

KULIS

LAND USE PLAN

MAY 2011



KULIS LAND USE PLAN

**TED STEVENS ANCHORAGE INTERNATIONAL AIRPORT
ANCHORAGE, ALASKA**

DOT&PF Project No. 52028

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LIST OF ACRONYMS

AADT	annual average daily traffic
AKANG	Alaska Air National Guard
BRAC.....	Base Realignment and Closure
DEC.....	State of Alaska Department of Environmental Conservation
DNL	day-night average sound level
DOD.....	U.S. Department of Defense
DOT&PF.....	State of Alaska Department of Transportation and Public Facilities
FAA.....	Federal Aviation Administration
FMR	fair market rent
FMV	fair market value
KAG.....	Kulis Advisory Group
Kulis.....	Kulis Air National Guard Base
MOA	Municipality of Anchorage
RFP	request for proposal
SAPX	South Airpark Expansion
TSAIA.....	Ted Stevens Anchorage International Airport
USAF	United States Air Force

EXECUTIVE SUMMARY

Ted Stevens Anchorage International Airport will take over ownership of a large inventory of buildings and infrastructure at Kulis Air National Guard Base in 2011. The purpose of the Kulis Land Use Plan is to identify how to develop/redevelop the Kulis Air National Guard Base site in a responsible manner to foster aviation/economic development. The Kulis Land Use Plan identifies development issues and constraints, land use options, how those options should be phased, potential community impacts and mitigation measures, and a proposed strategy to attract businesses to Kulis Air National Guard Base. The Kulis Land Use Plan also recommends interim non-aeronautical uses for Kulis properties that are not likely to be feasible for aeronautical uses over the next 20 years.

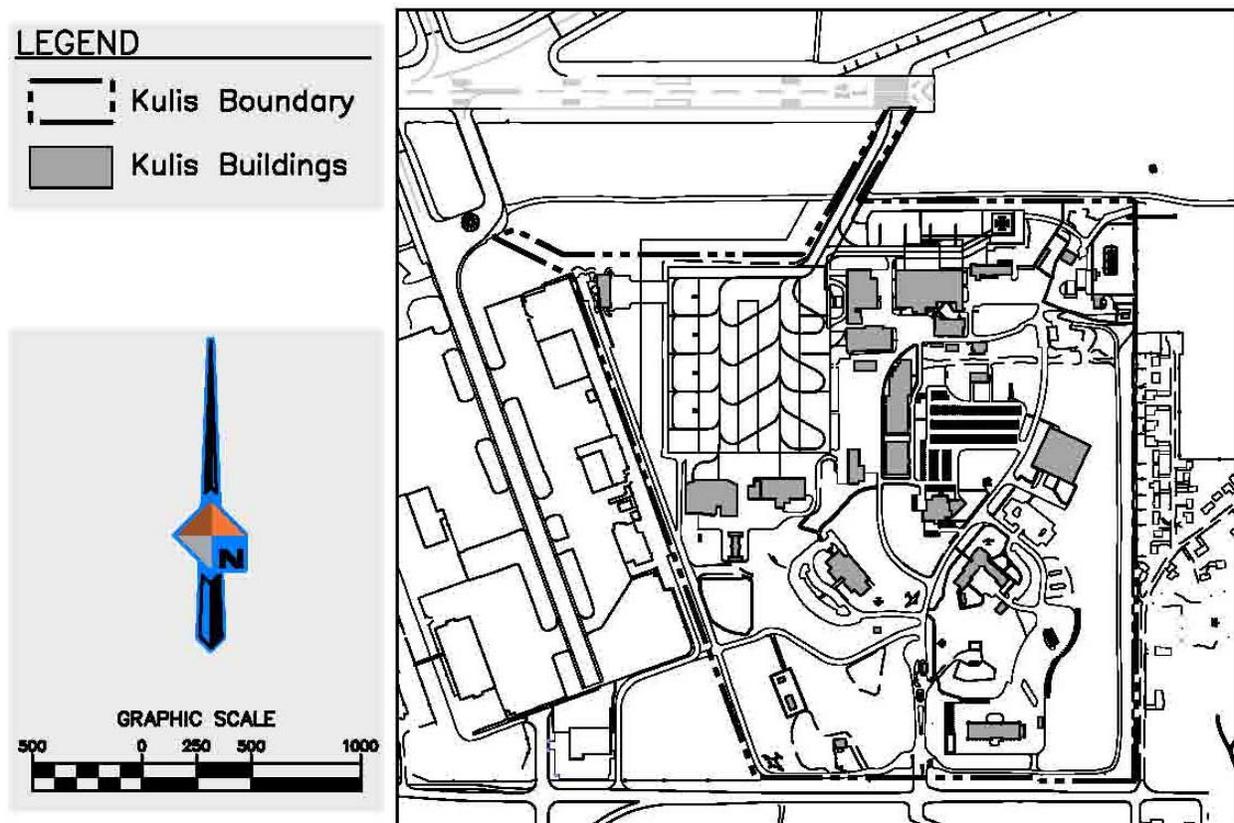


Figure ES-1: Kulis Air National Guard Base Site and Buildings

Kulis Air National Guard Base neighbors, municipal officials, and others participated in a Kulis Advisory Group and in public meetings. Primary concerns discussed included potential impacts on the neighborhoods to the east and south, especially noise and visual impacts, traffic on Raspberry Road, and potential contamination on Kulis Air National Guard Base. Other concerns

related to air quality, impacts of construction, utilities and drainage, and effects on property values. The Kulis Land Use Plan discusses ways to address these concerns as the site is developed.

The recommended Kulis Redevelopment Phasing Plan is shown below. Because of topography, costs, and existing development patterns, the north part of the site is likely to be redeveloped for aeronautical uses while the south part of the site will be redeveloped for non-aeronautical uses over the next 20 years. Four existing buildings on the south side of the site are suitable for non-aeronautical use. Sometime after 20 years, if better development options are not available at the airport, the south part of the site may be converted to aeronautical uses. Development of the southern area for aeronautical uses will be expensive and require significant soil removal and demolition of much of what is there today.

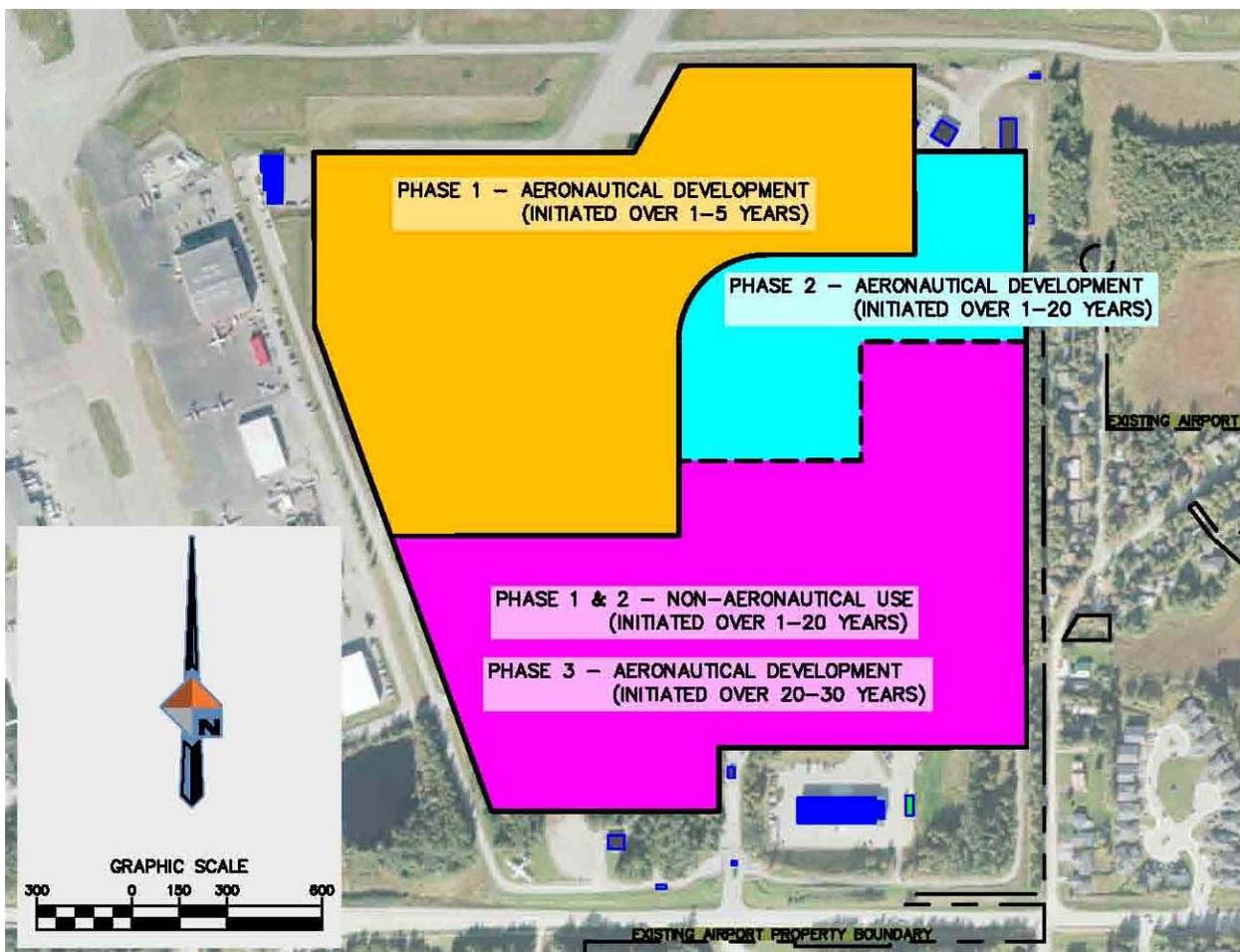


Figure ES-2: Recommended Kulis Redevelopment Phasing

The first phase of aeronautical development on the northwest side of the site is shown in the figure below. This area is proposed for aeronautical development first because it currently has aeronautical and support infrastructure; an existing large-aircraft parking apron, two existing hangars, existing road and utility access, and several other potential undeveloped lease lots. The area on the northeast side of the site is more expensive to develop and will likely not be developed until after the northwest side of the site. Furthermore, more discussion with the neighbors, the municipality, and prospective tenants is needed before final development layouts are determined. Some of these discussions will occur as part of the upcoming airport master plan.

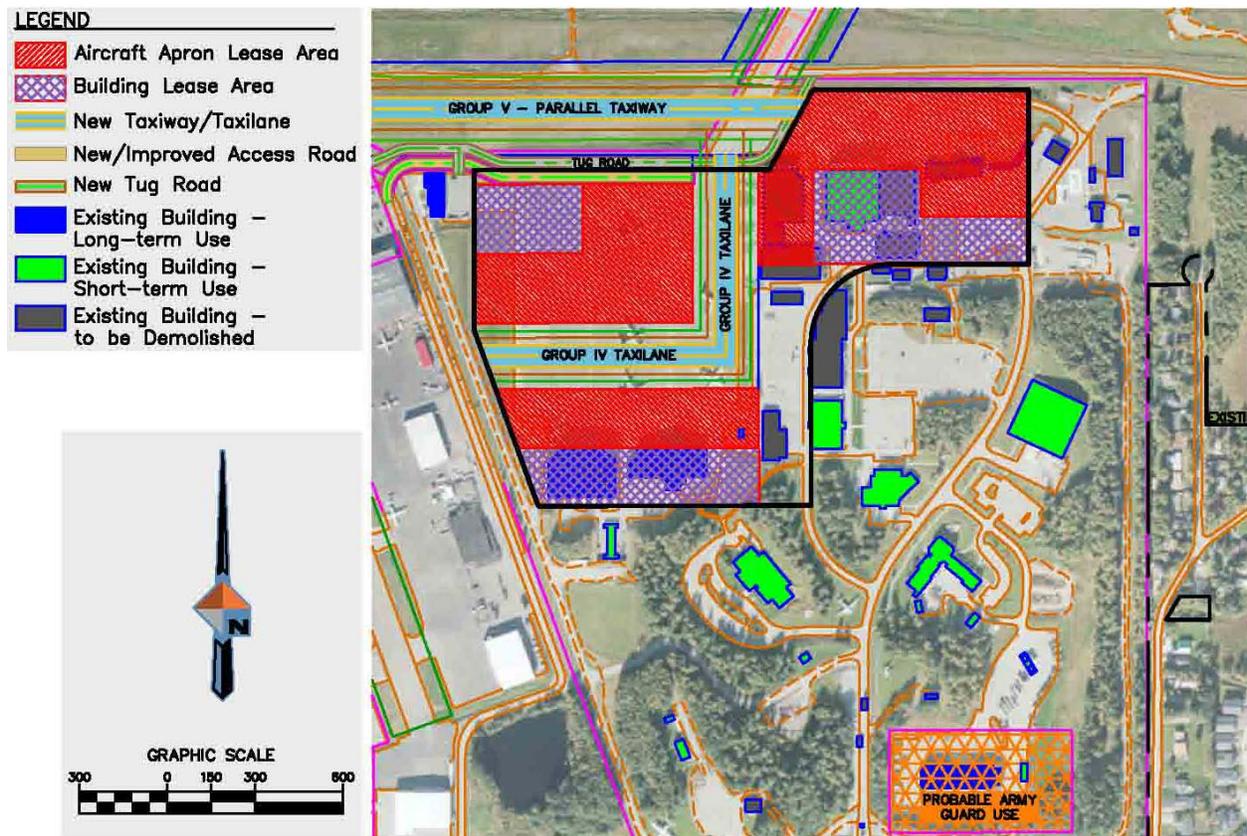


Figure ES-3: Recommended Phase 1 Aeronautical Development

A business interest survey completed as part of this planning process showed that there is interest by existing airport tenants in the existing buildings and land identified for aeronautical use. However, whether this interest translates into actual building sales and land leases in the short term is uncertain, particularly in today's economy when many tenants are reluctant to invest in facilities. Interest in the non-aeronautical properties on the south side of the site is also somewhat speculative. Building sales in this area will require long-term leases of at least 20 years. A strategy to market and sell the buildings and lease the airport land at the Kulis Air National Guard Base site is included in this report.

1.0 INTRODUCTION

Kulis Air National Guard Base (Kulis) is located at the Ted Stevens Anchorage International Airport (TSAIA), approximately three miles southwest of downtown Anchorage (Figure 1). Comprising approximately 4,680 acres, TSAIA property is owned by the State of Alaska and is administered and operated by the State of Alaska Department of Transportation and Public Facilities (DOT&PF). The United States Air Force (USAF) leases approximately 129 acres from the State of Alaska in the southeast corner of the TSAIA near Runway 25L/7R. The Alaska Air National Guard (AKANG) has a license from the USAF to operate Kulis. Residential and commercial areas border Kulis to the east, west, and south and the TSAIA airfield is to the north. Kulis currently contains forty-six buildings and facilities (Figure 2).

During the Base Realignment and Closure (BRAC) process completed in 2005, the BRAC Commission recommended closure of Kulis and the relocation of the 176th Wing of the AKANG and associated aircraft to Elmendorf Air Force Base no later than September 15, 2011. The Kulis site would then be returned to the State of Alaska under the License to Operate Agreement with the USAF. In preparation for receiving the land and facilities into the TSAIA inventory, a Kulis Land Use Plan is needed to guide the development and leasing of the property. This Kulis Land Use Plan documents the planning process and recommendations for the reuse and redevelopment of the Kulis site.

1.1 Project Purpose/Goal

The goal of the Kulis Land Use Plan is to identify how to develop/redevelop the Kulis site in a responsible manner to foster aviation/economic development. The Kulis Land Use Plan will be a decision-making guide for the re-use of the Kulis site. The plan's recommendations will be considered and updated in future airport master plan updates.

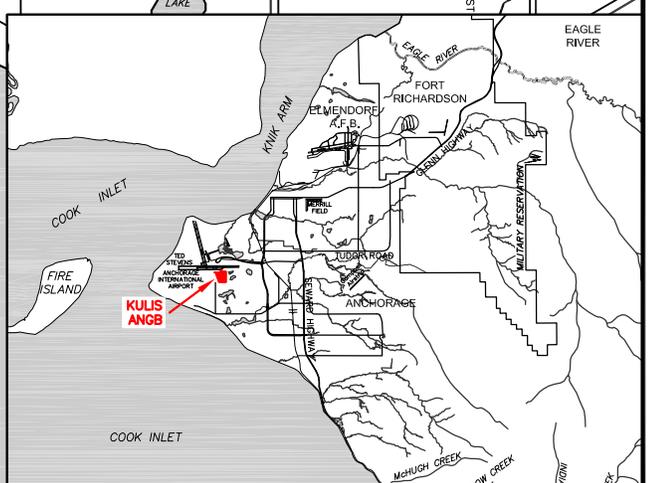
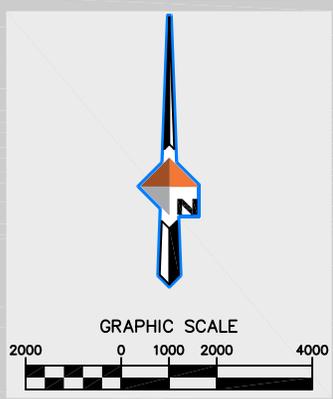
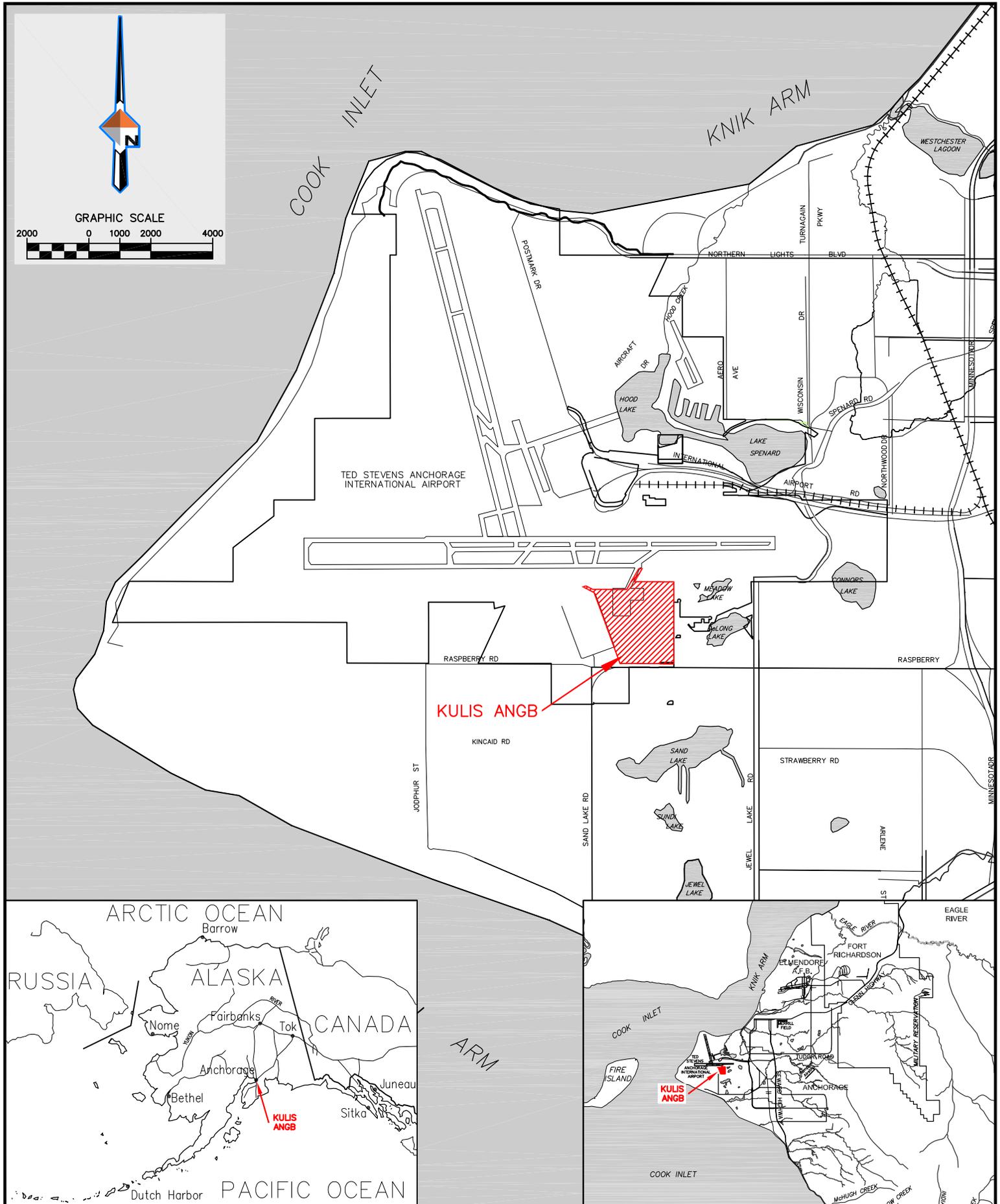
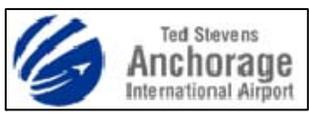


