

Talkeetna Airport Improvements

Final Environmental Assessment

Talkeetna Airport

State Project No. 54660

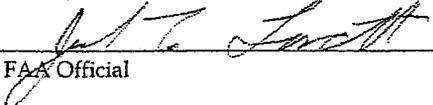
September 2006

For:
Federal Aviation Administration

On Behalf of:
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This environmental assessment becomes a federal document when evaluated and signed and dated by the Responsible Federal Aviation Administration official.

 Responsible FAA Official	9/25/2006 Date of approval
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Contents

Section	Page
Acronyms and Abbreviations	vii
1 Introduction and Proposed Action.....	1-1
1.1 Description of Existing Airport Facilities.....	1-1
1.2 Project History	1-4
1.3 Proposed Action	1-4
2 Purpose and Need	2-1
2.1 Problem Definition (Purpose) and Solutions (Need)	2-1
2.1.1 GA and Transient Aircraft Parking.....	2-1
2.1.2 Aircraft Lease Lots	2-2
2.1.3 Helicopter Parking Relocation and Heliport Development.....	2-2
2.1.4 Safety, Automobile Parking, and Snow Storage	2-4
2.2 Airport Activity Forecasts	2-5
2.3 Identification of Federal Action.....	2-6
3 Alternatives.....	3-1
3.1 Alternatives Considered but Eliminated	3-1
3.1.1 Alternative A.....	3-1
3.1.2 Alternative B	3-1
3.1.3 Alternative C.....	3-4
3.2 Proposed Action (Preferred Alternative)	3-4
3.2.1 Project Description	3-4
3.2.2 Future 2015 Airport Improvements.....	3-6
3.2.3 Required Permits and Approvals	3-6
3.3 No Action Alternative.....	3-7
4 Affected Environment	4-1
4.1 Noise.....	4-1
4.2 Land Use/Compatibility	4-1
4.3 Socioeconomic Conditions	4-4
4.3.1 Local Government.....	4-4
4.3.2 Population	4-4
4.3.3 Economy, Employment, and Income	4-5
4.3.4 Community Facilities.....	4-6
4.4 Transportation	4-6
4.5 Subsistence	4-7
4.6 Historical, Architectural, Archaeological, and Cultural Resources	4-7
4.7 Climate.....	4-7
4.8 Air Quality.....	4-7

4.9	Water Quality.....	4-8
4.10	Floodplains.....	4-8
4.11	Coastal Resources.....	4-10
4.12	Fish, Wildlife, and Plants.....	4-10
	4.12.1 Fish.....	4-10
	4.12.2 Wildlife.....	4-10
	4.12.3 Vegetation.....	4-11
	4.12.4 Threatened and Endangered Species.....	4-12
4.13	Wetlands.....	4-12
4.14	Hazardous Materials.....	4-14
4.15	Water Supply and Wastewater.....	4-15
4.16	Wild and Scenic Rivers.....	4-15
4.17	Farmlands.....	4-15
5	Environmental Consequences.....	5-1
5.1	Introduction.....	5-1
5.2	Noise.....	5-1
	5.2.1 No Action Alternative.....	5-2
	5.2.2 Proposed Action Alternative.....	5-2
5.3	Compatible Land Use.....	5-2
	5.3.1 No Action Alternative.....	5-5
	5.3.2 Proposed Action Alternative.....	5-5
5.4	Air Quality.....	5-5
	5.4.1 No Action Alternative.....	5-5
	5.4.2 Proposed Action Alternative.....	5-6
5.5	Socioeconomic Impacts, Environmental Justice, and Children’s Environmental Health and Safety Risks.....	5-6
	5.5.1 No Action Alternative.....	5-6
	5.5.2 Proposed Action Alternative.....	5-6
5.6	Historical, Architectural, Archeological, and Cultural Resources.....	5-7
	5.6.1 No Action Alternative.....	5-7
	5.6.2 Proposed Action Alternative.....	5-7
5.7	Water Quality.....	5-7
	5.7.1 No Action Alternative.....	5-7
	5.7.2 Proposed Action Alternative.....	5-8
5.8	Fish, Wildlife, and Plants.....	5-8
	5.8.1 No Action Alternative.....	5-8
	5.8.2 Proposed Action Alternative.....	5-8
5.9	Wetlands.....	5-9
	5.9.1 No Action Alternative.....	5-9
	5.9.2 Proposed Action Alternative.....	5-9
5.10	Floodplains.....	5-11
	5.10.1 No Action Alternative.....	5-11
	5.10.2 Proposed Action Alternative.....	5-11
5.11	Coastal Resources.....	5-13
	5.11.1 No Action Alternative.....	5-13
	5.11.2 Proposed Action.....	5-13

