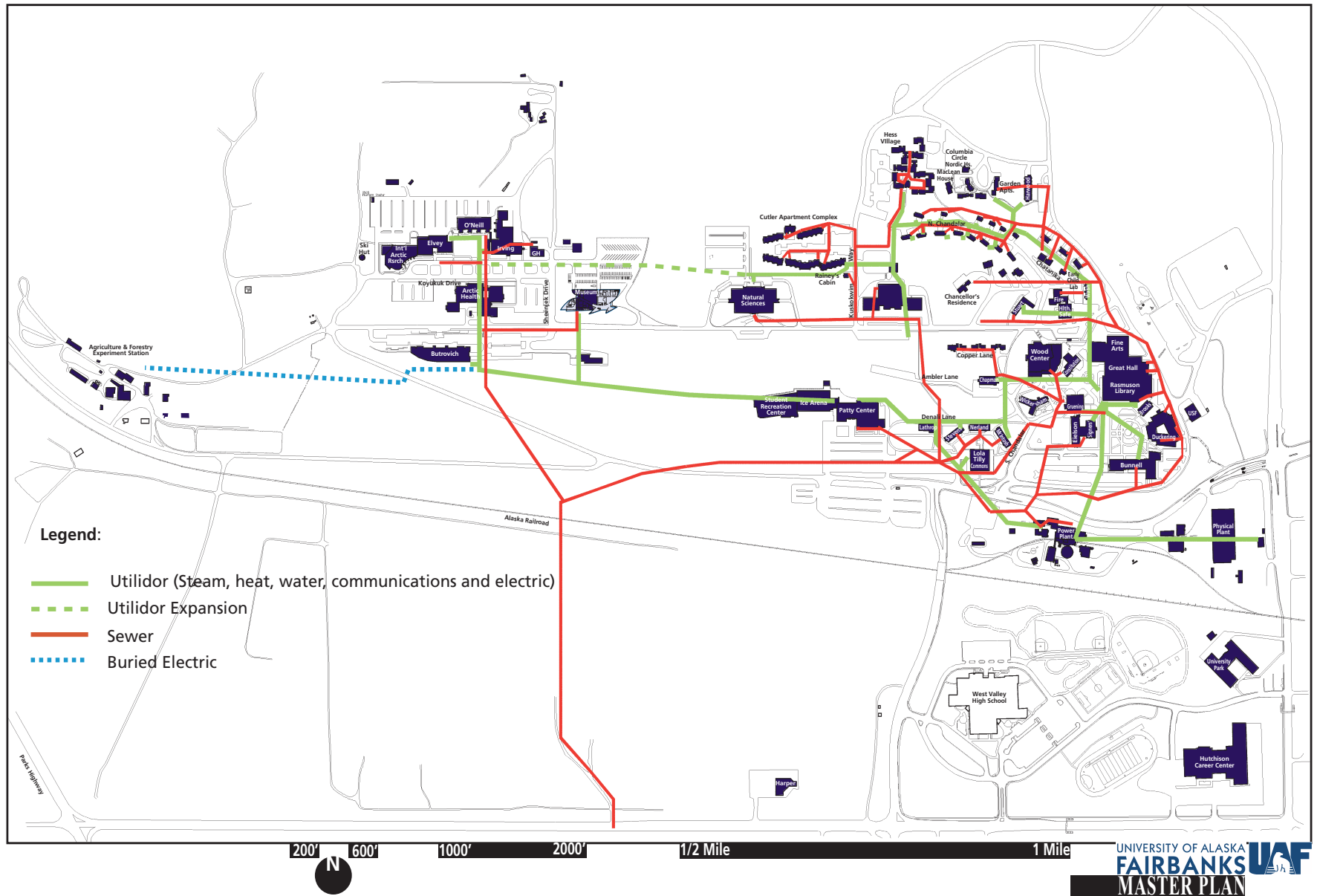
- Agricultural Field Experiment Station -18 buildings
- Arctic Health Research Building (1973)
- Brooks Memorial Mines Building (1952)
- Bunnell Building (1959)
- Bunnell House-Early Childhood Lab School (1922)
- Chapman Building (1951)
- Coal Lab (1988)
- Copper Lane House
- Duckering Building (1961/1964/1968/1986/2001)
- Eielson Building (1940)
- Elvey Building (1970)
- Fine Arts Building (1970)
- Geist Building - UA Museum (1980)
- Gruening Building (1973)
- Harper Building (1985)