Figure 1
Regional Location Map - Kulis Air National Guard Base





Figure 2
Kulis Buildings & Facilities



1.2 Overview of Planning Process

The Kulis Land Use Plan included the following steps:

- Inventory facilities and existing conditions on the Kulis site.
- Assess the demand for aeronautical use of Kulis relative to other TSAIA properties, including the South Airpark Expansion (SAPX) area.
- Identify Kulis land use and development layout options.
- Consider community impacts from redeveloping Kulis and ways to mitigate any negative impacts.
- Consider comments from the general public and key stakeholders, and adjust plans as needed.
- Identify capital project phasing, interim building maintenance requirements, and business strategies for developing/redeveloping the properties.
- Document the results of the study on the Airport Layout Plan and in this report.

Comments from the public and stakeholders helped identify initial issues and assisted the project team in evaluating and refining options. Four public meetings were held at project milestones. Meeting notices were mailed to approximately 1,800 residences near Kulis and were advertized with the community councils and Anchorage Daily News. A Kulis Advisory Group (KAG) made up of representatives of the neighborhood, municipal officials, the Federal Aviation Administration (FAA), airlines, and economic development groups reviewed project information prior to the public meetings and advised on the options and the public involvement approach. The project team visited the neighborhood to the east of Kulis, walked the property boundary with the neighbors, and discussed their concerns and suggestions. Project information was presented at Sand Lake Community Council meetings and was posted on the TSAIA website.

2.0 KULIS AIR NATIONAL GUARD BASE INVENTORY AND EXISTING CONDITIONS

The 129-acre Kulis site is bounded on the west by the South Airpark, on the north by the TSAIA airfield, on the east by a residential area, and on the south by Raspberry Road (Figure 2). Construction of Kulis facilities began in 1955, and expansion and rehabilitation have been ongoing since then; the most recent, a sand storage constructed in 2003. The site consists of aircraft and helicopter parking areas, maintenance hangars, and a wide array of buildings necessary to support the AKANG mission.

Kulis land was acquired as two parcels; Tract XVI encompassing about 28 acres, and a portion of Tract 1 Parcels A, D, F, and H totaling about 101 acres. Copies of the deeds and associated obligations can be found in Appendix E.

2.1 Aircraft/Helicopter Access and Parking

2.1.1 Aircraft Taxiways

Aircraft access from the TSAIA airfield is from Taxiway C, a single paved taxiway connecting to the end of Runway 25L. The taxiway south of Runway 25L meets Design Group IV aircraft standards.

2.1.2 Aircraft/Helicopter Parking Aprons

A paved aircraft parking apron in the northwest quadrant of the site is approximately 760 feet by 880 feet. The AKANG's Lockheed C-130 and HC-130N Hercules aircraft park on this apron. The AKANG's Sikorsky HH-60 Pave Hawk helicopters park on a 500-by-200-foot paved area at the northeast of the site (east of Taxiway C and north of Building 3) and land on the adjacent paved helipad.

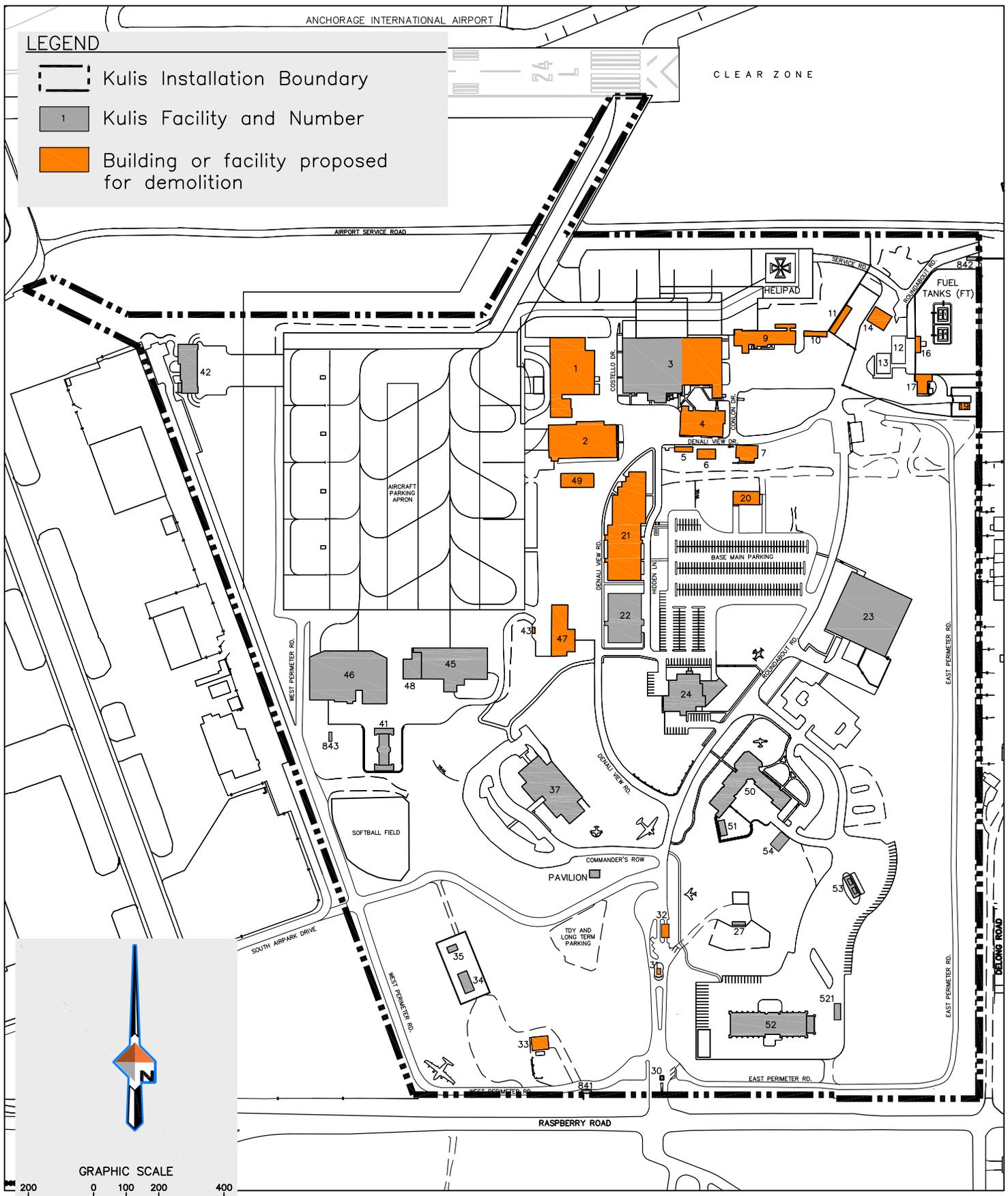
2.2 Landside Facilities

There are approximately forty-six existing buildings/facilities on the Kulis site (Figure 3). These existing facilities include offices, warehousing, hangars, storage, water meter housing, fuel facilities, and many other facilities unique to a military air base. A few of the existing buildings were constructed in the 1950s and 1960s, but most are newer and appear to have been well-maintained by the AKANG. See Table 1 for the description, area, and construction year of the existing buildings and facilities on Kulis.

CLEAR ZONE

LEGEND

-  Kulis Installation Boundary
-  Kulis Facility and Number
-  Building or facility proposed for demolition



GRAPHIC SCALE

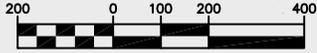


Figure 3
 Kulis Buildings & Facilities Proposed for Demolition



Table 1: Existing Buildings and Facilities on Kulis

Building No.	Description/Purpose	Area (square feet)	Year Constructed
1	Maintenance Shop	29,540	1977
2	Hangar	20,354	1964
3	Hangar	62,256	1963
4	Offices, Administrative	10,696	1955
5	Storage Shed	796	1959
6	Storage Shed	1,700	2001
7	Storage Shed	2,440	1982
9	Offices, Administrative	10,313	1963
10	Vehicle Parking Shed	1,131	1967
11	Vehicle Parking Shed	1,537	1967
14	Parking Canopy	3,000	1977
16	Pump Station	1,860	1972
17	Storage Shed	2,200	1977
19	Storage Shed	600	1982
20	Offices, Administrative	5,500	1989
21	Offices, Administrative	31,085	1971
22	Dining Hall and Multipurpose	14,850	1975
23	Warehouse and Offices	39,420	1993
24	Clinic, Offices, Administrative	23,912	2001
27	Offices, Administrative	480	1997
30	Traffic Check House	71	1971
31	Traffic Check House	220	2004
32	Vehicle Inspection Station		
33	Offices, Administrative		
34	Storage Shed	1,920	1997
35	Shop	560	1997
37	Offices, Administrative	23,793	1985
41	Engine Test Stand		1979
42	Fire Rescue Station	12,990	1999
43	Fuel Shelter	310	1999
45	Hangar	20,545	1980
46	Hangar	36,621	2001
47	Offices, Administrative	10,213	1970
48	Shop	7,292	1998
49	Shop	6,424	1985
50	Admin Offices and Maintenance Shops	23,767	1997
51	Storage Shed	960	1998
52	Vehicle Maintenance Facility and Administrative Offices	18,060	1999
53	Vehicle Fuel Station	621	2001
54	Sand Shed	1,602	2003
521	Vehicle Maintenance Facility		
841	Water Meter Facility	239	1989
842	Water Meter Facility	239	1989
843	Water Meter Facility	253	2001
	Pavilion		
FT	Fuel Tanks		

Notes: 1) Source: Environmental Assessment for BRAC of Kulis, Internal Draft Description of the Proposed Action and Alternatives, July 2007.

2) Building purposes have been modified to indicate the general function of each building

Many of the existing buildings and facilities do not have direct frontage onto the airfield, are not designed to house aircraft or aircraft-related functions, are in the way of future aeronautical uses, and are unlikely to be marketable for non-aeronautical purposes. For these reasons, and considering the buildings’ age, condition, size, location, environmental cleanup required, and configuration, TSAIA has requested the removal of twenty-five facilities prior to the AKANG’s vacation of the site (Figure 3, Table 2).

Table 2: Facilities Requested for Removal

Building No.	Description/Purpose	Comments
1	Maintenance Shop	
2	Helicopter Hangar	
3	Hangar	Partial demo - remove only portion east of hangar
4	Offices, Administrative	
5	Storage Shed	
6	Storage Shed	
7	Storage Shed	
9	Offices, Administrative	
10	Vehicle Parking Shed	
11	Vehicle Parking Shed	
14	Parking Canopy	
16	Pump Station	
17	Storage Shed	
19	Storage Shed	
20	Offices, Administrative	
21	Offices, Administrative	
27	Antennas at Facility	Remove antennas only - building to remain
30	Traffic Check House	
31	Traffic Check House	
32	Vehicle Inspection Station	
33	Offices, Administrative	
43	Fuel Shelter and Tank	
47	Offices, Administrative	
49	Shop	
FT	Fuel Tanks	

While it is possible that the AKANG will not agree to remove all of the buildings requested, for purposes of this Land Use Plan, it is assumed that those identified as having no value to TSAIA will ultimately be removed. The following discussion of on-site facilities only addresses those facilities that have not been identified for removal. Refer to Figure 3 for the locations of these facilities.

2.2.1 Hangars

Three hangars and the engine test stand will remain on site. A brief description of each follows:

- Hangar (Building 3) - This hangar was built in 1963 and is on the National Register of Historic Places. While the eastern portion of the hangar is proposed for removal, the western portion will remain, leaving an approximate 32,550-square-foot building. The hangar fronts the helicopter parking apron and houses office space and an upgraded mechanical, electrical, and fire suppression system. It is a single-bay building that can accommodate one C-130.



Figure 4: Hangar (Building 3), South Side



Figure 5: Hangar (Building 45), Apron Side

- Hangar (Building 45) - This hangar, built in 1980, is on the south side of the aircraft parking apron. The hangar houses a special ventilation system for specific maintenance work conducted within the bay. A small amount of administrative/office area is available within the hangar. The building has a 159-foot door and can accommodate a C-130 or similar aircraft.

- Hangar (Building 46) - The newest hangar, built in 2001, also fronts the south side of the aircraft parking apron and features a fire room, mechanical room, and a fabric bay door. The hangar is a two-bay single-door building that accommodates a C-130 and a smaller aircraft such as a SAAB 340B.



Figure 6: Hangar (Building 46), Interior



Figure 7: Engine Test Stand (Building 41)

- Engine Test Stand (Building 41) - The engine test stand, south of Hangars 45 and 46, will remain. The test area, with earthen reinforced walls on three sides and open to the north, was designed for C-130 engines.

2.2.2 Office/Warehouse Buildings

Seven facilities used for office, administrative, or warehousing purposes will remain on site, as will a number of storage sheds.

- Dining Hall and Multipurpose (Building 22) - Renovated almost entirely in 2001, this building features a full commercial kitchen and a dining area with seating for 300.



Figure 8: Dining Hall and Multipurpose Facility (Building 22)



Figure 9: Warehouse and Office Space (Building 23)

- Warehouse and Office Space (Building 23) - The majority of shelving and storage features will be removed, leaving a large amount of open warehouse space with some office/administrative area.

- Clinic and Office Space (Building 24) - A clinic is housed on the upper floor; classroom/office space is on the lower floor.



Figure 10: Clinic and Office Space (Building 24)



Figure 11: Office Space (Building 27)

- Office Space (Building 27) - The communication antennas are proposed for removal, but the building and nearby towers and beacon will remain.
- Shop Space (Building 35) - A small shop area is located in the southwest quadrant of the site.

- Office Space (Building 37) - This administrative facility has nonstructural interior walls that allow the floor space to be modified easily to fit varying needs.



Figure 12: Office Space (Building 37)



Figure 13: Office and Shop Space (Building 50)

- Office and Shop Space (Building 50) - Office space in the central portion of the building is flanked by shop space in each of the wings.

- Storage Sheds (Buildings 34, 51, and 54) - These smaller buildings are used for various types of vehicle, commodities, and equipment storage.



Figure 14: Storage Shed (Building 54) on Right

2.2.3 Miscellaneous Facilities

- Other facilities anticipated to remain on site include the fire rescue station, vehicle maintenance facilities, water meter facilities, and the pavilion. Fire Rescue Station (Building 42) - TSAIA plans to occupy this building and continue using it for fire rescue operations.
- Vehicle Maintenance Facility (Buildings 52 and 521) - The facility includes a total of ten bays, featuring a fuel bay on the east side, warm storage, pressure wash, paint bay, and divided classified space for a fuel truck. It is proposed that this facility be transferred to the Department of Military and Veterans Affairs for use by the Army Guard.



Figure 15: Vehicle Maintenance Facility (Building 52)



**Figure 16: Vehicle Fuel Station
(Building 53)**

- Vehicle Fuel Station (Building 53) - This fuel station is located near the Vehicle Maintenance Facility.

- Water Meter Facilities (Buildings 841, 842, and 843) - Located in the far northeast corner, middle-western edge, and southern edge of the site. These facility's housing utilities will remain.
- Pavilion (no building number) - The pavilion is located near the Building 37 offices.

2.2.4 Utilities

On-site utilities include electricity, natural gas, liquid fuel, sewer, water, storm drain, airfield and street lighting, and communications. ENSTAR, Chugach Electric, and Anchorage Water and Wastewater Utility bring gas, electric, and sewer and water utilities to the Kulis site, but once on-site, utility infrastructure is owned and managed by the AKANG. Because the AKANG has been the sole site user, utilities have not been metered at individual buildings. TSAIA will be completing a separate study of utilities to assess age, condition, metering, ownership, operation, and other issues.

2.2.5 Vehicle Parking

Limited vehicle parking is provided directly adjacent to many of the buildings. To support this limited building-specific parking, several large shared parking lots are provided, mostly in the northeast quadrant of the site. Large shared lots located at the base main parking area (between Buildings 22 and 23) and east of Building 3 contain approximately 420 parking spaces (Figure 3).

2.2.6 Roads

Access to Kulis is provided by a single entrance from Raspberry Road. Raspberry Road is a two-lane minor arterial with an annual average daily traffic (AADT) level of 9,191 in 2008. The Raspberry Road access from Kulis is near the top of a hill, directly across from the access to Kincaid Elementary School. During peak traffic times for Kulis and the school, making left turns into or out of the Kulis site and the school can be difficult.

Within Kulis, Roundabout Road and Denali View Drive provide the primary access to most of the occupied facilities. A road used primarily for maintenance borders the eastern and southeastern perimeter. A road to access the fire rescue station at the northwest corner of the site borders the western and southwestern perimeter.

2.2.7 Security Fencing

The site is fenced along its entire boundary, excluding the Taxiway C access. A manned gate currently controls access to the site from Raspberry Road.