5.12	Natural Resources and Energy Supply	5-13
5.12.1	No Action Alternative	5-13
5.12.2	Proposed Action Alternative	5-13
5.13	Hazardous Materials, Pollution Prevention, and Solid Waste	5-14
5.13.1	No Action Alternative	5-14
5.13.2	Proposed Action Alternative	5-14
5.14	Light Emissions and Visual Impacts.....	5-14
5.14.1	No Action Alternative	5-14
5.14.2	Proposed Action Alternative	5-14
5.15	Construction Impacts.....	5-16
5.15.1	No Action Alternative	5-16
5.15.2	Proposed Action Alternative	5-16
5.15.3	Construction Mitigation Measures	5-16
5.16	Material Site Impacts	5-18
5.16.1	No Action Alternative	5-18
5.16.2	Proposed Action Alternative	5-18
5.17	Cumulative Impacts.....	5-18
5.18	Summary of Mitigation Measures.....	5-21
6	Agency Coordination and Public Involvement.....	6-1
6.1	Introduction.....	6-1
6.1.1	Agency Coordination and Public Involvement	6-1
6.1.2	Public and Agency Meeting Summary.....	6-2
6.1.3	Public Scoping Meeting – August 17, 2004.....	6-4
6.1.4	Public hearing of Draft Environmental Assessment – May 18, 2006.....	6-4
6.2	Persons and Agencies Consulted	6-5
6.3	Permits and Approvals.....	6-6
7	List of Preparers	7-1
8	References.....	8-1

Appendixes

A	Permit Applications
B	Wetland, Vegetation, and Wildlife Report and Wetland Avoidance and Minimization Analysis
C	Supplemental Phase I Site Assessment
D	Noise Study
E	Agency and Public Coordination
F	Responses to Comments on the <i>Draft Environmental Assessment</i>

Tables

2-1	GA and Transient Aircraft Parking Demand	2-2
2-2	Summary of Heliport Facility Requirements.....	2-4
2-3	Annual Aircraft Operations	2-5
2-4	Airport-Based and Transient Operations Forecasts	2-6
4-1	2000 Census Population Ethnicity, Talkeetna, Alaska	4-5
5-1	Summary of Mitigation Measures.....	5-22
6-1	Summary of Agency Comments Received and Responses	6-3
6-2	Persons and Agencies Consulted	6-5
6-3	Permits and Clearance	6-6

Figures

1-1	Project Location Map	1-2
1-2	Existing Airport Facilities.....	1-3
1-3	Proposed Action – 2008	1-6
2-1	Existing Airport Deficiencies	2-3
3-1	Alternative A – 2008 and 2015 Improvements	3-2
3-2	Alternative B – 2008 and 2015 Improvements.....	3-3
3-3	Alternative C – 2008 and 2015 Improvements	3-5
3-4	Proposed Action	3-8
3-5	Future 2015 Improvements	3-9
4-1	Existing Noise Contours.....	4-2
4-2	Land Ownership and Community Facilities	4-3
4-3	Employment by Industry	4-6
4-4	Floodplain and Water Resources	4-9
4-5	Wetlands	4-13
4-6	Landfills and Identified Contaminated Sites.....	4-16
5-1	Noise Contours for the No Action Alternative in 2008.....	5-3
5-2	Noise Contours for the Proposed Action Alternative in 2008.....	5-4
5-3	Wetland Impacts Associated with the Proposed Action Alternative	5-10
5-4	100-Year Floodplain with the Proposed Action Alternative	5-12
5-5	Landfills and Identified Contaminated Sites with the Proposed Action Alternative	5-15
5-6	Commercial Materials Site	5-19

Acronyms and Abbreviations

AASP	Alaska Aviation System Plan
AC	FAA's Advisory Circular
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
ADOT&PF	Alaska Department of Transportation and Public Facilities
ALP	Airport Layout Plan
ARRC	Alaska Railroad Corporation
BMP	Best Management Practices
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
dB	Decibels
DNPP	Denali National Park and Preserve
DNL	Day-Night Average Noise Level
EA	Environmental Assessment
EDMS	Emissions Displacement Modeling System
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ESL	Environmental Survey Limits
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FICON	Federal Interagency Committee on Noise
FSS	Flight Service Station
GA	general aviation
GPS	global positioning system
INM	Integrated Noise Model
LTO	Landing/take-off cycle

LUST	leaking underground storage tank
M&O	maintenance and operations
Mat-Su	Matanuska-Susitna
MOA	Memorandum of Agreement
MTA	Matanuska Telephone Association
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NMFS	National Marine Fisheries Service
NPDES	National Pollution Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
PSA	Preliminary Site Assessment
RLUD	Residential Land Use Development
RPZ	Runway Protection Zone
sf	square foot or square feet
sy	square yard
SHPO	State Historic Preservation Office
SWPPP	Storm Water Pollution Prevention Plan
TKA	Talkeetna Airport
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

SECTION 1

Introduction and Proposed Action

The Alaska Department of Transportation and Public Facilities (ADOT&PF) is proposing improvements to the Talkeetna Airport in Talkeetna, Alaska (Figure 1-1). The project is located in Township 26 North, Range 4 West, Sections 19 and 30 of the Seward Meridian. Located within the Matanuska-Susitna (Mat-Su) Borough, the unincorporated community of Talkeetna is located along the Susitna River near its confluence with the Talkeetna River, about 70 air miles north of Anchorage, Alaska. The community, with an approximate population of 844, has a tourism-related economy because of its proximity to Denali National Park and Preserve (DNPP), Mount McKinley, and Denali State Park. Talkeetna is connected to the state road system (via George Parks Highway) and rail system (provided by the Alaska Railroad Corporation [ARRC]) and is the transportation center for tourists visiting DNPP.