Rasmuson Library



Natural Sciences Facility



Utilities



Elvey Building

- Institute of Arctic Biology Greenhouse (1998)
- Hutchison Career Center
- International Arctic Research Center (1999)
- Irving Building (1968/1972)
- Large Animal Research Station (LARS)-7 buildings
- Natural Sciences Facility (1994)
- O'Neill Building (1973)
- Rasmuson Library (1970)
- U.S. Forest Service Research Building (1962)
- University Park Building (1967)
- United States Geological Survey (7 instrument and support buildings)
- West Ridge Greenhouse (1969)

Administration and Support Services

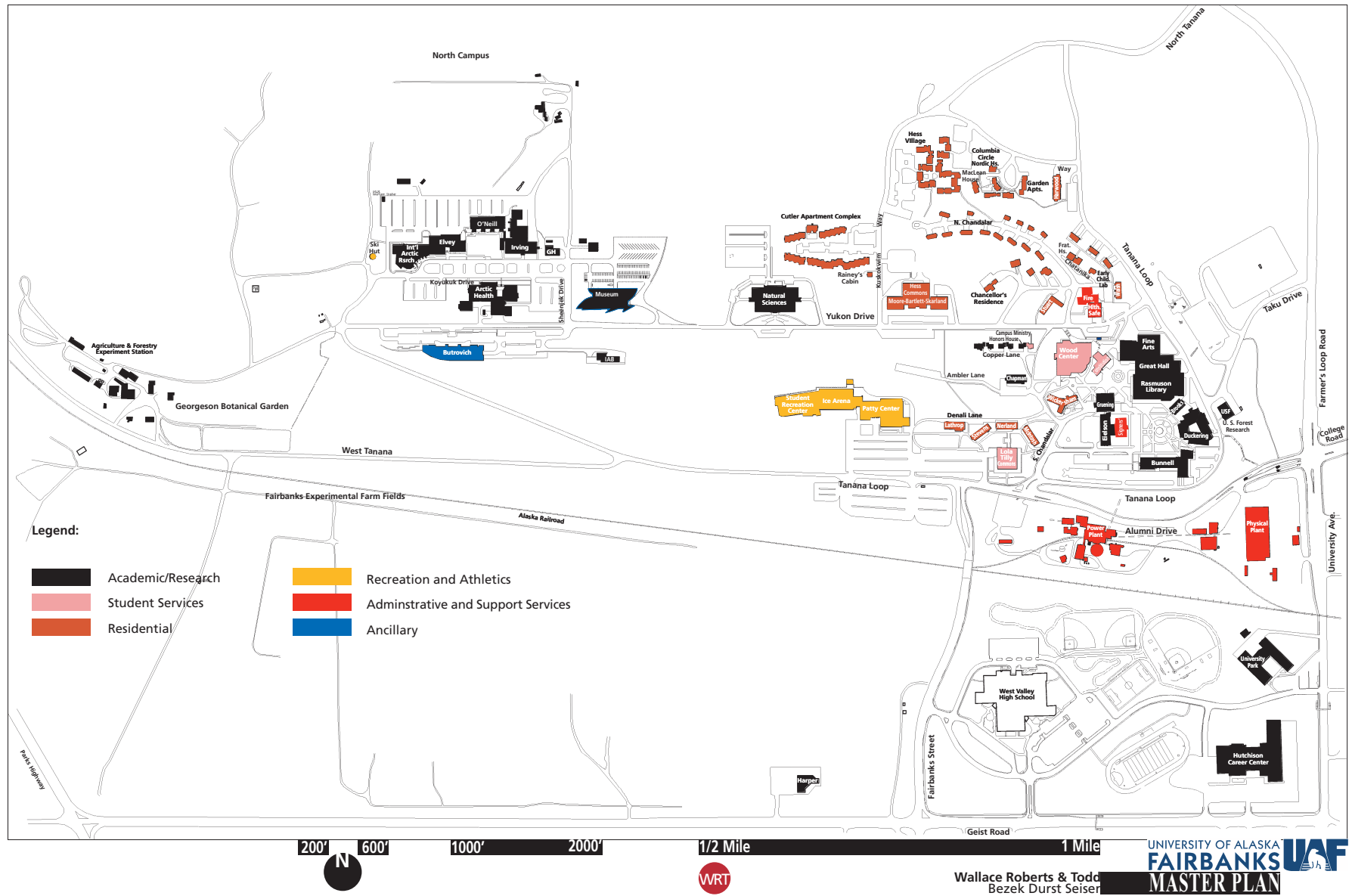
- Administrative Services Center (1992)
- Atkinson Building - Power Plant (1964)
- Physical Plant Building (1964)
- Signers' Hall (1931)
- Water Treatment Plant (1981)
- Whitaker Building - Health, Safety and Security (1964/1975)