2.3 Topography and Soils

Topography varies greatly across the site. The north half of the site is relatively flat with the elevation generally in the 100- to 110-foot range and is similar in elevation to Runway 25L and Taxiway C. The south half of the site is considerably hillier, with the elevation ranging from 120 to 170 feet. As a result, the aircraft accessible buildings are on the north side of the site, and buildings not requiring aircraft access are on the south side. Buildings on the north side are more densely developed. On the south side, buildings are more spread out because of topography and associated access issues.

Soils are generally buildable. Soils appear to be an organic mat covering sandy silts, silty sands, gravel, sand, and occasional deeper pockets of organic material, based on a limited sample of test holes. An area on the southeast portion of the site has been used as a soil waste area.

3.0 BUSINESS/DEVELOPMENT INTEREST

The transfer of buildings and facilities at Kulis to TSAIA represents a significant opportunity for increasing aeronautical activity and business development at TSAIA. However, the transfer of such a large inventory of buildings, apron space, streets, and utilities all at one time also presents some challenges for TSAIA management, including the following:

- Securing tenants to use the Kulis facilities.
- Preserving Kulis buildings while vacant.
- Dealing with Kulis buildings that do not lend themselves well to direct aeronautical uses.
- Assessing the potential impact of Kulis property availability on development of TSAIA's other properties, such as the SAPX.

Two surveys were conducted to determine the scope of potential business interest in Kulis properties and the potential impact of that interest on the development of the SAPX area. One survey was completed in December 2009 and the other in July and August of 2010.

In the 2009 survey, twenty-eight businesses were contacted with seventeen ultimately taking part in the survey. The seventeen participants included six air carriers, two fixed-base operators, and nine facility developers (firms that construct or remodel buildings for the purpose of subletting space to other businesses). The results of the survey were compiled in the *Aviation Business Interest Survey* report, dated February 20, 2010 (Appendix A).

The 2009 survey revealed that very few of the parties interviewed had ever visited Kulis and most were unfamiliar with the size and kind of buildings on the base. In May 2010, a tour of Kulis was conducted for interested parties and included visits to the aircraft hangars and other major buildings. Most of the tour participants were impressed with the good condition of the buildings and were excited about their business potential.

In July and early August 2010, a second survey of businesses was conducted to determine if the Kulis tour or changes in the economy since the 2009 survey had altered business interest in Kulis and SAPX properties. A total of nineteen businesses were contacted in the second survey, sixteen of which had participated in the 2009 survey. Out of the nineteen businesses contacted,

five completed the full survey questionnaire and six provided limited responses. The results of the 2010 survey were compiled in the *Second Aviation Business Interest Survey* report, dated August 14, 2010 (Appendix B).

From the results of the two surveys, a general overview of business/development interest in Kulis and the SAPX at TSAIA are included in the discussion that follows. An analysis of aeronautical and non-aeronautical demand determined by the surveys is found at the conclusion of this section.

3.1 Kulis Air National Guard Base

The data collected in the 2009 and 2010 surveys indicated that:

- There is a significant level of interest in purchasing existing buildings and leasing land with frontage on an existing aircraft apron at Kulis, although the 2010 survey suggests that interest may have decreased somewhat since the 2009 survey.
- There is little interest by aeronautical businesses in using *nonapron-frontage* property at Kulis for aeronautical purposes.
- There is modest interest among facility developers in using *nonapron-frontage* buildings at Kulis for *non-aeronautical* purposes.

Based on the survey data and informal conversations with some of the survey participants, it appears that most of the aeronautical businesses interested in Kulis properties are small to mid-sized air carriers looking to consolidate all of their operations in a single location, including aircraft maintenance, cargo handling, and administrative offices. As a result, most of these aeronautical businesses are not interested in Kulis buildings that do not have direct aircraft access to an apron or taxiway.

On the other hand, many of the facility developers that took part in the surveys were interested in buildings without airfield access, but only if they could be used *for non-aeronautical purposes* on a long-term basis (20 to 30 years). Most said they would not have any interest in these buildings if they were restricted to aeronautical uses only, because of the likely low level of demand for aeronautical use of these buildings would make them an uneconomic investment.

They also had no interest in risking capital on these buildings if their non-aeronautical use were to be limited to a short term, such as five years.

While sharing their opinions about Kulis properties, survey participants from the facility development industry often expressed concern that TSAIA's disposal of all Kulis properties at the same time might depress building space rental values throughout the airport and make some existing buildings outside Kulis uneconomic to rent. They were also concerned that making the Kulis properties available all at the same time might draw existing tenants out of developer-owned buildings elsewhere on the airport, resulting in widespread vacancies.

From the survey data, business interest in Kulis properties can be characterized as follows:

- For the most part, aeronautical business interest in Kulis properties is exclusively focused on buildings with direct aircraft access to an apron or taxiway.
- Interest in Kulis buildings that lack direct aircraft access is almost entirely from the facility development industry and then only if the buildings can be used for non-aeronautical purposes on a long-term basis.

3.2 South Airpark Expansion (SAPX)

In the 2009 survey, participants were asked about their interest in possible SAPX properties as well as their interest in Kulis properties. This was done in part to encourage each participant to compare the two facilities and determine their relative interest in Kulis versus the SAPX. The results were very conclusive. Ten of the seventeen participants responded that they had absolutely no interest in leasing space in the SAPX. Four of the remaining seven participants said they might be interested in SAPX space, but only if they were unsuccessful in obtaining a site at Kulis.

The reasons given by 2009 survey participants for their low or nonexistent interest in SAPX properties included the following:

- The higher cost of developing new facilities as compared to using existing buildings at Kulis.
- Uncertainties about land use restrictions TSAIA might impose on leases in the SAPX.

- No current market demand for new building space.

As result of the extremely low interest in SAPX property expressed during the 2009 survey, the 2010 survey focused primarily on Kulis. One 2010 survey respondent (that had not participated in the 2009 survey) indicated an interest in SAPX land, but stated a preference for property in Kulis. With respect to the SAPX, nothing in the 2010 survey significantly alters the conclusion drawn from the 2009 survey. That is, based on those who responded to the survey, there is no current aviation business interest in SAPX land, nor is there likely to be interest until such time as the Kulis properties suitable for aeronautical uses are occupied.

3.3 Aeronautical Demand

The results of the 2009 and 2010 surveys indicate that aeronautical business interest in Kulis properties is almost entirely focused on buildings and land that have direct aircraft access to an apron or taxiway. Aeronautical business respondents to the surveys exhibited an almost universal lack of interest in properties that have no direct aircraft access. Therefore, the current aeronautical demand for Kulis space is limited to apron-frontage properties.

Most of the aeronautical businesses that responded to the 2009 and 2010 surveys were small to medium-sized air carriers. In general, these companies have been looking to Kulis as a potential location for consolidating all of their operations at a single location. The hangars and most of the other apron-frontage buildings at Kulis are very large, probably too large for many of these businesses. Accommodating the needs of these small to medium-sized air carriers may necessitate modifying single buildings to serve two or more carriers. The cost of such a modification, on top of the cost of purchasing the building from TSAIA, may be out of reach for an individual small or medium-sized air carrier.

For the most part, operators of larger aircraft, for which the Kulis hangars are well suited, have not expressed much interest in Kulis for the following reasons:

- They operate primarily on the north side of the east-west runway complex and consider regular aircraft access to Kulis too cumbersome.
- They maintain their aircraft at another airport.
- They already have a hangar elsewhere on TSAIA.

Taken together, these considerations suggest that the primary demand for at least some of the apron-frontage buildings at Kulis will come from facility development firms with the capital resources to acquire one or more buildings, modify them to accommodate two or more small to medium-sized air carriers, and serve as the landlord of a multi-tenant building.

By the anticipated transfer of the base in 2011, the interest in Kulis properties expressed by aviation businesses in the 2009 and 2010 surveys may change as a result of factors beyond the control of the TSAIA staff. These factors include:

- Changes by the Postal Service in the bypass mail program (impacting cargo carriers).
- Up or down changes in the Alaska economy (impacting all air carriers).
- The availability of suitable space in existing buildings elsewhere on the airport.
- The demand for suitable building space outstripping the capacity of existing buildings elsewhere on the airport.

Depending on how these factors play out, aeronautical business demand for Kulis properties could significantly increase or decrease. For this reason, it will be important for the TSAIA staff to maintain an ongoing dialogue with aeronautical businesses and facility developers throughout the time leading up to the Kulis transfer. This would allow the staff to monitor the pulse of interest in Kulis and keep interested parties up to date on developments at Kulis as progress is made toward the ultimate transfer.

3.4 Non-aeronautical Demand

The results of the 2009 and 2010 surveys indicate that there was virtually no interest in the aeronautical use of Kulis buildings lacking direct aircraft access to an apron or taxiway. On the other hand, several facility development firms expressed interest in obtaining these buildings for long-term *non-aeronautical* uses. The developers' survey responses indicated that a lease term of at least 20 years would be necessary to support the investment necessary to buy the buildings and convert them to private sector, non-aeronautical functions. Under these conditions, it appears that there would be fairly strong demand for the nonapron-frontage buildings.

Because of their off-apron locations and internal configurations, it is unlikely that demand to use the buildings for an aeronautical purpose will develop over the next 20 years. Until such time as the land on which these buildings are located is needed for the development of taxiways or other aeronautical facilities, TSAIA should take advantage of the buildings' significant revenue-generating potential as non-aeronautical facilities. Leasing the building sites for non-aeronautical purposes would require a release from the FAA. The process for obtaining a release is described in Section 6.8.

4.0 KULIS LAND USE ANALYSIS

4.1 Kulis Land Use Options Evaluation Process

The Kulis Land Use Options were developed using the following general steps:

1. Conduct a Business Interest Survey (discussed above) and identify planning constraints and guidelines.
2. Hold initial KAG and public meetings to discuss the planning process and business survey results and to identify community issues.
3. Identify preliminary short-term (next 20 years) and long-term (20 years +) layout options assuming ultimate full aeronautical use, and determine what properties could have interim non-aeronautical use.
4. Hold the second KAG and public meetings on the preliminary options.
5. Prepare revised short-term and long-term options.
6. Hold the third KAG and public meetings on the refined options.
7. Document the results in this report.
8. Hold a final public meeting.

4.2 Kulis Planning Guidelines and Constraints

As the initial options were being developed, the project team identified several planning guidelines and constraints that affected the viability and timing of options. Primary site planning guidelines and constraints included the following:

- Aeronautical Use - Maximize use of the site for aeronautical uses to the extent practical, based on FAA mandates and the need to use TSAIA's limited land for its highest and best use. For revenue generating purposes, consider interim leasing for non-aeronautical uses where aeronautical demand or practicality is unlikely in the next 20 years.
- Parallel Taxiway - Reserve space for a Design Group V taxiway parallel to Runway 7R-25L along the north side of Kulis (an extension of the existing Taxiway Z built to the west of the South Airpark). This taxiway would provide more flexibility for

routing aircraft into and out of Kulis and for other non-Kulis aircraft. A relocated airport service road (tug road) would be located south of the taxiway and north of Kulis.

- Taxiway and Lease Lot Size - Design taxiways, aircraft parking, and building lease areas with flexibility in mind, given uncertain tenant demand. For the existing apron and adjacent lease lots, retain Design Group IV sizes since the existing aircraft parking and hangars are designed to that size. For the other areas, use Design Group III or IV, if possible. Consider the potential for a large wide-body (Design Group V) aircraft hangar somewhere on the north side of Kulis, if practical. Examples of various types of aircraft for each Design Group are shown in Figure 17.

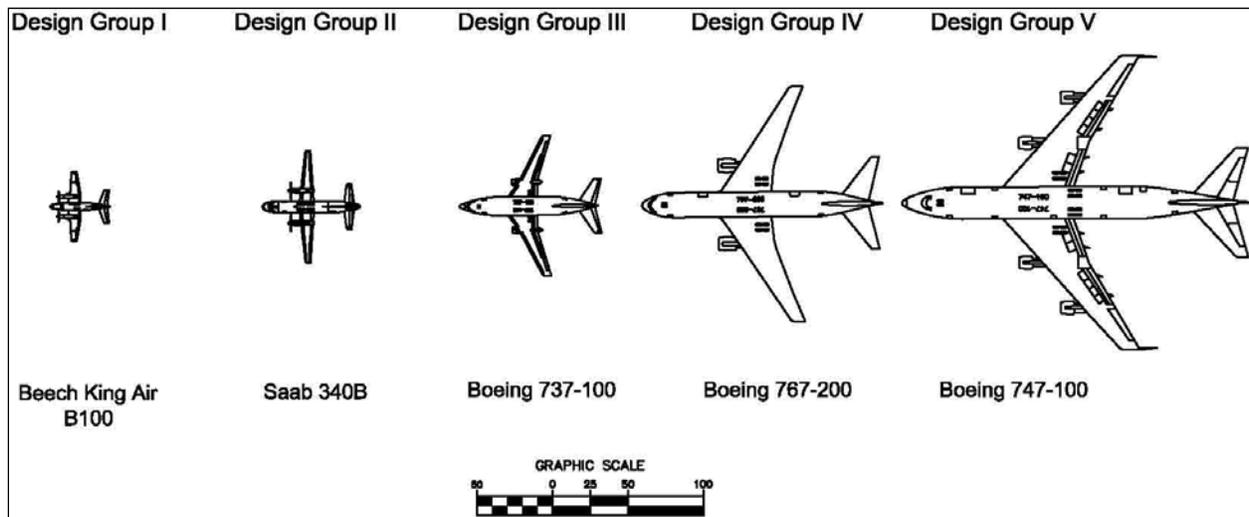


Figure 17: Types of Aircraft for Each Design Group

- Buildings Demolition - TSAIA proposed a list of buildings they would like to be removed prior to the site being returned to their inventory. These were defined in Table 2 and Figure 3.
- Buildings to Remain - Buildings assumed to remain in both the short term and long term include the two hangars on the south side of the existing apron, the existing fire rescue building on the northwest corner of the site (to be retained for airport operations), and the vehicle maintenance facility on the southeast corner of the site (to be retained for Army Guard use). Other buildings are assumed to be demolished prior to the return of Kulis to TSAIA or in the 20- to 30-year timeframe, after interim aeronautical or non-aeronautical use.

- **Trees/Buffers** - Recognize that preserving large treed buffer areas could conflict with FAA requirements to maximize use of airport land, but look for opportunities to create them on the south and east boundaries in areas where topography or other factors make development impractical.
- **Other Site Constraints** - Consider other site constraints including topography, access from Raspberry Road, and uses of adjacent off-airport lands.

4.3 Preliminary Options

4.3.1 Preliminary Layout Options

The four preliminary layout options (Figures 18 through 21) show significantly different approaches to redeveloping the Kulis site. All options show the maximum ultimate site use for aeronautical purposes, with taxilanes, aircraft parking, and aeronautical lease lots extending across nearly the entire site. However, as discussed below, interim use of the south side of Kulis for non-aeronautical uses is likely for at least the next 20 years.

Preliminary Option 1 (Figure 18) depicts one Design Group III and one Design Group IV north-south taxilane accessing Kulis from the north, and a single Design Group II taxilane on the southern portion of the site accessing Kulis from the South Airpark. Each taxilane is surrounded by aircraft parking lease areas and building lease areas. Access roads and utilities are relocated to serve each lease lot. Because of the topography, several sloped areas are shown south of the existing apron, along portions of Raspberry Road, north of the vehicle maintenance building, and along the east boundary. These sloped areas would likely be needed to transition between the various elevations on the site. Vehicle access to the east side of the South Airpark is also provided through Kulis.

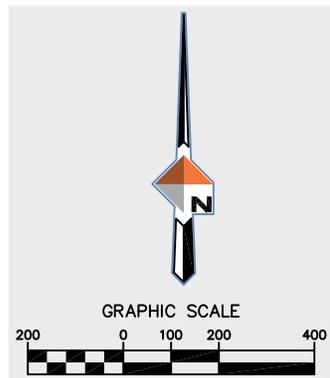
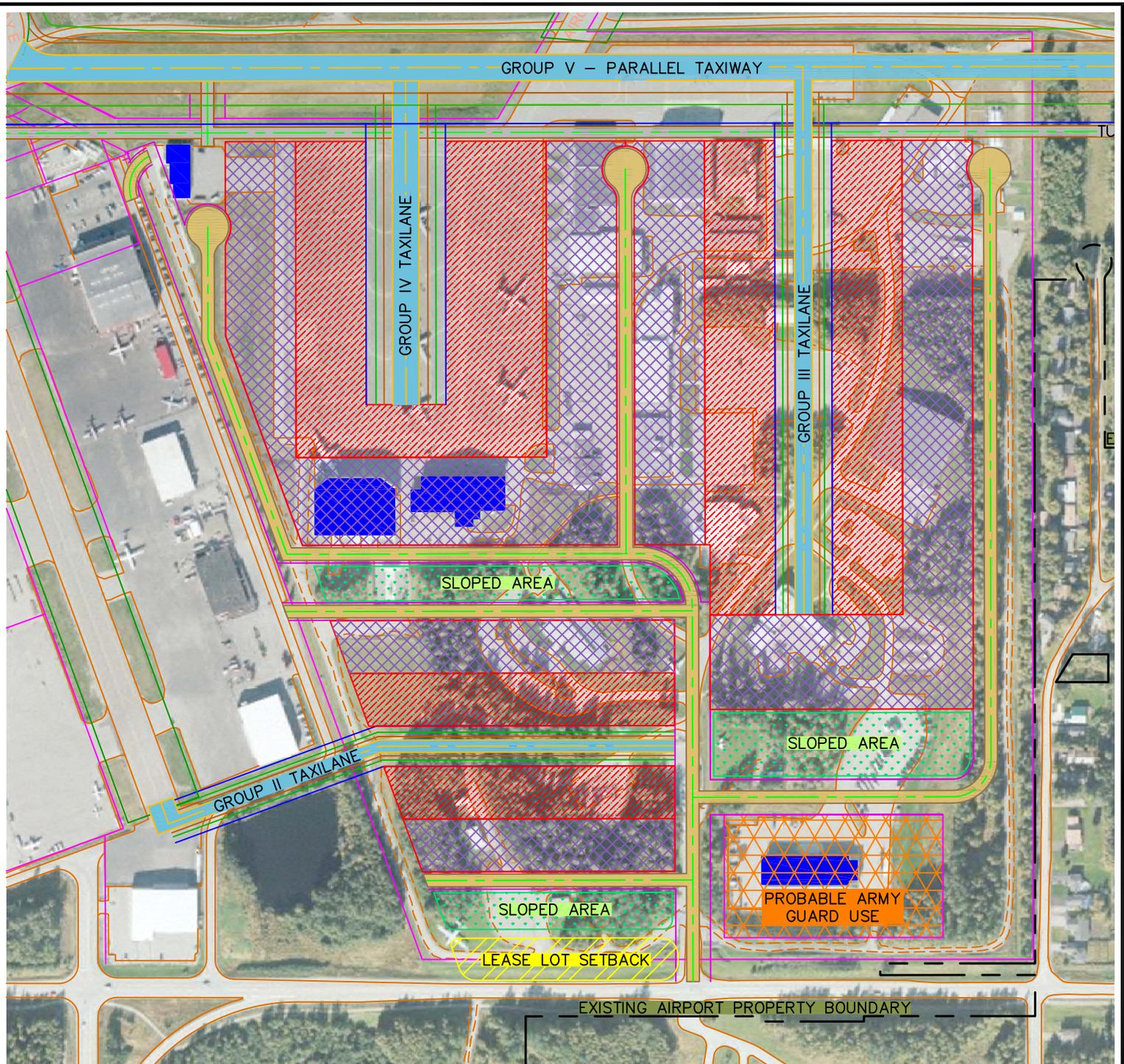
Preliminary Option 2 (Figure 19) depicts a single Design Group IV taxilane from the north with a 90-degree turn to the east to access the north half of the Kulis site. The southwest quadrant is accessed from the South Airpark, similar to Option 1. Some permanent non-aeronautical lots are created in the southeast quadrant, because this option has no practical way to provide aircraft access to these areas.