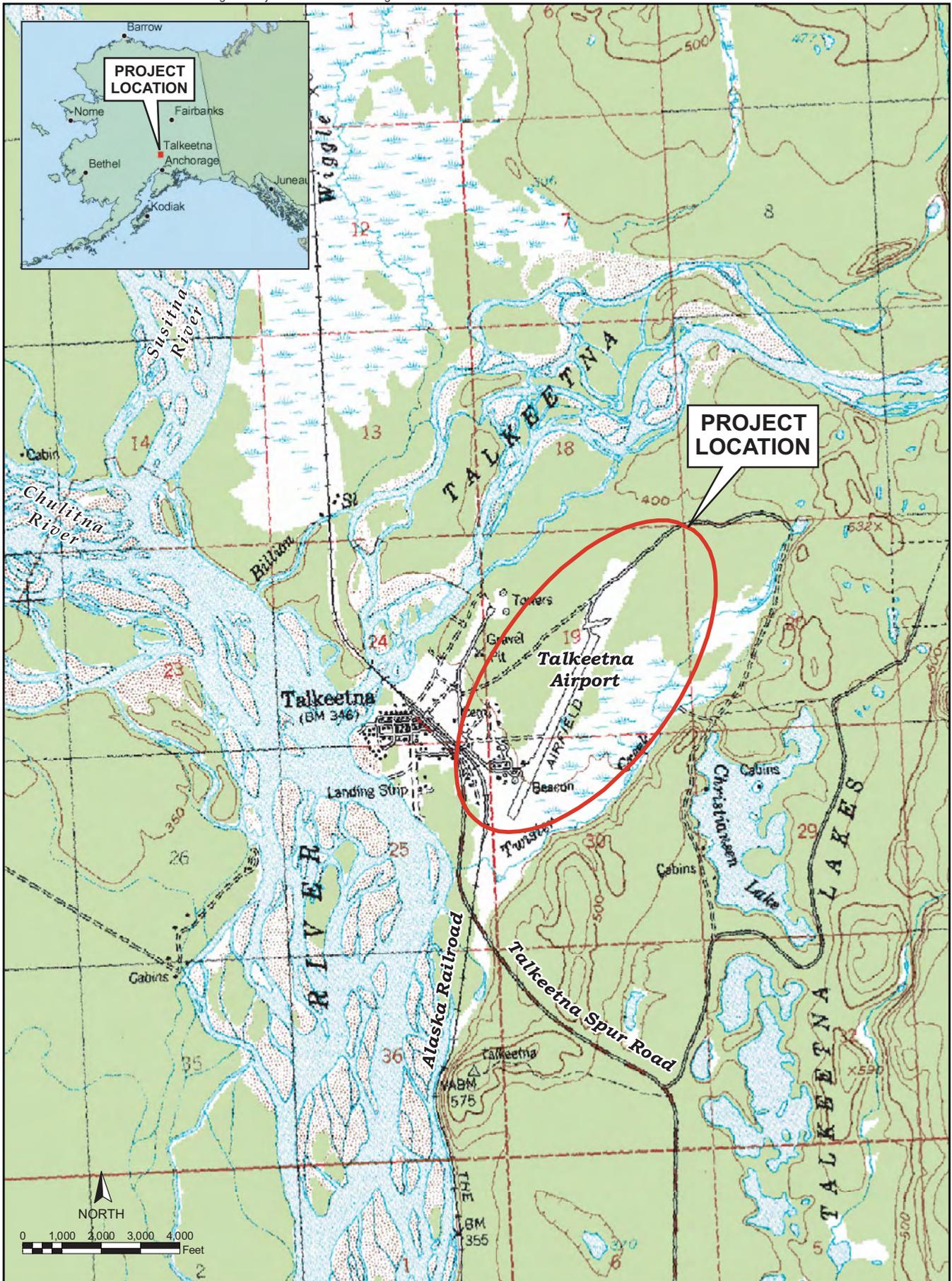
This Environmental Assessment (EA) has been prepared in accordance with Federal Aviation Administration (FAA) Orders 1050.1E and 5050.4A, and to satisfy the requirements of the National Environmental Policy Act of 1969 (NEPA).