Student Services

- Constitution Hall (1956)
- Hess Commons (1970)
- Lola Tilly Commons (1963)
- University Campus Ministry-Copper Lane (1950)
- Wood Center (1970)



Approach to West Ridge from Tanana Loop



Campus Buildings



Stevens Hall



Lathrop Hall

Residential

- Bartlett Hall (1970)
- Chancellor's residence (1954)
- Chatanika-fraternity house (1959)
- Cutler Apartment Complex (1985)
- Faculty Housing-24 houses on Copper Lane, Chandalar, Chatanika, Colville (1949-1956)
- Garden Apartments (1964/1965)
- Harwood Hall (1964)
- Hess Village-13 buildings (1972)
- MacLean House (1997)
- Lathrop Hall (1962)
- McIntosh Hall (1957)
- Moore Hall (1966)
- Nerland Hall (1952)
- Nordic House-visiting scholars (1950)
- Rainey/Skarland Cabin (1936) (National Historic Register)
- Skarland Hall (1964)
- Stevens Hall (1958)
- Stuart Hall (1956)
- Walsh Hall (1958)
- Wickersham Hall (1957)

Recreation and Athletics

- Patty Athletic Center (1963)
- Ice Arena (1979)
- Student Recreation Center (1994)

Ancillary

- Butrovich Building - Statewide Administration (1990)

UAF Facilities Condition Audit and Survey

In September 2001, Bezek Durst Seiser, Inc., architects, Anchorage, completed a review of 15 major campus facilities totaling 930,000 square feet to develop deficiency reports, project scopes, costs and a database for recommended projects to facilitate life-safety code compliance and mitigation of program inadequacies, maintenance, operation, hazardous materials and arctic design deficiencies. The facilities ranged from 30 to 70 years old and most have had little overall refurbishment except for the roofs and some limited fire/life safety and ADA adaptations. The research and lab-intensive facilities surveyed have some of the most costly needs and will be difficult to renovate without major disruptions to ongoing activities.

Implementing the facility study recommendations may have some impact on or be affected by campus planning issues related to:

- Primary building usage-change or replacement of building use
- Pedestrian circulation
- Accessibility
- Campus exterior space—new entries, additions, expanded building service areas, site grading and walk modifications for ADA and drainage
- Building appearance—new or modified building exteriors to address energy or maintenance issues
- New construction scenarios associated with project scopes

The university will continue the survey process for other campus buildings and campus infrastructure (site amenities, improvements and utilities) in the near future.



Recreation complex



View of Butrovich and West Ridge from Geist Road