Preliminary Option 3 (Figure 20) shows a single north-south Design Group IV taxilane bisecting the site and a second taxiway extending east-west across the existing apron. Because less space is allocated to taxilanes, there is more room on the east side of the site for larger aircraft parking and lease lots, providing greater flexibility for a variety of tenant needs. An alternative layout is also depicted on Figure 20, showing how the east side could be developed with a combination of small and large lease lots.

Preliminary Option 4 (Figure 21) shows that if a single developer were to lease the site, less is known about the site layout. While the developer would be faced with most of the same constraints and planning considerations described earlier, the developer would have flexibility to reuse the entire site according to tenant demand, his ability to finance the infrastructure improvements needed, and within any constraints placed on him by the TSAIA.

4.3.2 Potential Development Phasing

Figure 22 shows preliminary site development phasing based on demand expressed in the business interest survey and site constraints. Figure 23 shows how that phasing would apply to each of the options discussed above (except for Option 4 - Single Developer). The north side of Kulis, which contains the existing aircraft parking areas and aeronautical buildings that will be retained and which can be developed without major site regrading, is more likely to be developed/redeveloped for aeronautical uses in the next 20 years. The south side of Kulis is unlikely to be needed or practical for aeronautical uses until beyond 20 years. This is because it is hillier and potentially requires more site regrading, building demolition, and road and utilities relocation. Since the south side would be much more expensive to redevelop for aeronautical purposes, aeronautical tenants and TSAIA would very likely first lease and develop infrastructure on other TSAIA properties that are less expensive to develop. Further, as noted earlier, tenants wishing to use the south side properties for non-aeronautical purposes would want to lease the land for non-aeronautical uses for at least 20 years, to justify the expense of purchasing and modifying the buildings.

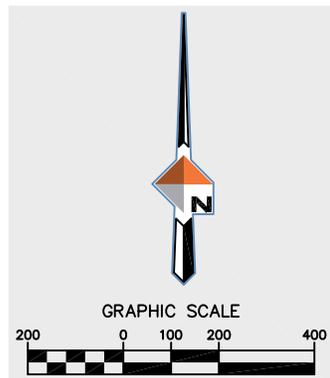
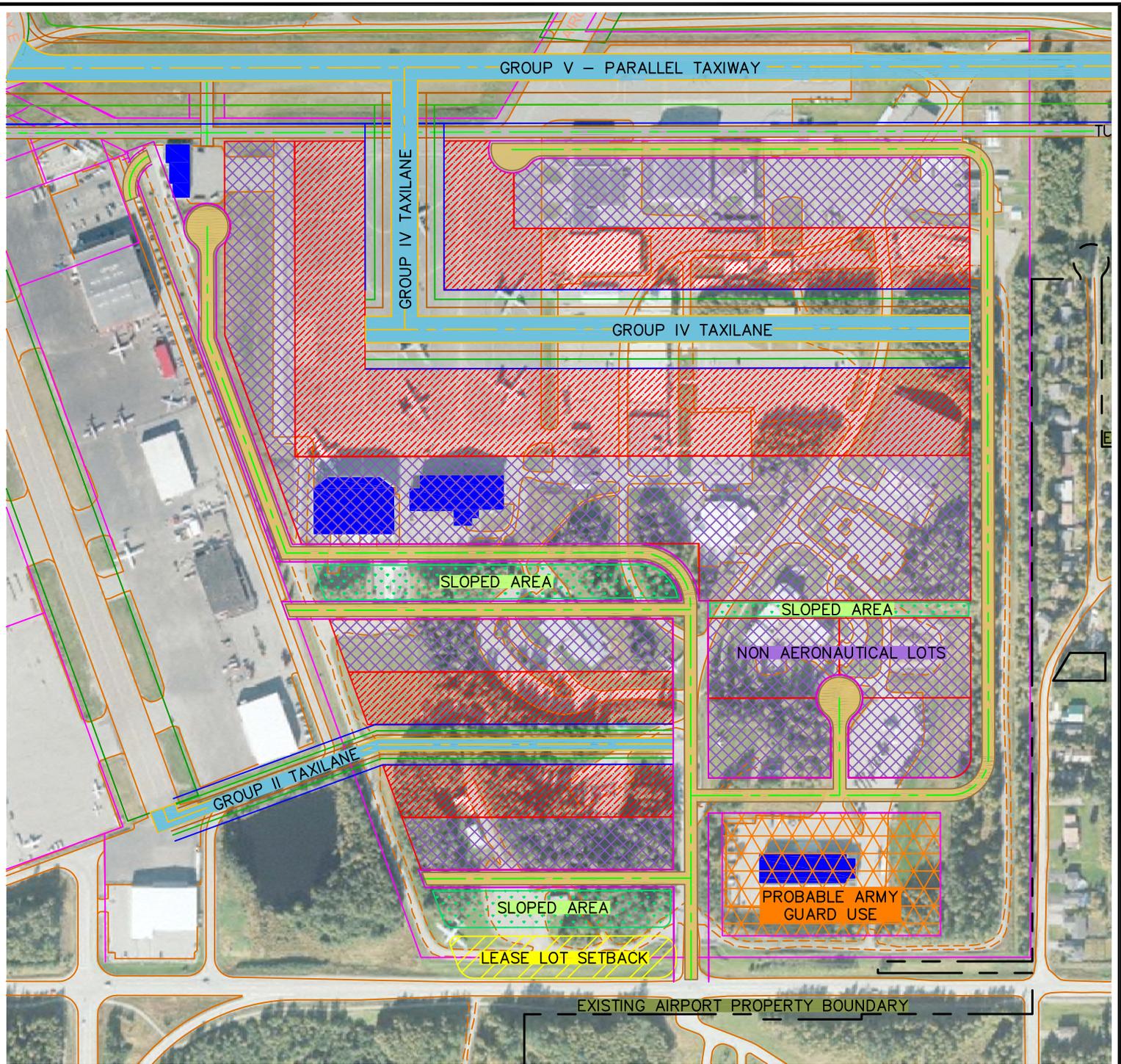


LEGEND	
	Aircraft Apron Lease Area
	Building Lease Area
	New Taxiway/Taxilane
	New/Improved Access Road
	New Tug Road
	Existing Building to Remain



Figure 18
Preliminary Option 1 - Long-Term Layout



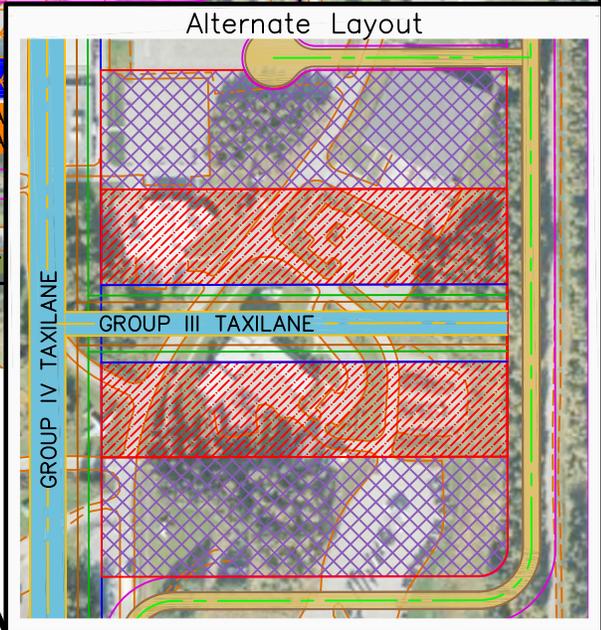
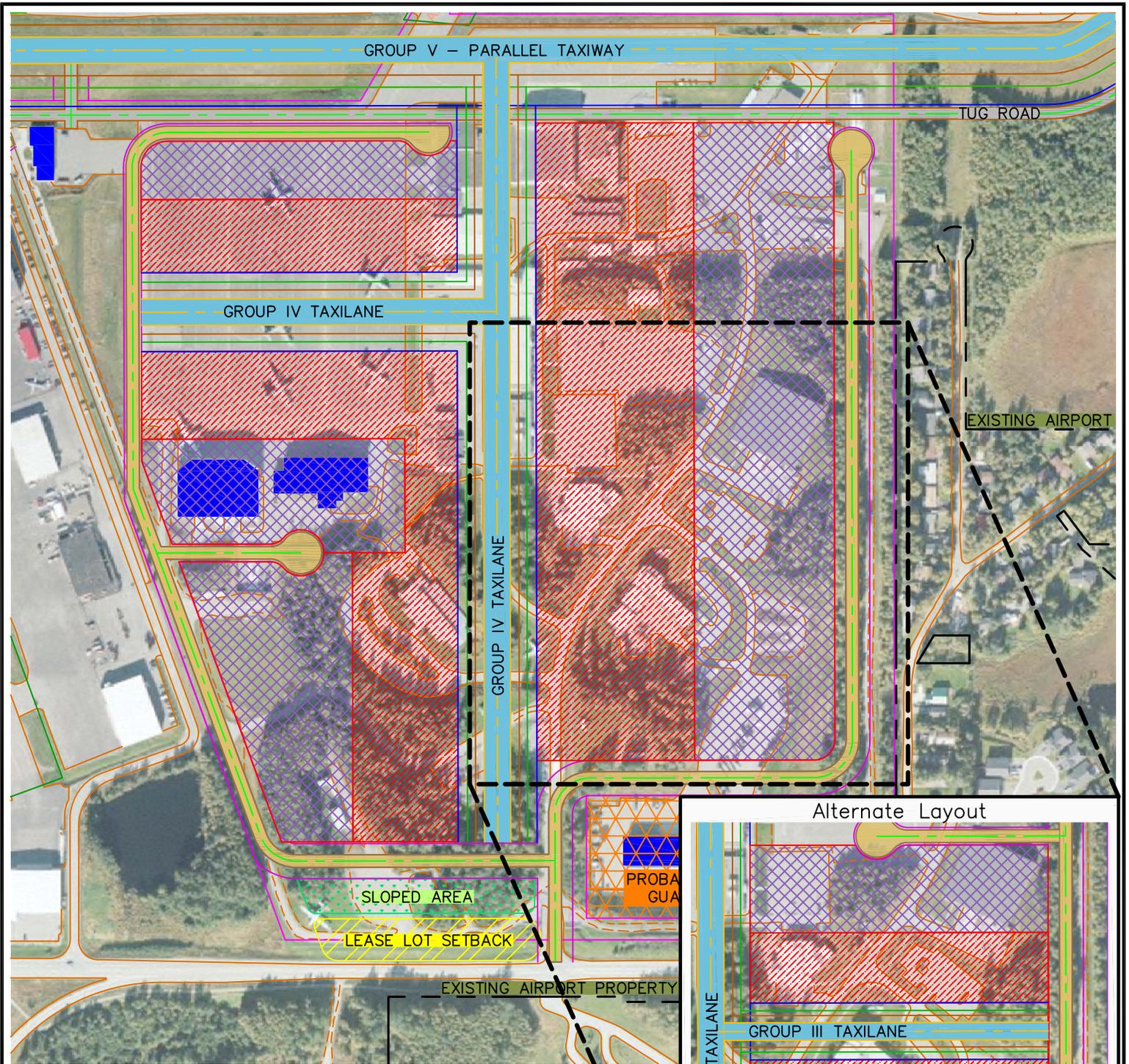


LEGEND

	Aircraft Apron Lease Area
	Building Lease Area
	New Taxiway/Taxilane
	New/Improved Access Road
	New Tug Road
	Existing Building to Remain

Figure 19
 Preliminary Option 2 - Long-Term Layout





LEGEND

	Aircraft Apron Lease Area
	Building Lease Area
	New Taxiway/Taxilane
	New/Improved Access Road
	New Tug Road
	Existing Building to Remain

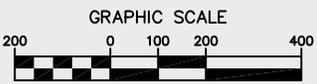
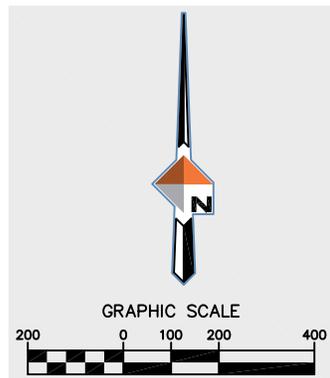
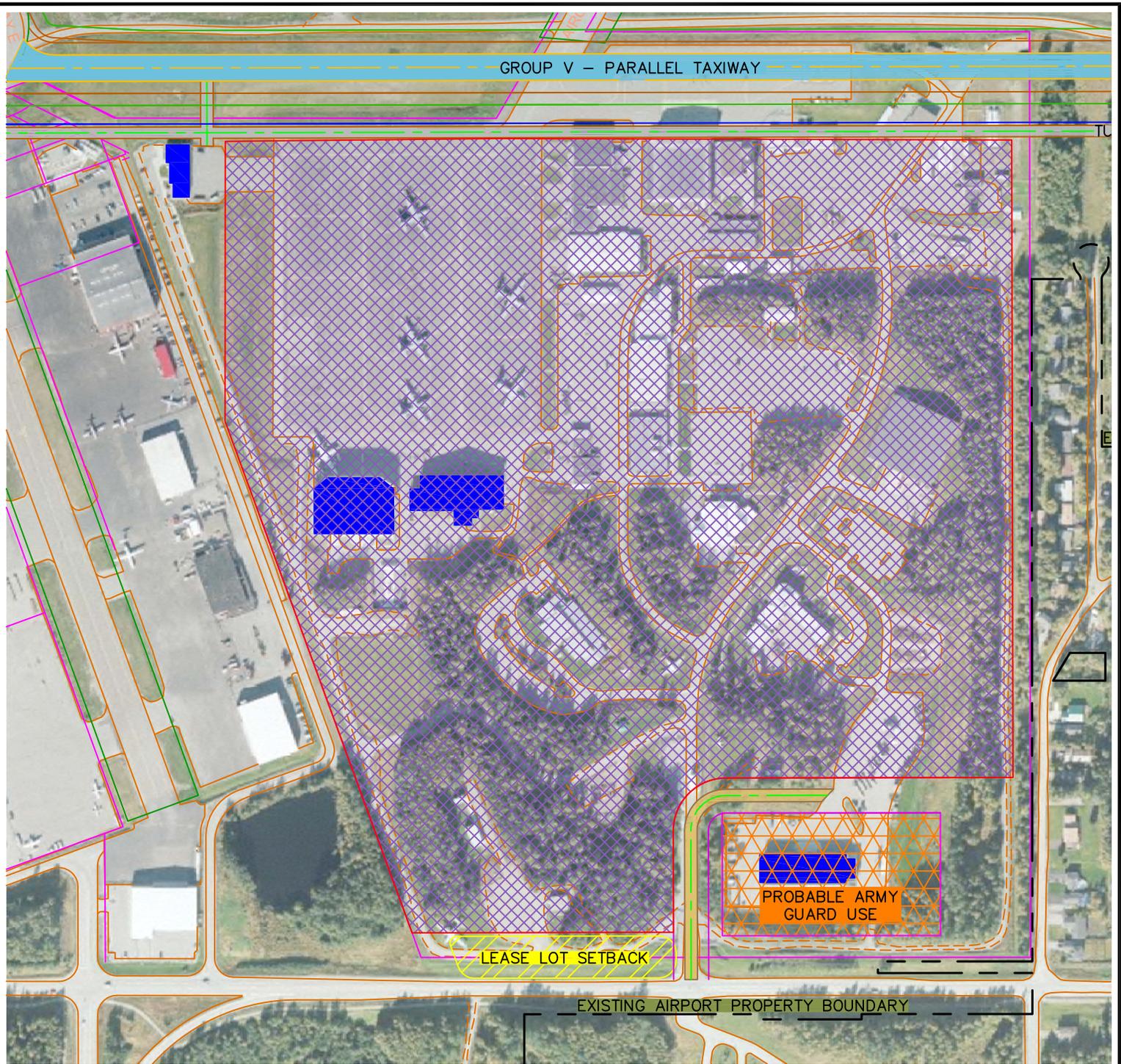