1.1 Description of Existing Airport Facilities

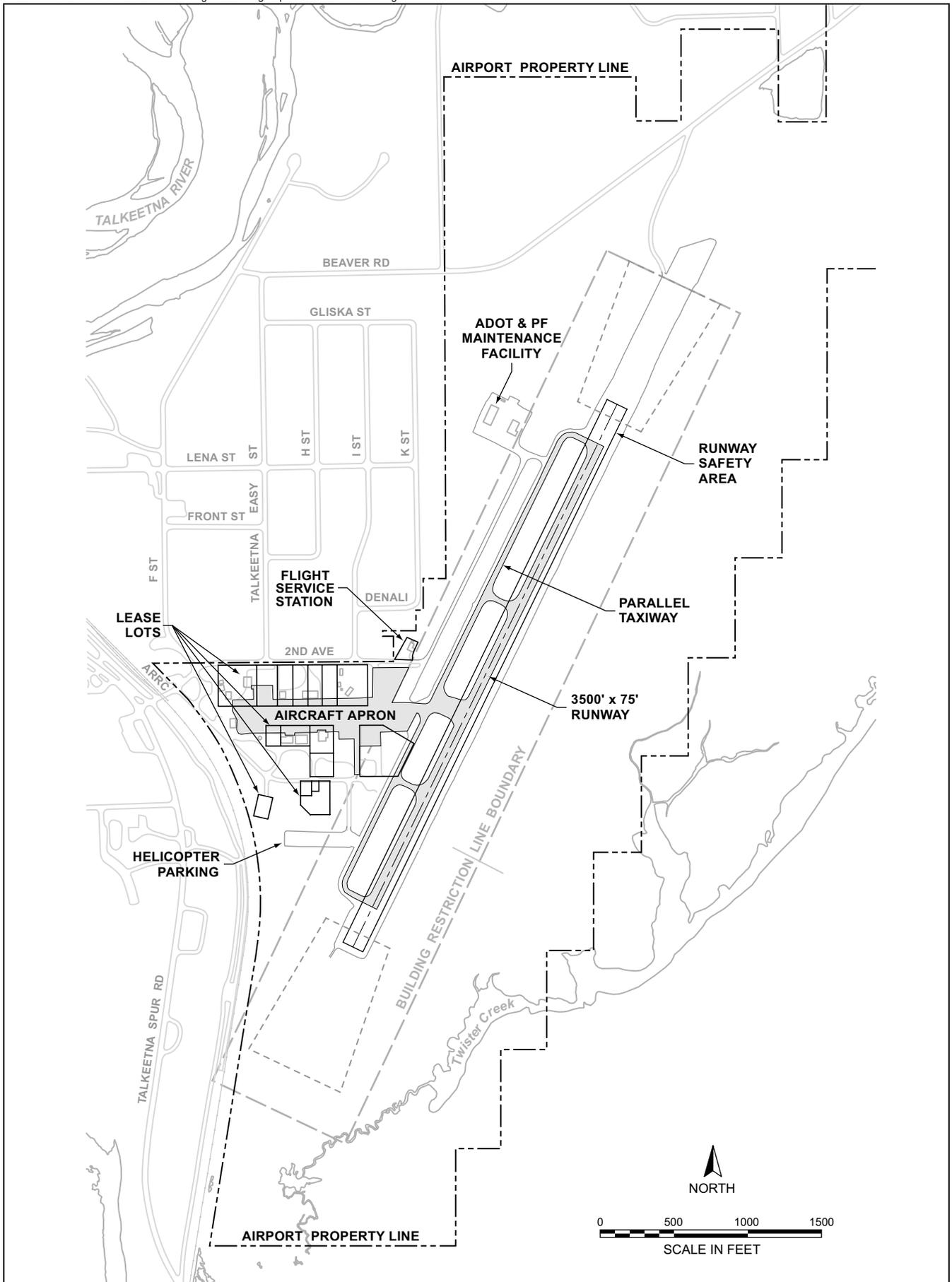
Talkeetna Airport was constructed in 1941, and is owned and operated by ADOT&PF. The Alaska Aviation System Plan (AASP) classifies Talkeetna Airport as a “local” airport. Local airports provide secondary access to communities and include recreational and emergency airports. Aviation is a major economic generator for the Talkeetna community, which is frequently used as the base for guide service operations to outlying areas. Air taxi service, in support of the Mount McKinley summer climbing season, is a major aspect of aviation activities at Talkeetna Airport; in fact, seven air taxi operators are based at Talkeetna Airport. Flightseeing operations to the DNPP are also increasingly popular. The U.S. National Park Service (NPS) and U.S. Army operate fixed-wing aircraft and helicopters to support Mt. McKinley search and rescue missions out of Talkeetna Airport.