Figure 20
Preliminary Option 3 - Long-Term Layout



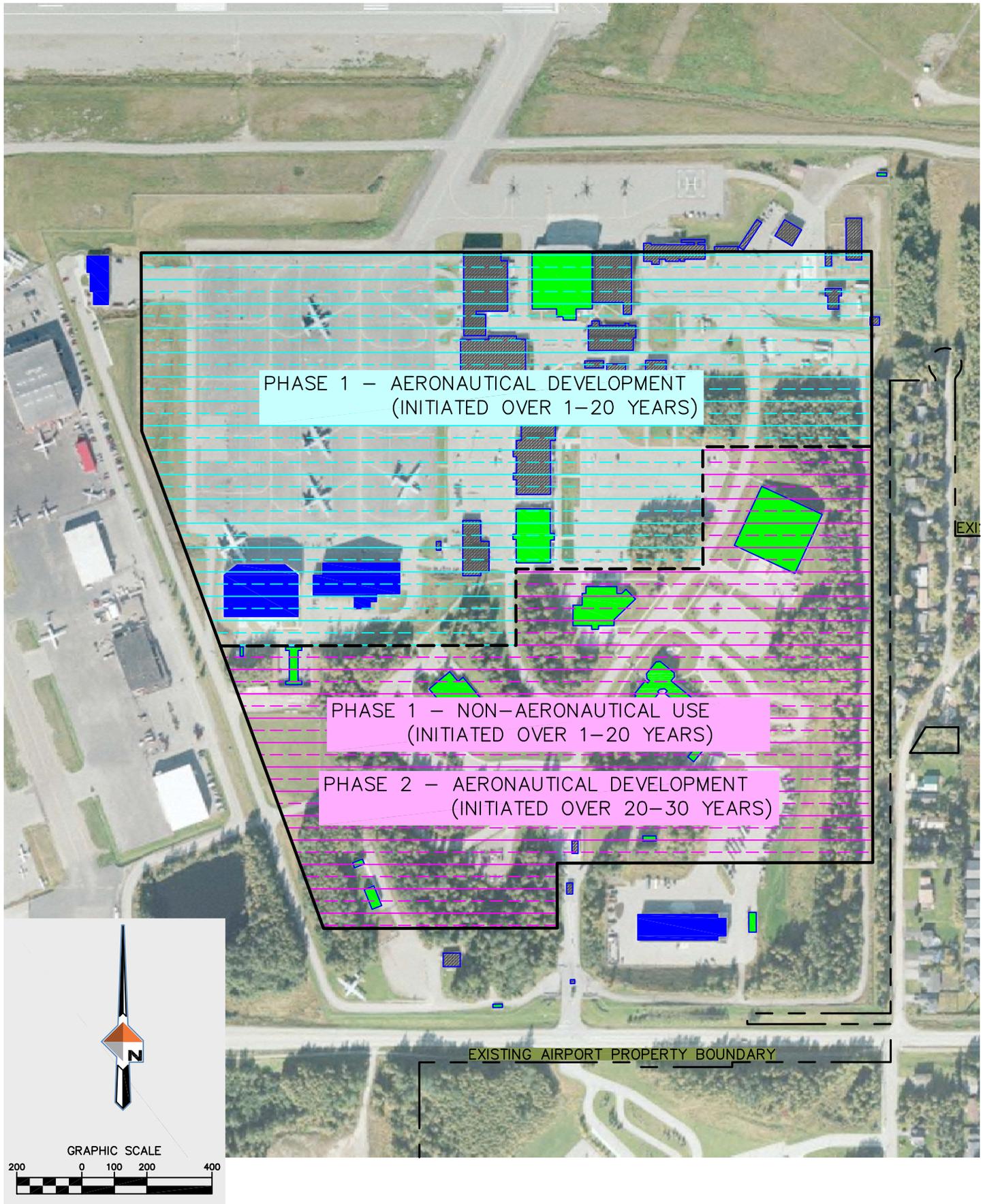


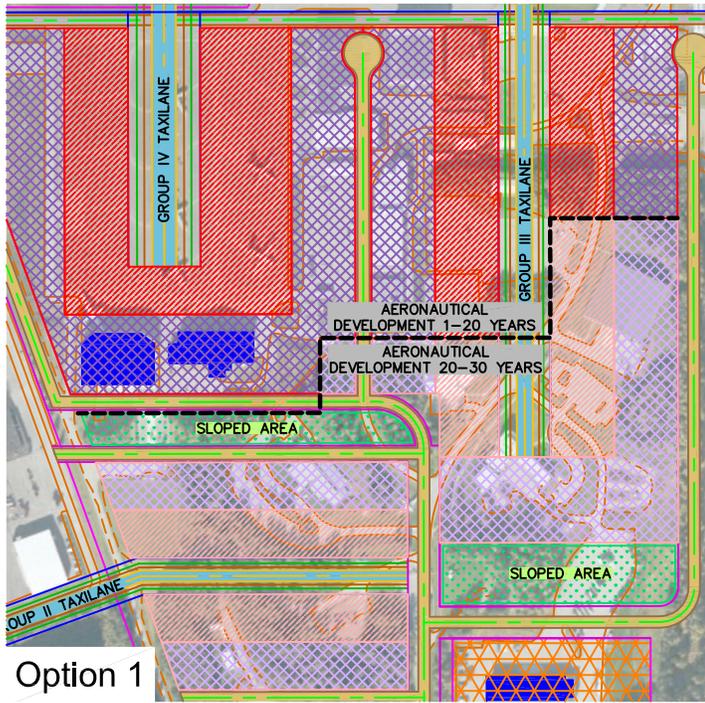
LEGEND

	Developer Lease Area
	New Taxiway/Taxilane
	New/Improved Access Road
	New Tug Road
	Existing Building to Remain

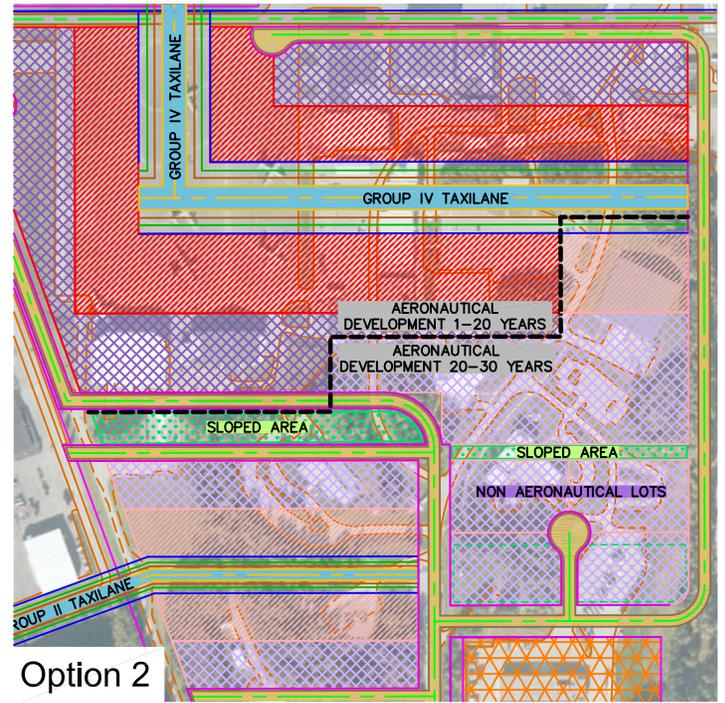
Figure 21
 Preliminary Option 4 - Long-Term Layout
 (Single Developer)



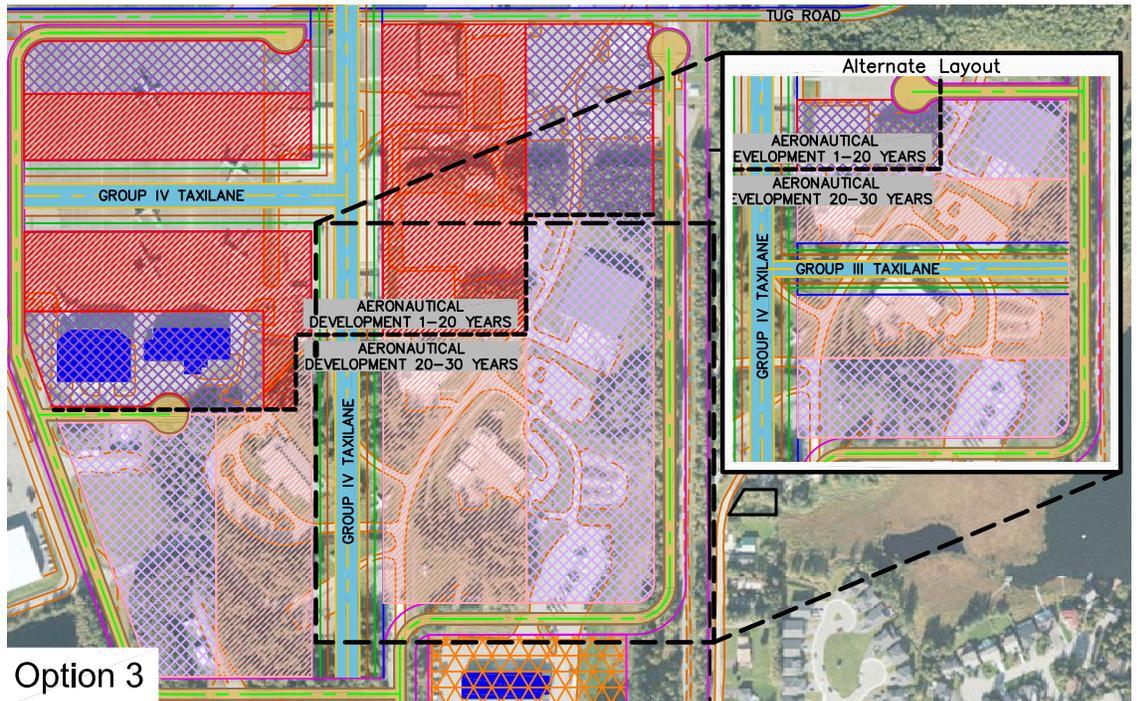




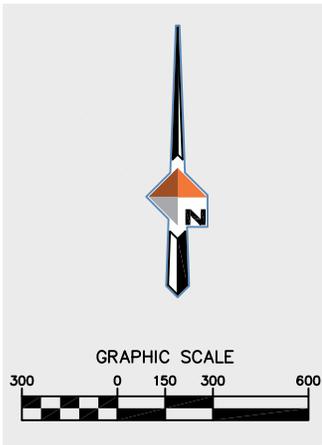
Option 1



Option 2



Option 3



LEGEND

	Aircraft Apron Lease Area
	Building Lease Area
	New Taxiway/Taxilane
	New/Improved Access Road
	New Tug Road
	Existing Building to Remain

4.3.3 Public and Stakeholder Comments

Primary public, neighbor, and KAG comments on the above options centered around the following issues:

- Desire for a permanent vegetated buffer on the east side of the Kulis site.
- Concerns about slope stability and drainage impacts associated with future development of Kulis.
- Proximity and visibility of Kulis development.
- Concerns about potential effects on property values.
- Concerns about noise and vibration from aircraft operations.
- Concerns about the proximity of aircraft to homes in Option 2. Some preferences for Options 1 or 3 because of the greater distances and potential for future buildings located between homes and aircraft.
- Discussion of the potential of a land swap with the Municipality of Anchorage (MOA) to ensure buffer areas are permanently protected.
- Suggestions that the TSAIA buy some of the existing homes.
- Concerns about traffic safety and sight distance on Raspberry Road today and in the future after Kulis is redeveloped.
- Concerns about air quality and the size and type of aircraft to be allowed.

Following the meeting, members of the project team, TSAIA staff, and neighbors to the east of Kulis met on Air Guard Road and walked the property line, viewed existing conditions at the east boundary, and discussed the issues noted above.

4.4 Revised Layout Options

4.4.1 Revised Options

Following the public, KAG, and neighborhood meeting, and after further consideration about the uncertainties of tenant aeronautical demand, the project team made the following changes:

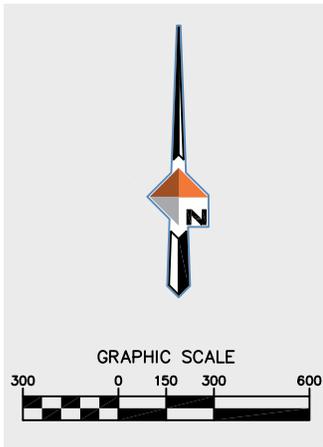
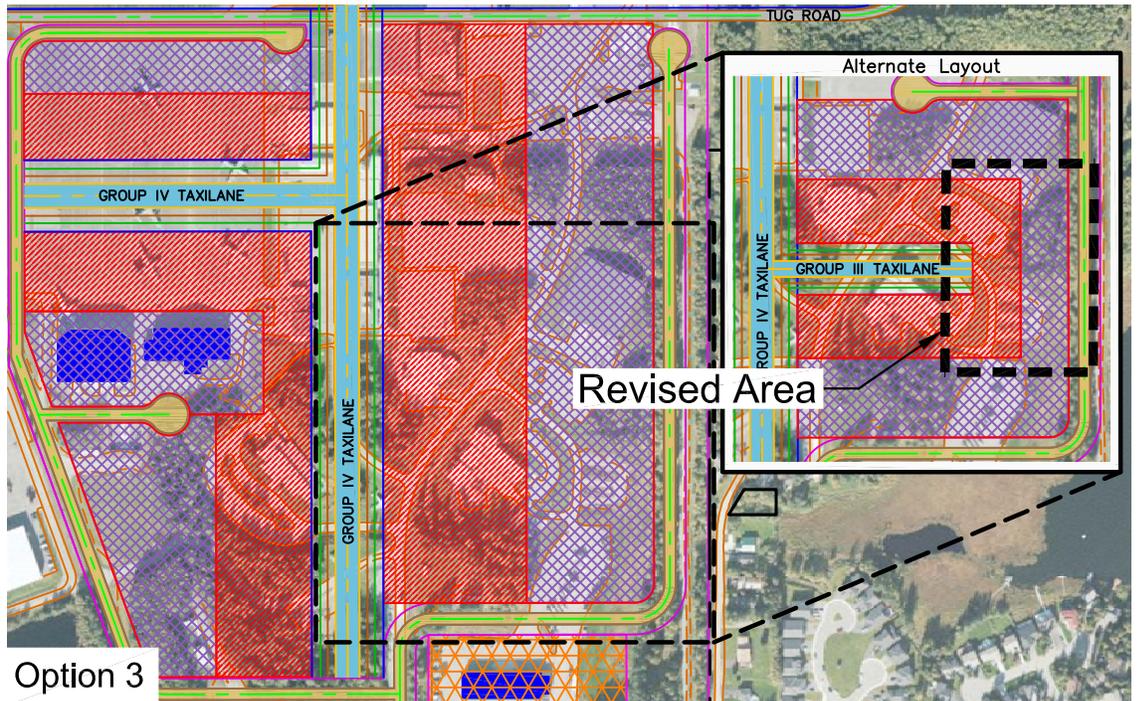
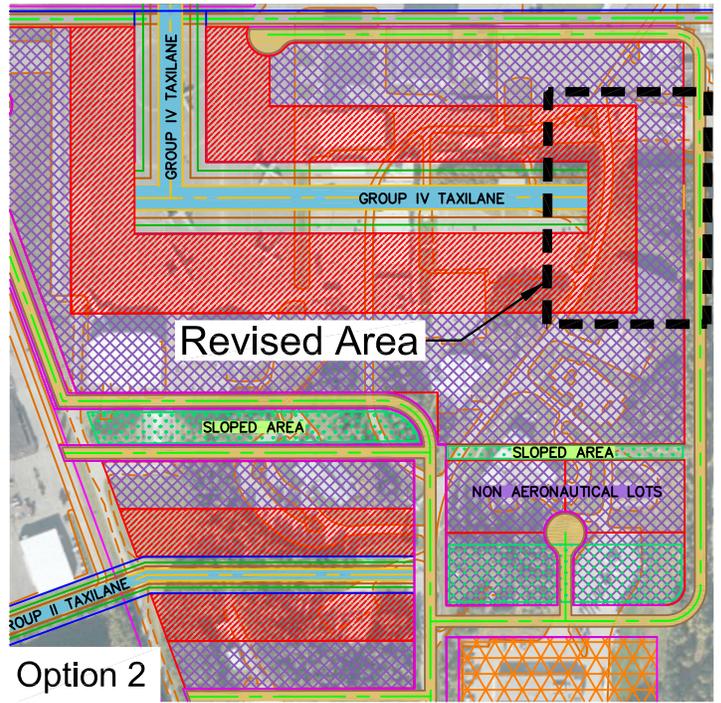
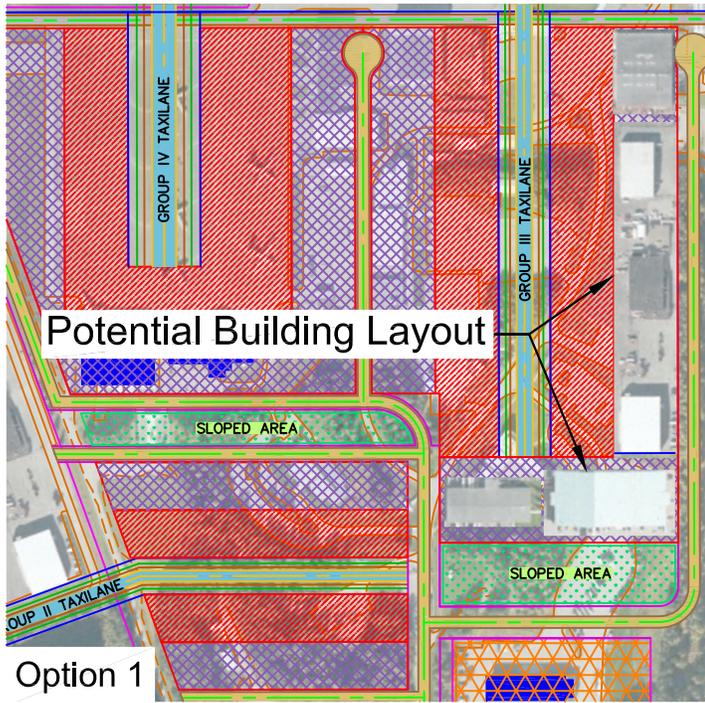
- | | |
|----------|--|
| Option 1 | No change. |
| Option 2 | Revised development along the east boundary to shift aircraft parking to the west, and place building areas between the aircraft operating areas and homes, to help block noise and views of aircraft. |
| Option 3 | Similar changes to Option 2. |
| Option 4 | No change. |

To illustrate potential size and location of buildings on the site, buildings from the existing South Airpark were overlaid on Option 1. Option 1 with buildings shown and the Revised Options 2 and 3 are shown in Figure 24.

4.4.2 Revised Option Phasing

Figure 25 shows revised potential phasing of the options as described below:

- The first phase of aeronautical development in one to five plus years would be in the northwest quadrant, using the existing apron and the existing aircraft hangars. Expected near-term aeronautical demand could likely be accommodated on five lease lots. This would be the least expensive area to develop.
- The second phase of aeronautical demand in the first 20 years is in the northeast quadrant. This area would be more expensive to develop than the area in the first phase with new buildings, grading, aircraft parking, vehicle access, and utility relocations to construct. The timing and layout of development is less certain for this phase because more new infrastructure will be required, and tenant needs are more uncertain. Furthermore, more coordination with neighbors and the MOA may be needed before plans for this area are finalized.
- The south half of the site would likely be used primarily for non-aeronautical purposes for over 20 years. This area would be much more expensive to redevelop for aeronautical purposes for reasons discussed earlier, and tenants would likely choose to develop the other easier-to-develop aeronautical properties first.