Airport facilities consist of a 3,500-foot paved runway with low-intensity lighting, a parallel taxiway, two paved aircraft parking aprons, and maintenance and operations (M&O) facilities. The airport does not have a terminal or passenger facilities. Individual terminal area facilities have been constructed by many of the airport’s commercial tenants. The access road to the airport M&O facility begins at Second Avenue near the FAA Flight Service Station (FSS), and parallels the runway and taxiway. Second Avenue extends from the Talkeetna Spur Road to the FSS. Figure 1-2 shows the existing airport facilities.

Two other active airfields are located within 1 mile of Talkeetna Airport. Talkeetna Village Airstrip is a small airport with an unpaved runway located in downtown Talkeetna, approximately 1 mile west of Talkeetna Airport. The airstrip is open to the public, hosts five aircraft based there year-round, and supports a limited number of transient aircraft. The



Source: USGS Topographical Map, Talkeetna B-1
Scale: 1:63,360
Date: July 30, 2004



Talkeetna Airport Improvements Environmental Assessment | **Figure 1-2 Existing Airport Facilities**

other airport, Christiansen Lake, is used as a base for both private and commercial floatplanes and is located approximately 1 mile southeast of Talkeetna Airport.

1.2 Project History

In 1997, a Master Plan prepared for Talkeetna Airport (USKH, 1997) recommended several projects to enhance safety and efficiency of operations at the airport. An Environmental Assessment (EA), drafted in 2000 for the airport improvements identified in the April 1997 Talkeetna Airport Master Plan Phase One Report, evaluated five alternatives. The FAA did not issue a final decision on the EA's preferred alternative but, instead, recommended additional studies including:

- A hydrologic study to evaluate potential floodplain involvement and appropriate mitigation
- A siting study for a heliport
- A noise study to assess existing and future noise levels from airport operations on the surrounding community

In 2001, the Talkeetna Airport Master Plan was revised to include facility requirements through 2015.

A subsequent floodplain study was published in 2003. It concluded that much of the property surrounding the airport is located in the 100-year floodplain (URS, 2004). Consequently, ADOT&PF began to evaluate floodplain mitigation strategies for unavoidable development within the floodplain, including flood control dikes through Talkeetna and expansion of the ARRC railroad bridge. Concurrently, ADOT&PF began to investigate airport alternatives that avoided the 100-year floodplain. In accordance with Executive Order (EO) 11988 Floodplain Management, it is FAA policy to avoid encroachment on base floodplains if there is a practicable alternative for meeting the purpose and need that avoids floodplain encroachment. ADOT&PF successfully identified an alternative that substantially avoids floodplain impact and has selected this alternative as the Proposed Action. As a result, ADOT&PF has abandoned the investigation of alternatives entailing flood control dikes and railroad bridge expansion.

Because of substantial changes in the project definition since the 2000 EA was drafted, ADOT&PF has decided to prepare this new EA that assesses the Proposed Action along with the No Action Alternative. The basis for airport improvements identified in this EA is the 2001 Talkeetna Airport Master Plan.

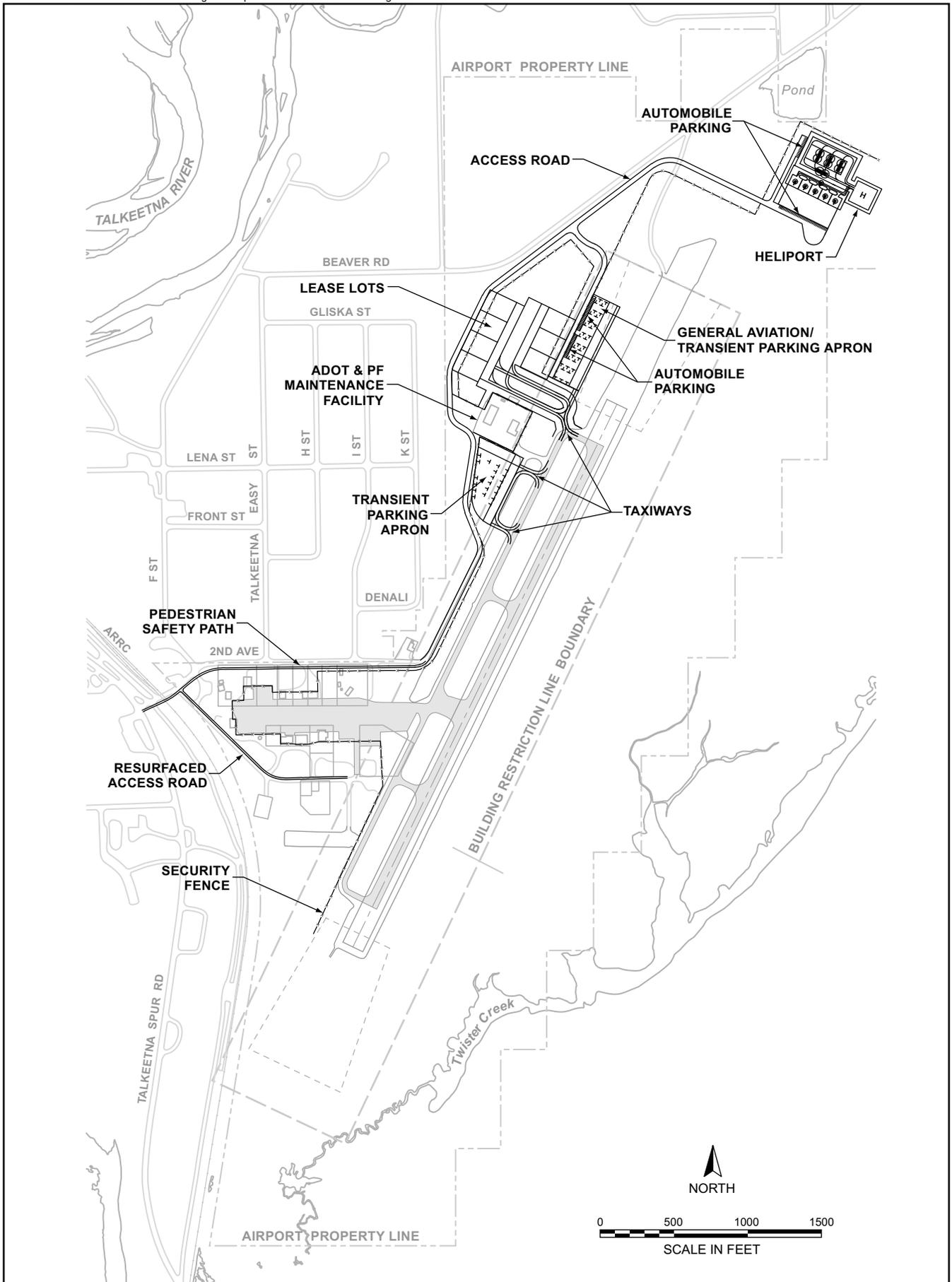
1.3 Proposed Action

The purpose of the project is to enhance safety; to satisfy current and forecast demand for airport facilities; and to improve the efficiency of airport operations. The Proposed Action consists of projects prioritized by ADOT&PF to meet current and forecast demand through 2008. Other projects recommended for implementation by 2015 in the revised Master Plan will be assessed for cumulative impact but are not considered part of the Proposed Action. Any future need to implement these projects would be the subject of separate NEPA, permitting, and other approval processes.

The following improvements comprise the Proposed Action and would be built and operational by 2008. Figure 1-3 illustrates the proposed improvements.

- Construct new apron with eight additional lease lots for use by commercial and general aviation (GA) tenants of the airport to satisfy existing and forecast demand for lease lots.
- Construct new GA and transient aircraft parking aprons to satisfy existing and forecast demand for aircraft parking.
- Construct 84 automobile parking spaces to satisfy existing and forecast demand for automobile parking.
- Relocate the existing helicopter parking and establish a designated heliport in compliance with FAA design standards to separate fixed wing and rotary aircraft, thus enhancing airport safety.
- Install security fence around western perimeter portions of the airport to minimize trespass incursions by pedestrians and domestic animals and to segregate aircraft operational areas from public areas to enhance public and airport safety.
- Provide an access road from Second Avenue to the new lease lots and GA apron and the new heliport. Pave the existing access road to the existing apron and lease lots to improve maintenance and operations, decrease dust, and improve drainage.
- Provide a pedestrian safety path to improve public and airport safety.

This EA has been prepared to disclose any environmental effects that would result from the Proposed Action. Key environmental issues associated with elements of the Proposed Action include floodplains, wetlands, contamination associated with closed landfills on the airport property, and temporary disruption from construction activity and noise. Section 5, Environmental Consequences, describes the effects of the project and mitigation proposed to compensate for any impacts.



Talkeetna Airport Improvements Environmental Assessment | Figure 1-3 Proposed Action – 2008

SECTION 2

Purpose and Need

The purpose of the project is to enhance safety, to satisfy current and forecast demand for airport facilities, and to improve the efficiency of airport operations. The proposed project would provide improvements to meet forecast demands through 2008, as identified in the Talkeetna Airport Master Plan (USKH, 2001). The deficiencies identified in that document include:

- Insufficient GA and transient aircraft parking
- Insufficient number of lease lots for the forecast need
- Inadequate separation between fixed wing and helicopter parking and operation
- Insufficient helicopter parking area for the forecast need
- Insufficient separation between large and small helicopter operations
- No lighting at the helicopter parking area
- Insufficient automobile parking
- Insufficient snow storage
- No separation of pedestrian and automobile traffic from aircraft operation areas
- Lack of safe pedestrian access to the airport

Development on the airport property is highly constrained because of the proximity of residences to the airport, the presence of high quality wetlands, and the 100-year floodplain boundary. The proposed project would address the airport deficiencies in a manner that would avoid and minimize environmental impacts to the extent practicable while meeting the purpose and need. Figure 2-1 illustrates the airport deficiencies summarized above.