LEGEND

	Aircraft Apron Lease Area
	Building Lease Area
	New Taxiway/Taxilane
	New/Improved Access Road
	New Tug Road
	Existing Building to Remain

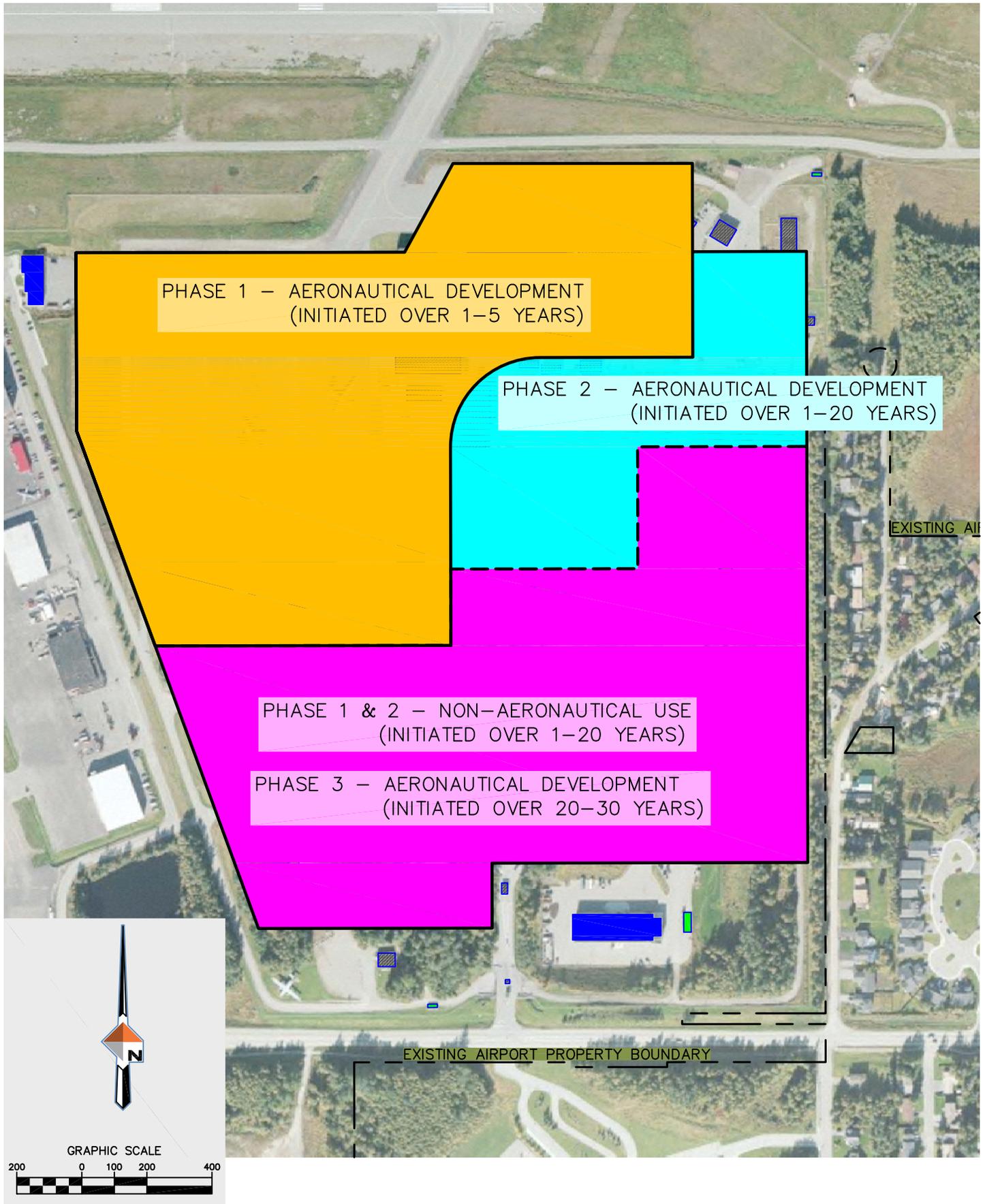


Figure 26 shows the proposed layout of the first phase of aeronautical development. It would include at least three lease lots and reuse of two hangars along the existing main apron and two lease lots and reuse of one hangar along the existing helicopter apron. This Phase 1 layout provides enough flexibility to allow for development of Options 1 through 3 for the long term.

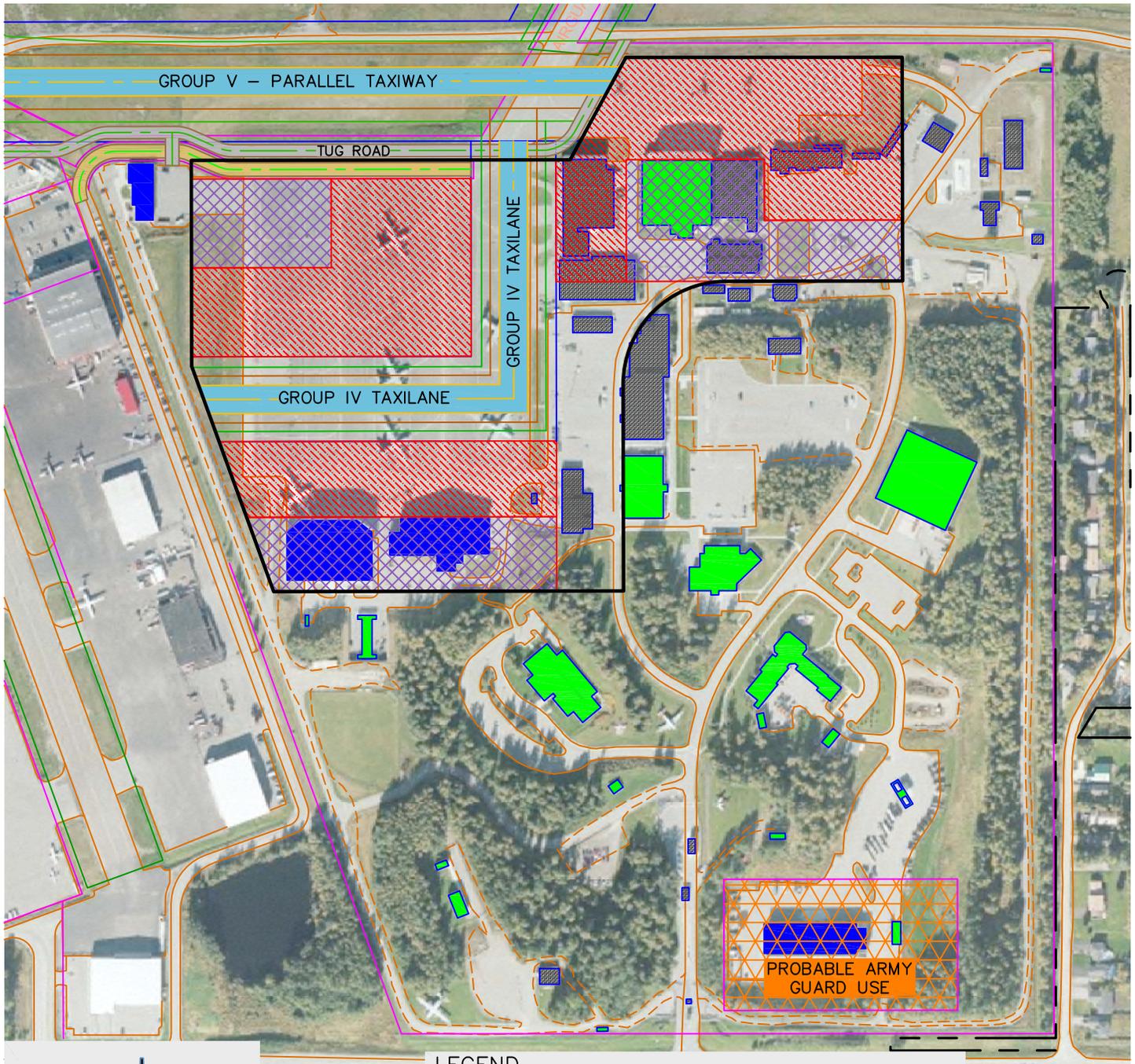
TSAIA would like to reexamine the extent and type of aeronautical demand and the potential long-term Kulis layouts after the economy rebounds, funding for new infrastructure becomes clearer, and discussions with the MOA about a potential land trade for buffer areas progress. This will likely occur as part of the next Airport Master Plan update. More public and neighborhood input would occur during the update process.

Figure 27 shows four existing buildings in the south half that would likely be retained for non-aeronautical use for at least the next 20 years. Sometime after 20 years, as fewer other options are available at TSAIA, this area may eventually be redeveloped for aeronautical purposes, if it is found to be cost-effective.

4.5 Land Use Plan

Figure 28 shows the proposed Kulis Land Use Plan designations that will be incorporated into the Airport Layout Plan. In summary, it includes:

- **Mixed Use Aviation Land Use** incorporating areas in the north part of the Kulis site expected to be developed exclusively for aeronautical purposes over the next 20 years.
- **Interim Non-Aeronautical Land Use** incorporating areas in the south part of the Kulis site expected to primarily be used for non-aeronautical uses over the next 20 years and potentially for redevelopment for aeronautical uses after 20 years.
- **Airport Support Land Use** for the existing Fire Station at the northwest corner of the Kulis site.
- **Airfield Land Use** to the north of the Kulis site and including a segment of the existing Kulis site that will be reserved for a future parallel taxiway and tug road.

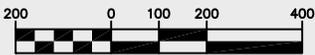


LEGEND

-  Aircraft Apron Lease Area
-  Building Lease Area
-  New Taxiway/Taxilane
-  New/Improved Access Road
-  New Tug Road
-  Existing Building - Long-term Use
-  Existing Building - Short-term Use
-  Existing Building - to be Demolished



GRAPHIC SCALE



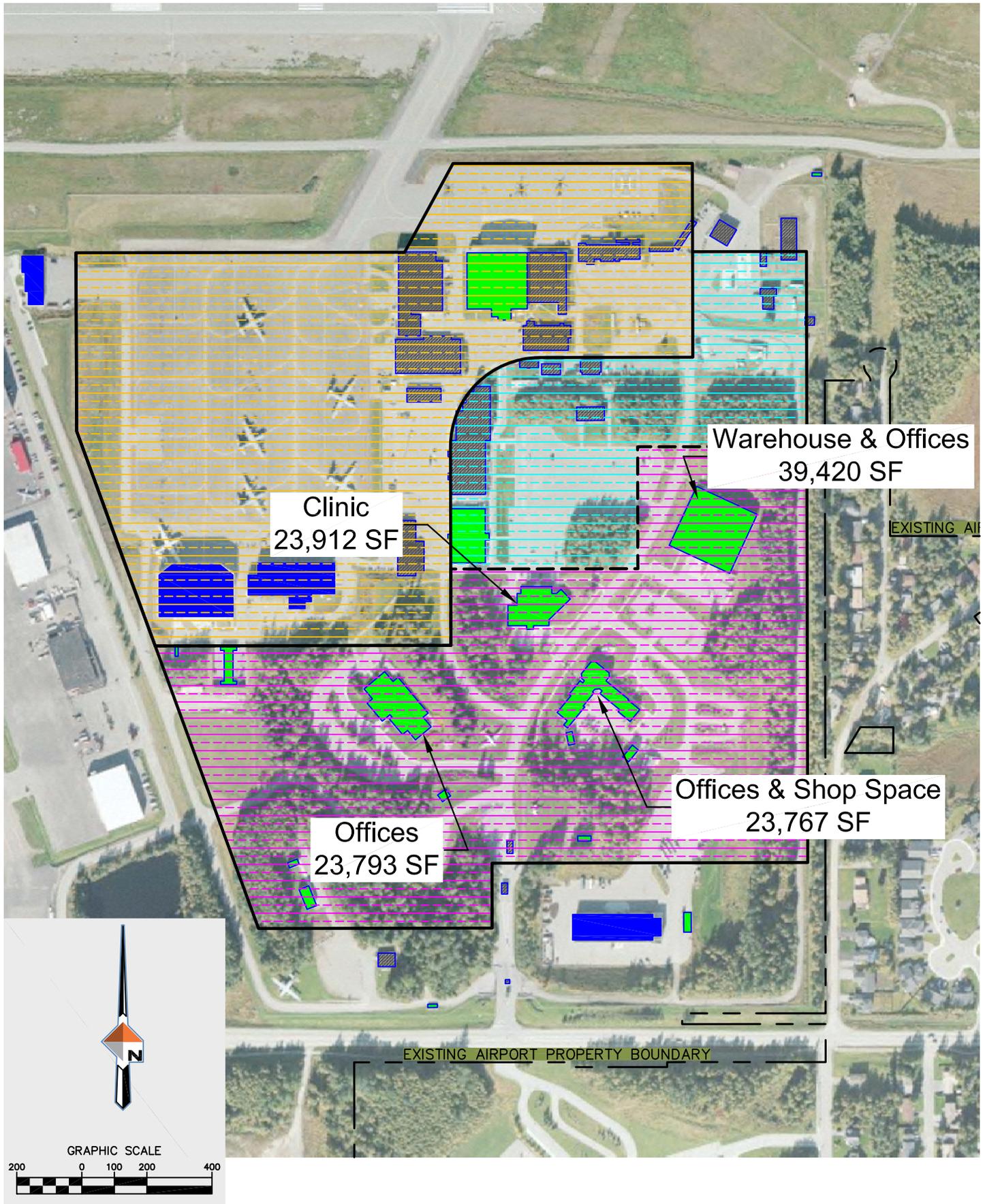


Figure 27
Interim Non-Aeronautical Use of Existing
Buildings

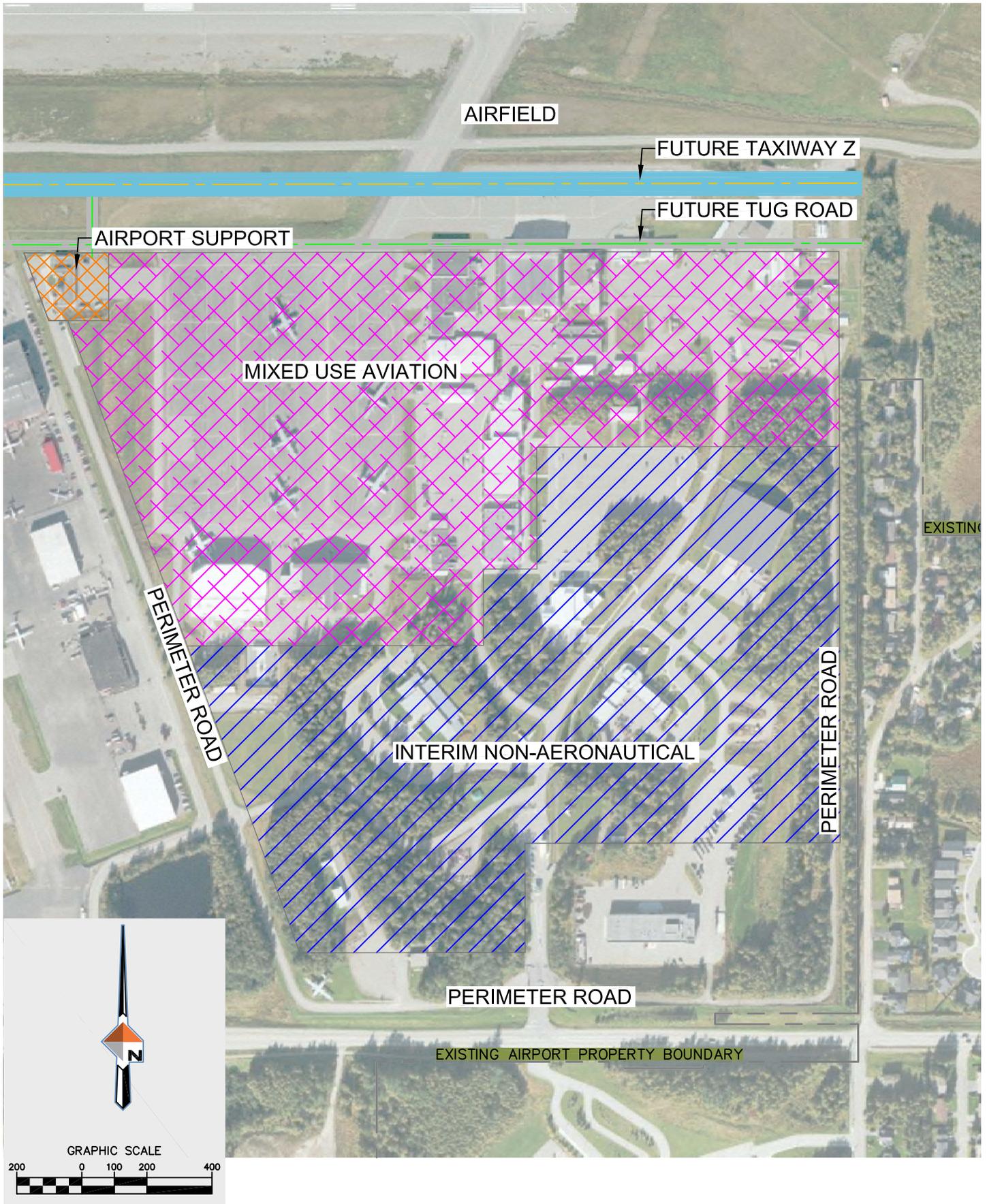


Figure 28
Kulis Land Use Designations

4.5.1 Land Use Definitions

More detailed land use definitions that will be followed in future Kulis property land development and use decisions are as follows. These definitions will be reviewed and updated as part of the upcoming airport master plan.

Mixed Use Aviation

Aeronautical uses excluding 30-seat or higher scheduled passenger operations, ultra-light activities, and wide-body cargo operations (no airport size restrictions for aircraft maintenance operations). Areas with taxiway/apron access will serve aeronautical uses requiring aircraft access to and from aircraft operating areas. Areas without existing taxiway/apron access may be used on an interim basis for aeronautical uses not requiring aircraft access to and from aircraft operating areas until such time as taxiway/apron access is constructed. Aeronautical use is aeronautical activity as defined by FAA Order 5190.6B.

Interim Non-Aeronautical

The base use in this area is “Mixed Use Aviation”; however, non-aeronautical uses are allowed in this area on an interim basis, until aeronautical demand justifies the major expense of site redevelopment necessary for most aeronautical uses. No significant new non-aeronautical use buildings are allowed.

Airport Support

Lands reserved for facilities used by airport management in operating and maintaining airport and airfield facilities, such as maintenance yards, material storage, equipment storage and maintenance, ARFF facilities, snow storage areas, and facilities for personnel providing such work.

Airfield

Airport areas directly related to the landing, takeoff, and taxiing of aircraft, including runways, taxiways, RPZ’s, airfield approach zones, building and obstacle restriction areas, and certain navigational aids requiring unobstructed clearance areas.

4.5.2 Other Land Use Guidelines

It is the intent that noisiest activities will either be directed to lease lots at the north and west parts of the Kulis site or noise impacts will be mitigated through site design or operational restrictions. Helicopter operations, if allowed, will be located in the northwest quadrant of the Kulis site.

A perimeter road with sloped areas will be maintained along the east, west, and south boundaries. The width of the sloped area will vary based on elevations and design features of future development, but will generally follow the layout shown. Trees will be preserved between Kulis and the neighborhood to the east to the extent practical, particularly in areas where the property is significantly sloped or otherwise undevelopable. However, perimeter road maintenance, utilities, slope stabilization, and FAA requirements may affect selective treed areas. TSAIA will continue discussions with the Municipality of Anchorage about a land trade that could further protect this area from future development and tree clearing.

Aeronautical uses as discussed above are defined by the FAA in FAA Order 5190.6B as any activity that involves, makes possible, or is required for the operation of aircraft or that contributes to or is required for the safety of such operations. It includes, but is not limited to:

- Air taxi and charter operations.
- Scheduled or nonscheduled air carrier services.
- Pilot training.
- Aircraft rental and sightseeing.
- Aerial photography.
- Crop dusting.
- Aerial advertising and surveying.
- Aircraft sales and service.
- Aircraft storage.
- Sale of aviation petroleum products.
- Repair and maintenance of aircraft.
- Sale of aircraft parts.
- Parachute activities.
- Ultra-light activities.
- Sport pilot activities.
- Military flight operations.

5.0 POTENTIAL COMMUNITY IMPACTS AND STRATEGY

Kulis is located on the southern portion of the TSAIA in southwest Anchorage. Southwest Anchorage is primarily a low-density residential area with limited commercial development. The area west of Jewel Lake Road and north of Dimond Boulevard is primarily zoned and developed as single- and two-family residential uses with limited commercial uses located along Jewel Lake Road and Dimond Boulevard. Most of the residential areas on the south side of Raspberry Road were subdivided in the mid-1960s through the mid-1980s; however, large parcels of land along Sand Lake Road that were previously used for gravel extraction have been developing as single-family subdivisions over the last several years.

Residential development has occurred directly adjacent to the Kulis eastern property line in the area of DeLong Lake. Development in this area consists of single-family and two-family development, including condominiums. Development in this area occurred mostly during the late 1970s and early 1980s with the latest subdivision (DeLong Landing) occurring in 2001. The area along the north end of Air Guard Road was the first area to be subdivided, and some of the residences in that area are among the first houses built in the DeLong Lake area in the mid-1960s.

Kincaid Elementary School is located directly south of Kulis on the south side of Raspberry Road. The school was built on property acquired by the MOA from TSAIA, and special attention was paid to addressing the potential for airport noise impacts during construction of the school.

The major arterial roadways in this part of Anchorage consist of Jewel Lake Road and Sand Lake Road running north-south and Raspberry Road and Dimond Boulevard running east-west.

5.1 Aircraft Noise

Aircraft noise from the TSAIA consists of both ground noise (taxiing, engine run-ups, thrust reverser, take-off roll, etc.) and noise overhead from takeoffs and landings. Noise levels are generally evaluated by considering cumulative noise exposure (day-night average sound level or DNL), as this metric is considered by many federal agencies to be the best metric for evaluating noise impacts on a community. Generally, noise levels above 65 DNL are considered to be incompatible with noise sensitive uses, such as homes, schools, and churches. TSAIA's 2002

Noise Exposure Map shows that the DeLong Lake area lies in the 60 to 65 DNL contour except for the area at the northern end of Air Guard Road, which is in the 65 to 70 DNL contour. A ground noise study completed by the TSAIA in 2002 indicated that the most prevalent sources of noise and vibration in the DeLong Lake area is related to commercial aircraft departures to the west or north and thrust reversers used by aircraft landing toward the east.

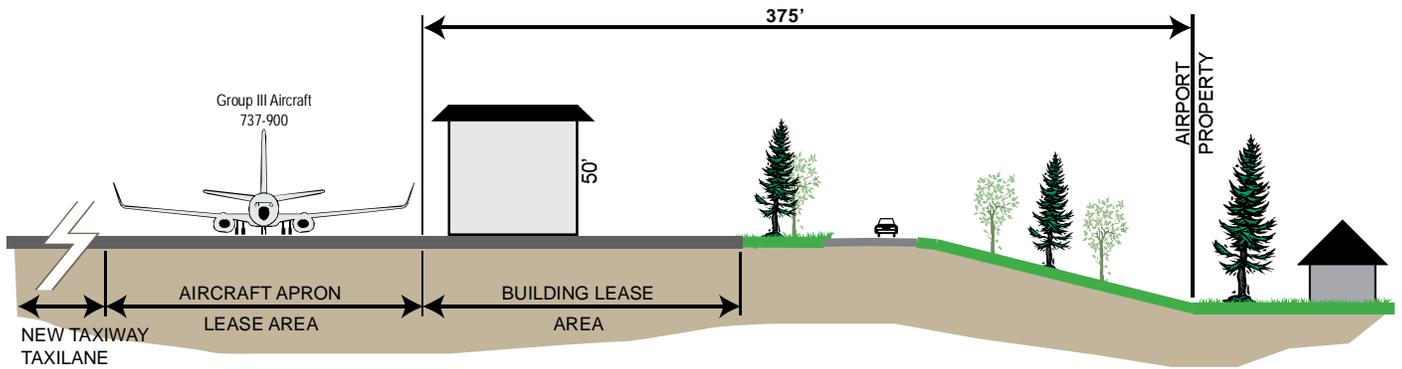
Noise generated on the Kulis site is primarily related to taxiing and maintenance of the AKANG's Lockheed C-130 and HC-130N Hercules aircraft and takeoff and landings of Sikorsky HH-60 Pave Hawk helicopters.

The various options evaluated for redevelopment of Kulis primarily forecast future use of Kulis as a combination of larger commercial aircraft and smaller general aviation aircraft, similar to the mix of uses that occur in the South Airpark. Although the type of aircraft that will use the area is generally known, the specific aircraft for each lease lot and the timing and the level of operations will depend on the specific tenants that occupy each lease lot.

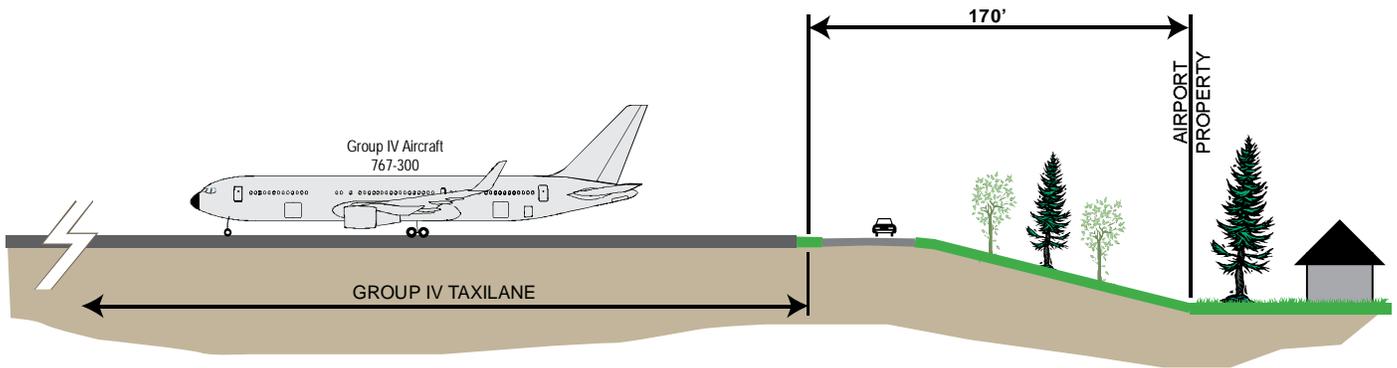
Alternatives that place lease lots with buildings between the residential areas to the east of Kulis and aircraft taxiways and aprons provide an opportunity to mitigate potential impacts of changes in aircraft noise levels in the adjacent residential areas. Generally, as the distance between the residential areas and the aircraft operations areas increases, the potential noise effects decrease.

Figure 29 shows examples of where aircraft, buildings, and homes would be located in relation to each other for preliminary Options 1 through 3. As noted earlier, Option 2 and Option 3, Alternative Layout, have been modified to move aircraft operations further away from homes in response to public comments (see Figure 30).

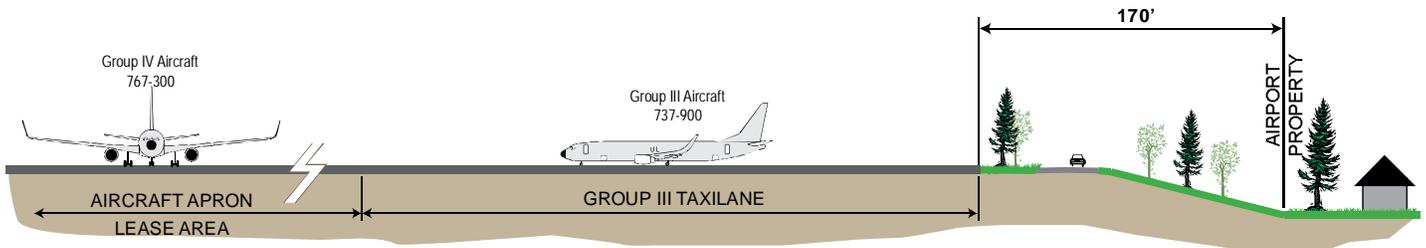
Homes within TSAIA's 65dB DNL contour, directly east of Kulis have received sound insulation improvements for their homes funded by the FAA and TSAIA that lowered the noise levels inside these homes. Mitigation measures for aircraft noise from future aviation uses of Kulis may include changes to lease lot layouts to position structures, berms, or walls between aircraft and the residential areas. Further aircraft noise mitigation measures should be evaluated as part of the site development review by the TSAIA for tenants applying to lease lands in this area.



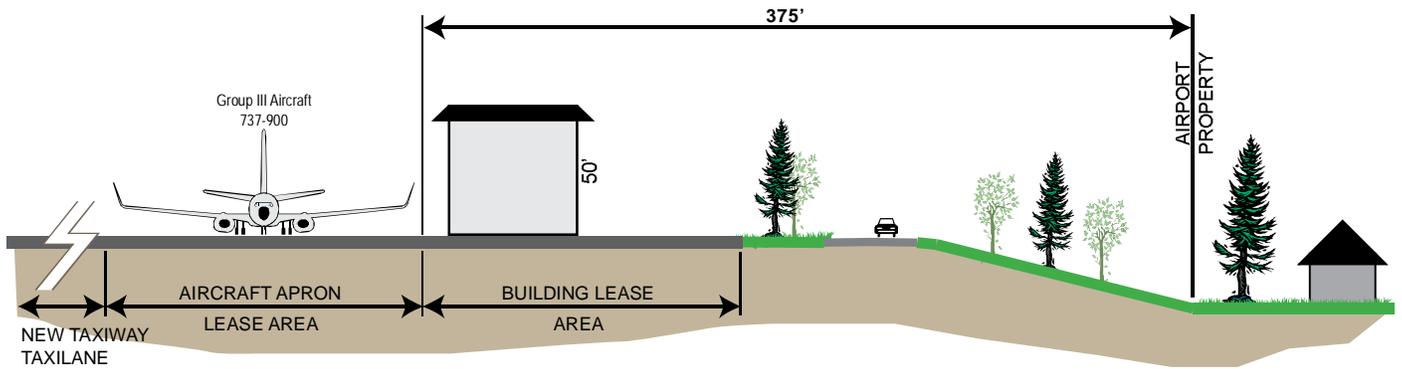
OPTION 1



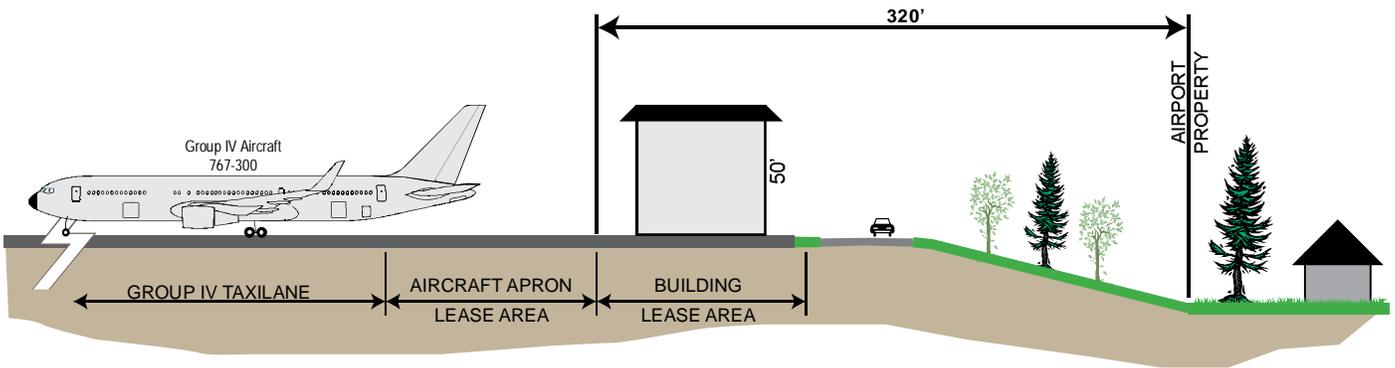
OPTION 2



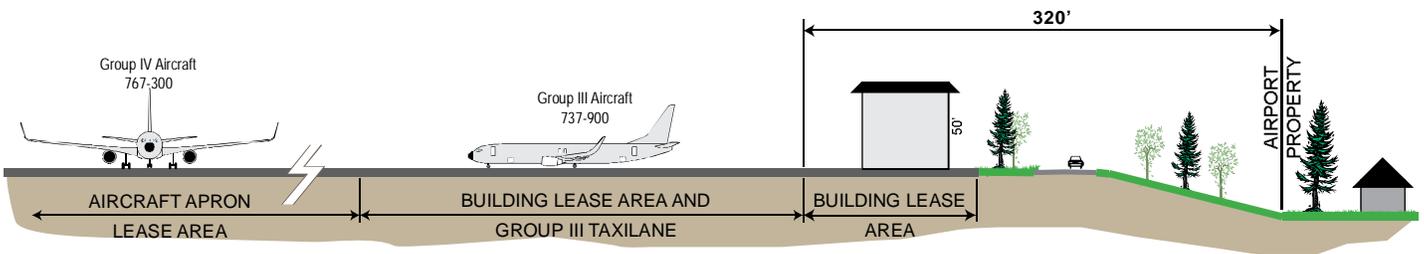
OPTION 3



OPTION 1



OPTION 2



OPTION 3

5.2 Vehicle Traffic

Raspberry Road serves as the primary access road for Kulis. It is also the primary route for residents of areas south of Raspberry Road and west of Jewel Lake Road heading into other areas of Anchorage for work. Raspberry Road is also the primary road access for Kincaid Elementary School.

This section of Raspberry Road is a minor collector road that is owned and maintained by the State of Alaska. The road consists of 12-foot-wide paved traffic lanes in each direction with turn pockets for left-hand turns at Kincaid Elementary School and Kulis. The road is constructed to MOA standards for collector roads and is posted at 45 miles per hour. Traffic levels on the road were 9,191 AADT in 2008. The road corridor has a hill that peaks near the entrances to the elementary school and Kulis, restricting the line-of-sight for traffic accessing Raspberry Road from the residential areas east of Kulis.

The existing access to Kulis is located directly across from the main access to Kincaid Elementary School. Access to the residential area directly east of Kulis is primarily from Air Guard Road, which runs along the eastern boundary of the Kulis site.

A separated multi-use trail is located on the south side of the road from Jewel Lake Road to Kincaid Park at the west end of the road.

Kulis historically has employed approximately 370 people on base during the week. Peak occupancy times typically occurred on weekends and during major training events when up to 1,400 people would be on the base. Thus, traffic generation from the base is typically in the range of 1,100 trips per day on weekdays and up to 3,000 trips per day on weekends. Weekday access occurs primarily during the morning peak hour and egress occurs during the afternoon peak. As most Anchorage residents live to the east of Kulis, it is assumed that most employees have to make a left turn onto Raspberry Road during the afternoon peak period, conflicting with traffic from Sand Lake Elementary and residential and park-related traffic heading west on Raspberry Road.

Traffic associated with redevelopment of Kulis will depend on the specific tenants that occupy the site. In general, the alternatives evaluated could result in a maximum of 2,800,000 to

2,900,000 square feet of aeronautical space when fully developed. Full development of this space could result in up to 3,600 trips per day, an increase of up to 20% from current peak traffic levels.

Traffic will need to be reevaluated as Kulis is developed and other regional traffic grows. Mitigation measures for traffic effects on Raspberry Road could include implementation of traffic demand measures like promoting transit use or carpooling or road improvements to provide easier access into and out of the site. Access improvements could include re-routing some traffic coming into Kulis to the South Airpark access road or improving the existing access to Kulis by adding lanes, lowering the road, and/or signalization.

5.3 Contaminated Sites

The State of Alaska Department of Environmental Conservation (DEC) Contaminated Sites Database lists nineteen separate contaminated sites that have been reported at the base over time (Table 3). All of the sites are classified as closed, but two sites have been closed with institutional controls. Institutional controls limit changes in development or use of the sites. For example, where contamination is under a cement slab, it is considered contained; but if redevelopment of the site is proposed and the cement slab is to be removed, additional testing and/or remediation of the soils below the slab may be required.

DEC regulates spills of hazardous materials and contaminated sites. Fueling facilities developed on the Kulis site will be required to meet DEC standards for spill prevention and response.

5.4 Visual Impacts

Much of the southern portion of Kulis is currently undeveloped and is well-vegetated. Residences along Air Guard Road east of the site are mostly buffered from the site by both topography and vegetation and have expressed concerns regarding the potential to lose this buffering with increased development on Kulis. Residences on the north end of Air Guard Road, however, have less buffering, and existing aviation facilities on Kulis are already visible from these residences. Redevelopment of Kulis is likely to result in more intensive development of portions of the site than during its use by the AKANG, increasing the potential for visual impacts to the residences east of the site.

Table 3: DEC Database - Kulis Contaminated Sites

Hazard ID	Location	Status	File ID
2999	AST No. 1	Cleanup Complete	Kulis
3147	Fire Rescue Station	Cleanup Complete	2100.38.436
22977	Tank ET 5, Building 17	Cleanup Complete - Institutional Controls	2100.26.272.13
22999	Tank 45-4	Cleanup Complete	2100.26.272.02
23653	No location given	Cleanup Complete	2100.26.272.01
23838	UST 45-1 RI	Cleanup Complete	2100.26.272.12
23839	Base, 00037-1	Cleanup Complete	2100.26.272.09
23851	Base, 0009-1	Cleanup Complete	2100.26.272.07
23856	Base	Cleanup Complete	2100.26.437
23864	Base, 3-X	Cleanup Complete	2100.26.272.14
23944	Diesel UST 00045-2	Cleanup Complete	2100.26.272.11
23945	00021-1	Cleanup Complete	2100.26.272.10
23975	Base, 16-1	Cleanup Complete - Institutional Controls	2100.26.272.06
23976	Base, 00004-1	Cleanup Complete	2100.26.272.08
24745	UST 00001-2	Cleanup Complete	2100.26.272.04
24760	UST 1-2 and Separator 1-2	Cleanup Complete	2100.26.272.04
24765	Building 47-1 RI, Diesel Oil UST	Cleanup Complete	2100.26.272.03
24781	Waste Oil UST and Oil/Water Separators 3-3	Cleanup Complete	2100.26.272.15
24872	UST 3-1	Cleanup Complete	2100.26.272.05

Mitigation of visual impacts could include setbacks from the south and east property lines, establishment of buffers using berms and or vegetation between developed areas on Kulis and the residential areas, and attention to lighting design to reduce light pollution in adjacent areas. As noted earlier, however, unless the setback area is otherwise undevelopable due to slopes or other factors, the TSAIA has limited ability to permanently preserve setbacks. One option discussed during the study was to permanently protect the buffer setback through a land trade with the MOA. The Draft West Anchorage District Plan identifies land trades as a way to address land use and ownership concerns of TSAIA and the MOA.