2.1 Problem Definition (Purpose) and Solutions (Need)

2.1.1 GA and Transient Aircraft Parking

The future demand for GA and transient aircraft parking on the existing aprons exceeds current availability.

Talkeetna Airport currently has two fixed-wing aircraft parking areas. The first is a paved apron, located on the west side of the runway and directly connected to the runway and taxiway. The apron can accommodate approximately 30 aircraft at a time and provides parking for air taxi, commuter, military, and other government agency aircraft. The second parking area is a gravel apron near the FSS that can accommodate approximately 20 aircraft.

Table 2-1 shows historical and forecast demand for airport-based and transient aircraft parking.

TABLE 2-1
GA and Transient Aircraft Parking Demand

	1995	2000	2005	2010	2015
GA Aircraft Parking	47	59	72	88	105
Transient Aircraft Parking	12	14	17	20	24

Source: USKH, 2001

To meet 2008 forecast demand, parking is needed for 82 based GA aircraft and 19 transient aircraft.

2.1.2 Aircraft Lease Lots

Future demand for fixed-wing aircraft lease lots exceeds the current supply. Currently, 14 permanent and two seasonal lease lots are available at Talkeetna Airport. These are shared by tenants who operate both fixed-wing aircraft and helicopters. Although a total of 17 additional fixed-wing lease lots are needed in 2015, eight lease lots will satisfy the 2008 demand.

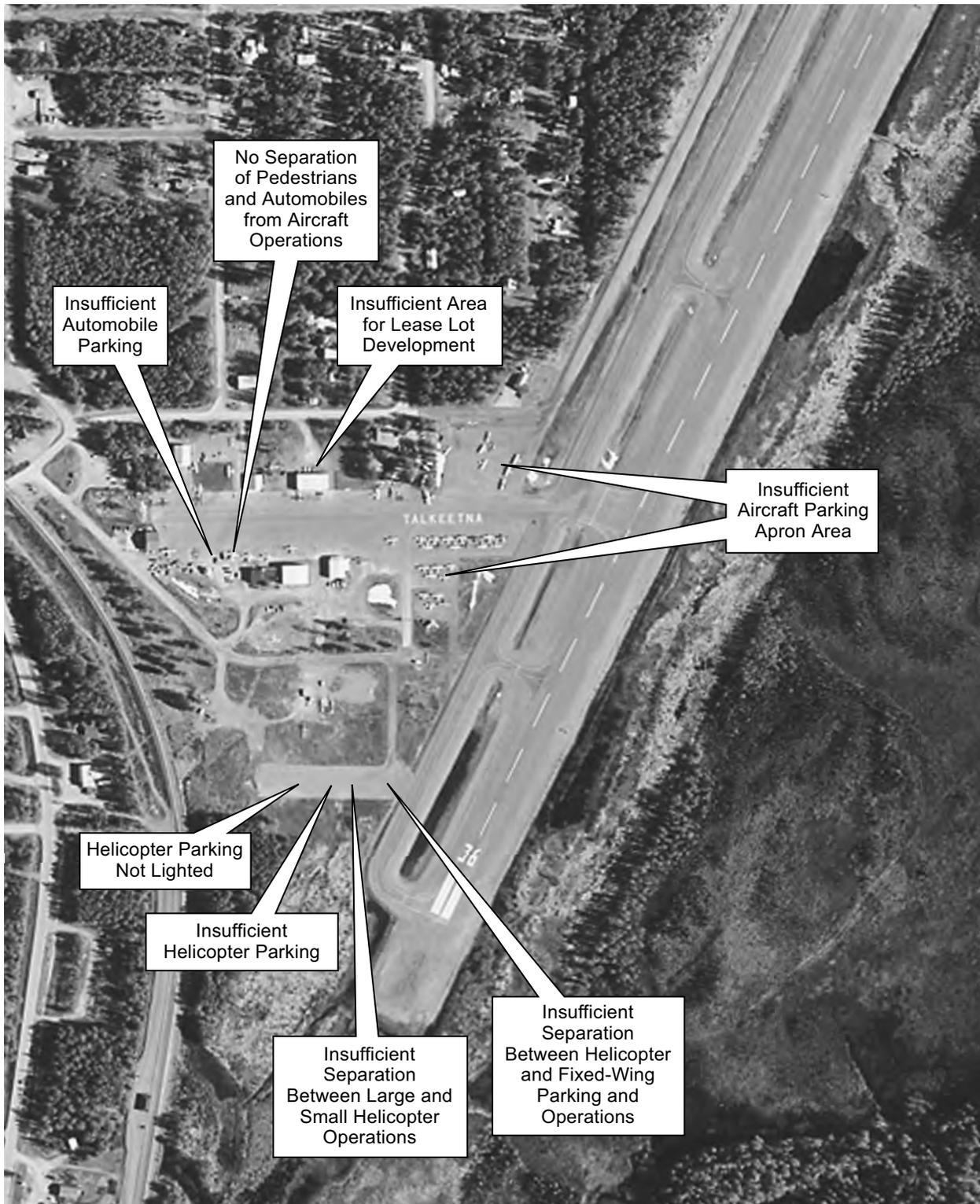
Currently, there are no helicopter lease lots at Talkeetna Airport. Three lease lots are required to support the forecast demand for helicopter operations. ADOT&PF anticipates that two of these lots would be leased to commercial air taxi tenants and one would be leased to the NPS.