5.5 Other Potential Impacts Identified

Other impacts that arose during public comments included:

- air quality impacts,
- construction-related impacts,
- utility impacts,
- drainage and slope stability concerns, and

- potential effects on property values.

Air quality impacts are associated with the combustion of jet fuel, gasoline, and diesel during airport operations. Although the MOA is now in compliance with carbon monoxide levels established by the Environmental Protection Agency, there have been complaints regarding fuel odors near the TSAIA. The MOA conducted a study to evaluate the potential for hazardous air pollutants near the TSAIA in 2003. The study found that the only air pollutants above reporting limits were carbon monoxide and benzene, toluene, ethylbenzene, m,p-xylene, o-xylene compounds. The study also found that these air pollutants were lower near the airport than at other high-vehicle-traffic areas in Anchorage. The study attempted to correlate odors with various air pollutants but could not find any correlation. Redevelopment of Kulis may result in an increase in fuel usage and therefore increased fuel odors in the vicinity of the site. Mitigation for air quality concerns could include encouraging the use of electric-powered ground service equipment rather than diesel-burning equipment and location of fueling activities as far from the residential areas as possible.

Construction-related impacts include construction traffic, noise, and dust. These effects can be mitigated through development of traffic plans to identify construction traffic routing and timing, limits on construction hours, and development of dust mitigation plans for reducing dust emissions.

Concerns were raised regarding whether increased demand for water and sewer service at Kulis would adversely impact utility service to the residential areas to the east. Anchorage Water and Wastewater Utility indicated that they were not aware of any potential adverse effects and that they would be working with TSAIA to address any appropriate utility upgrades that might be required to adequately service facilities developed on the site.

Drainage and slope stability concerns were also raised by residents east of Kulis. The topography of the site rises significantly to the south and there is a vegetated slope between Kulis and many of the residential areas to the east. Future redevelopment of the site could result in regrading to lower the topography of the site to match the existing elevation on the northern portion of the site. Any development that results in changing the site elevation will be required to address slope stability and drainage changes in the site design and development.

Properties owned by TSAIA include large undeveloped areas along DeLong Lake, as well as adjacent to Kincaid Park and in the Turnagain Bog area. Despite aircraft noise and fuel odor issues, neighborhoods near the TSAIA continue to be popular due to the large undeveloped areas and proximity to parks and other open spaces. Residential land values depend on many factors (size; age; condition; proximity to schools, employment, open areas, etc.), and although the proximity to the airport may be a negative factor for some potential homebuyers, others may consider proximity to the airport to be a positive factor. Due to the many factors that affect residential property values, the past and future effects of Kulis site operations on residential property values is not known and would be very difficult to estimate.

Redevelopment of Kulis is likely to occur in many phases over many years. TSAIA officials could encourage potential tenants to present their development plans to the Sand Lake Community Council prior to development to ensure that residents are aware of proposed developments and have an opportunity to work with potential developers to incorporate mitigation measures into development plans where possible.

6.0 BUSINESS STRATEGY AND IMPLEMENTATION PLAN

The return of the Kulis property to the TSAIA will transfer to the airport a substantial inventory of major buildings, aircraft parking aprons, streets, and utility systems. The assumption of management responsibility for these assets will necessitate the expenditure of TSAIA funds to maintain and preserve this inventory, at least until such time as facilities are leased or sold. To offset these expenditures, the TSAIA will need to implement an aggressive strategy to begin generating revenue from these assets as soon as possible after the Kulis transfer takes place. The leasing or sale of buildings represents the largest potential revenue source from the Kulis assets, so the strategy must be directed toward exploiting this opportunity.

Note: Both military property re-use and airport land use are generally subject to special considerations under state and federal law, as well as obligations of the state under FAA grant assurances. Each recommendation and alternative presented in this report is subject to state legal review, both generally and with respect to the details of implementation, to ensure compliance with all applicable legal requirements. In addition, the implementation by TSAIA of any recommendation in this report regarding property leasing and building sale must be consistent with the requirements of 17 AAC 42 (Alaska Administrative Code).

6.1 Building Leasing/Sale Alternatives

Three broad alternatives for the leasing/sale of Kulis buildings are described below:

- Retain direct management of the buildings and issue short-term leases for space within the buildings, much like the TSAIA does with the public terminal buildings.
- Issue triple-net leases for the buildings and building sites (a triple-net lease is a landlord/tenant relationship in which the tenant is made responsible for paying rent plus all expenses associated with the asset being leased, including property taxes, structural insurance, and building maintenance/operation).
- Sell the buildings and grant long-term leases for the building sites to the respective purchasers/tenants.

Each of these alternatives has advantages and disadvantages that must be considered, as described below:

A) Retain Direct Management

Advantages of retaining direct management of the buildings:

- Would appeal to a wider range of potential tenants because buying or leasing an entire building would not be necessary.
- Would also appeal to a wider range of potential tenants because long-term commitments are not required and tenants do not have responsibility for the building's overall maintenance and utilities.
- Would be a revenue-producing alternative to maintaining an empty building until it can be sold or triple-net leased to a single party.
- Would allow the airport to produce revenue from buildings that are anticipated to be demolished within five to ten years.
- This is more attractive to potential tenants during unstable economic times than the long-term commitment required by Alternative C.

Disadvantages of retaining direct management of the buildings:

- Provides limited ability for tenants to alter or remodel space to suit their business needs.
- Higher overhead costs for the airport due to building maintenance and utilities.
- Would increase airport operating costs due to the additional staffing necessary to manage and maintain the buildings or the expense of contracting with a private sector company to perform the building management and maintenance functions.

B) Leasing on a Triple-Net Basis

Advantages of leasing buildings on a triple-net basis:

- Would save the airport the personnel and overhead costs associated with building maintenance, repair, and utilities.

- When compared to Alternative A, this would simplify management because day-to-day building care would be the tenant's responsibility and there would be fewer tenants to deal with (theoretically, one per building).
- Although triple-net leases are more often long-term transactions, a short-term triple-net lease might be a more cost-effective approach than Alternative A for leasing a building that TSAIA determines cannot, or should not, be sold or long-term leased.

Disadvantages of leasing buildings on a triple-net basis:

- Involves a much more complex lease than is necessary under Alternatives A or C.
- Requires regular, detailed building inspections to ensure that the tenant is doing all the maintenance and repair required by the lease to preserve the building and its equipment.
- Can result in more conflicts between airport management and the tenant because the airport is interested in revenue generation and asset preservation, while the tenant is interested in keeping maintenance and repair costs down, especially in the latter years of the lease term.
- According to our surveys, far fewer potential tenants are interested in a triple-net lease arrangement than would be interested in Alternatives A or C.

C) Selling Buildings and Long-Term Leasing Building Sites

Advantages of selling buildings and leasing building sites:

- Eliminates building maintenance and repair costs for the airport.
- Would require far less intensive management than Alternatives A or B.
- Would provide substantial up-front revenue (through building sales) to better offset the increases in the airport's road and apron maintenance costs resulting from the addition of Kulis facilities to the TSAIA inventory.
- Allows much more flexibility for tenants to alter or remodel buildings to suit their own operations.

- Our surveys indicate that this would be attractive to more potential tenants than Alternative B.
- Building ownership gives the tenant a bigger stake in their relationship with the TSAIA than do Alternatives A and B and makes for a more secure long-term revenue stream.

Disadvantages of selling buildings and leasing building sites:

- This is not as attractive to smaller businesses that cannot use an entire building.
- This is less attractive than Alternative A to potential tenants during unstable economic times.
- Depending on the state of the economy at the time the buildings are offered for sale, this alternative may require more time (to locate buyers, etc.) before all of the assets begin producing revenue.
- This provides less flexibility for the airport to demolish buildings than with Alternative A.

6.1.1 Recommended Alternative

Based on a review of these alternatives, Alternative A is considered not cost-effective for the airport in the long-term. Alternative A should be considered only in the event a building proves impossible to be marketed under Alternatives B or C, and then only if Alternative A is determined to be more cost effective than placing the building in cold storage.

A long-term triple-net lease under Alternative B is less attractive than a long-term lease under Alternative C for the airport and most potential tenants. During the 2009 business interest survey, only one of the 17 respondents indicated a high degree of interest in a triple-net lease. As a large corporate aircraft operator, this respondent is unique within the Alaskan commercial aviation industry, in terms of its type of operation and its access to funding resources. It should also be noted that this respondent was also interested in the building purchase/ground lease alternative.

Our business interest surveys indicated a low level of private sector interest in leasing Kulis buildings on either a short-term or triple-net basis. However, those responses may have been influenced by the fact that a building purchase/long-term land lease option was also presented in the survey. Given the three choices of short-term lease, triple-net lease, and building purchase/long-term land lease, the majority of survey respondents chose the latter. Nevertheless, if a building does not sell or if TSAIA determines that it is in the best interest of the airport to withhold a building from sale, a short-term triple-net lease may be the best alternative to pursue.

In the long-term view, we believe that Alternative C will be the most cost-effective, revenue-secure approach for the airport to take in converting the Kulis military assets into aeronautical business expansion and development. Provided that buyers for the buildings can be found, the advantages of this alternative far outweigh its disadvantages.

Recommended Approach: Implement Alternative C as the primary vehicle for getting Kulis buildings into private sector use. Use short-term triple-net leases under Alternative B to generate revenue from any buildings for which buyers cannot be found in the short-term. Use Alternative A as a last resort only if a building cannot be sold or leased under Alternatives B or C, and then only if Alternative A is determined to be more cost effective than placing the building in cold storage.

6.2 Recommended Sale/Lease Marketing Approach

Before adopting a marketing plan for Kulis properties, TSAIA should first identify any building(s) that should be withheld from sale, either for use by the airport or for short-term leasing. The latter category might include a building scheduled for eventual demolition, but leasable for revenue generation purposes on an interim basis. Upon designating the respective buildings for airport use, interim leasing, and sale disposal, it is recommended that TSAIA implement a marketing plan, broadly outlined as follows:

- Properties designated for interim leasing - Offer the buildings for short-term triple-net leasing with the term set by the airport to coincide with the airport's building demolition schedule or ultimate building plan. A bonus bid offering would likely be the most cost effective, straightforward means of awarding this kind of lease.

- Properties designated for building sale/long-term land leasing - Offer all of (or a majority of) the properties as a single package to be purchased/leased by a single entity or offer each building and site as a separate unit, resulting in multiple tenant use of Kulis. Depending on the real estate marketing environment at the time, TSAIA could:
 - Pursue the single purchaser/lessee offering first followed by a multiple-tenant offering if the former proves unsuccessful;
 - Incorporate both options in a single solicitation process in which interested parties could choose to submit a proposal for leasing the entire base (or the majority thereof) or a particular building or buildings; or
 - Adopt the multiple-tenant offering approach, alone.

Because of the greater potential for complexity involved in the single purchaser/lessee offering method, we recommend an RFP process be used if this option is selected.

Either bonus bidding or an RFP process could be used as the award methodology for the multiple-tenant alternative. However, the RFP process should be considered for the more potentially complex disposals.

6.3 Capital Improvements

The TSAIA will be responsible for capital improvements and for maintenance of buildings until they are sold or leased with all or a portion of those responsibilities assumed by tenant(s). During completion of Phases 1 and 2 (as shown on Figure 25), TSAIA capital improvements will likely be limited to some minor road, utility, and security fencing extensions or realignments on the north side of the existing apron. In addition, unless the manned gate or a key card gate system is used to limit access at Raspberry Road, a new security fence will be needed within the Kulis properties, separating the apron areas from the roads and parking areas and extending between buildings. TSAIA capital costs for nonaeronautical areas should be minimal. A separate study is addressing the utility improvements required to install utility meters for individual lease lots and buildings.

Phase III development on the south half of the Kulis site becomes increasingly more expensive to develop for TSAIA and its tenants. For TSAIA, the costs will involve building demolition, lowering the hills on the site by up to 50 feet, new taxiways, and relocated roads and utilities and fences.

Capital costs estimates for the Kulis site are shown in Table 4. Costs associated with work on lease lots are limited to earthwork associated with leveling the site, apron development, and demolition of buildings.

Table 4: Kulis Redevelopment Capital Costs

	Cost
Phases 1 and 2 (next 20 years)	
Earthwork	\$ 800,000
Taxiway Z and Tug Road – Initial Phase	5,950,000
Fencing	175,000
Utilities	500,000
Total Basic Bid:	\$ 7,425,000
Overhead, Design, & Construction @ 35%:	2,598,750
Total:	\$10,023,750
Phase 3 (beyond 20 years)	
Building Demolition	\$ 4,000,000*
Earthwork	15,200,000
Taxiway Z and Tug Road – Next Phase	5,400,000
Taxilanes	1,700,000
Aprons	19,800,000
Fencing	290,000
Roads	2,000,000
Utilities	2,000,000
Total Basic Bid:	\$50,390,000
Overhead, Design, & Construction @ 35%:	17,636,500
Total:	\$68,026,500

* This cost does not include buildings proposed to be demolished by Department of Defense.

7.0 PUBLIC INVOLVEMENT

Members of the public, airport stakeholders, Kulis neighbors, and others were involved during the development of the Kulis Land Use Plan. Key components of the public involvement tasks are described in the following sections and documented in Appendix D.

Comments from the public and stakeholders helped identify initial issues and assisted the project team in evaluating and refining options. Four public meetings were held at project milestones. Meeting notices were mailed to approximately 1,800 residences near Kulis and were advertized with the Sand Lake Community Council and in the Anchorage Daily News. A KAG made up of representatives of the neighborhood, the MOA, the FAA, airlines, and economic development groups also reviewed project information prior to the public meetings and advised on potential options and the public involvement approach. The project team also visited the neighborhood to the east of Kulis, walked the property boundary with the neighbors, and discussed their concerns and suggestions. Project information was presented at several Sand Lake Community Council meetings and was posted on the TSAIA website.

7.1 Mailing/E-mail List

An initial mailing list was compiled of aviation users, TSAIA tenants, approximately 1,800 TSAIA residential and business neighbors, government interests, and other key stakeholders. The initial mailing list was used for distribution of the first public newsletter, which gave notice that all subsequent project correspondence would be distributed via email and invited interested parties to provide their email addresses in order to continue receiving project updates and notifications. The email distribution list was created and continuously updated to include those requesting to receive project updates and notifications.

7.2 Newsletters

Newsletter flyers were distributed in advance of each of the four public meetings. The newsletters provided information regarding the status and schedule of the project, notice of the upcoming meeting, and contact information for the TSAIA and DOWL HKM Project Managers. The first newsletter was mailed to all stakeholders on the mailing list. The other newsletters were emailed to those on the email distribution list and distributed at Sand Lake Community

Council meetings and posted on the TSAIA and Sand Lake Community Council websites. Flyers are included as Appendix D.

7.3 Kulis Advisory Group

The KAG assembled to advise on project presentations in advance of each public meeting. The KAG was comprised of representatives from the Sand Lake Community Council, Anchorage School District, MOA, FAA, economic development groups, and aviation organizations (Appendix D for KAG membership).

7.4 Public Meetings

Four public meetings were held specifically for the Kulis Land Use Plan. Each meeting consisted of an open house, presentation, and question and answer session. Meetings were advertised through flyers, Sand Lake Community Council notices, and in the Anchorage Daily News. Materials from each meeting were posted to the TSAIA website after the meetings. Presentation materials, meeting minutes, and comment sheets from each meeting are included in Appendix D. A summary of the public meetings follows:

- Public Meeting 1: Identified the purpose of the project, project issues, and the study process.
- Public Meeting 2: Presented preliminary land use options and phasing and discussed potential community impacts.
- Public Meeting 3: Presented revised land use options, development phasing, and potential mitigations for community impacts.
- Public Meeting 4: Presented the Draft Kulis Land Use Plan.

At the second public meeting, residents neighboring the Kulis site along Air Guard Road requested that members of the project team conduct a walk-through of that area with neighbor participation. On April 17, members of the project team and a representative from TSAIA walked Air Guard Road with interested residents and collected photographs of the area, documenting comments and concerns from Kulis's closest neighbors.

7.5 Community Council Meetings

Representatives from DOWL HKM provided status reports to the Sand Lake Community Council at five meetings over the course of the project, beginning at the council's December 14, 2009, regular meeting. Flyers for public meetings were distributed at the community council meetings and posted on the community council's website.

7.6 Website

Project information was posted on the TSAIA (<http://www.dot.alaska.gov/anc/about/Kulis.shtml>) and Sand Lake Community Council (<http://www.sandlakecc.org/>) websites. The website information included:

- The purpose for and scope of the project.
- Public meeting materials (presentations, minutes, handouts).
- The project schedule.
- Comment forms.
- Contact information for TSAIA and DOWL HKM Project Managers.
- The Draft Kulis Land Use Plan.

7.7 Summary of Key Public Comments

Public comments were collected throughout the project during public and community council meetings, by email, and by comment forms returned to the project team. A summary of public comments collected is included in Appendix D, and key comments (those identified or echoed by many stakeholders throughout the project) are summarized below:

- Noise: The noise produced by aircraft activity at Kulis is considered by some to already exceed acceptable levels, and any increase in noise from new activities on the site is a concern to many.
- Traffic and Access: Concerns include a line-of-sight issue on Raspberry Road in the vicinity of the Kulis access point and the potential for increased traffic congestion during peak periods.
- Environmental Impacts: Preservation of the natural environment (trees, vegetative, and natural buffers) was identified as a concern by many of the neighbors. In addition, air

pollution, drainage and erosion issues, and hazardous materials and/or contamination were identified as concerns, particularly by those living closest to Kulis.

- Future Use of the Site: Concerns about larger aircraft and helicopter activity on Kulis were expressed. Suggestions were made to use some of the site for non-aeronautical activities, such as an aviation education campus or for other governmental agency operations.
- Proposed Land Use Options: Most public comments indicated a preference for Options 1 and 3, concerns about the proximity of aircraft to homes in Option 2 (that was addressed in the Revised Option 2), and uncertainty about how Option 4 would be implemented.
- Mitigating Impacts: Mitigation measures suggested included maintaining and expanding the natural, vegetated buffer between the site and residential areas, constructing a berm between developed areas and Raspberry Road, moving proposed roads further from residences, and a land swap with the MOA to allow for a designated long-term buffer.

KULIS