2.1.3 Helicopter Parking Relocation and Heliport Development

The existing helicopter parking does not meet current FAA design standards. FAA standards require a minimum 400-foot separation between fixed wing aircraft operations and hovering/taxiing helicopters, and a minimum 700-foot separation between simultaneous fixed wing aircraft and helicopter visual flight rule operations. The existing helicopter parking area is located approximately 660 feet south of the existing lease lots, 560 feet south of the existing GA apron, and between 300 feet and 675 feet west of the existing runway centerline. A distinct landing area within the helicopter parking area is not marked, and helicopters currently land anywhere on this apron. Because the existing helicopter parking is not lighted, it is only usable during daylight hours.

The demand for helicopter apron area and designated helicopter parking exceeds the existing supply because no bonafide heliport exists at Talkeetna Airport. Based on the forecast demand, the heliport must accommodate nine helicopter parking positions by 2008. Four positions must be sized for large helicopters (CH-47 Chinook or UH-60 Blackhawk) and the remaining five positions must be sized for smaller helicopters (Bell 206 Jet Ranger or Aerospatial AS 315 Lama).

The layout for helicopter facilities is driven by the design criteria for the most demanding helicopter forecast to operate at Talkeetna Airport and is thus designated the design



helicopter. The CH-47 Chinook is the designated design helicopter at Talkeetna Airport because of its current and forecast operations. Table 2-2 summarizes these facility siting and dimensional requirements for the CH-47 Chinook.

TABLE 2-2
Summary of Heliport Facility Requirements for the CH-47 Chinook Helicopter

Design Element	Requirement
Touchdown and Lift-off Area – Length	100 feet
Touchdown and Lift-off Area – Width	100 feet
Final Approach and Takeoff Area – Length	150 feet
Final Approach and Takeoff Area – Width	150 feet
Final Approach and Takeoff Area – Runway Separation	700 feet
Taxiway Width	25 feet
Taxi Route Width	100 feet
Helicopter Parking Pads	
Number	5 small/ 4 large
Size of Small Pad	625 sy
Size of Large Pad	1,670 sy

Source: FAA Advisory Circular (AC) 150/5390-2A, “Heliport Design”

2.1.4 Safety, Automobile Parking, and Snow Storage

Airport vehicle and pedestrian access is provided from Second Avenue, which is the primary route for tourists and GA transient users traveling between the airport and the Talkeetna community center.

Pedestrian incursions frequently occur on the taxiways and aprons at the airport, because no defined pedestrian access from the community center to the various commercial flight services at the airport is provided. Security fence is needed to separate pedestrian and automobile traffic from aircraft operations. A pedestrian safety path along Second Avenue is needed to allow designated access to existing and future commercial businesses at the airport, thus improving safety.

There are few designated automobile parking spaces at Talkeetna Airport. During the peak season, automobiles park in undefined areas and on private property. This reduces the operational efficiency of the airport. During heavy snowfall winters, snow storage stockpiles further encroach upon the limited available parking area and on aircraft aprons. The Proposed Action would provide 84 designated automobile parking spaces to better control parking, improve operational efficiency, and to enhance safety. The 84 spaces would also meet the 2015 long-term vehicle parking requirements, as identified in the 2001 Talkeetna Airport Master Plan.

2.2 Airport Activity Forecasts

Historical trends and forecasts of aviation activity in the 2001 Master Plan form the basis for the Talkeetna Airport facility requirements and recommended improvements. The Master Plan forecasts for both fixed-wing aircraft and helicopters were developed from a survey of the commercial operators at the airport and anecdotal information provided by FSS personnel, U.S. Army, and Alaska Air National Guard.

The traffic forecasts developed in the Master Plan depend on a number of assumptions, the most important of which include:

- The Alaskan economy and tourism industry will continue to grow at the current rate.
- Tourism growth at Talkeetna is expected to exceed the Alaskan state average, especially with the development of access to the south side of DNPP and the completion of the McKinley Princess Wilderness Lodge on the south side of the park.
- The population of Talkeetna will continue to grow at a rate of between 4.0 percent and 5.0 percent per year during the 1995 to 2015 period.
- The seasonality of the air traffic at Talkeetna Airport will remain unchanged during the forecast period.
- Talkeetna Airport will not receive year-round, regularly scheduled, fixed-wing air service during the forecasting timeframe.
- Part of the fixed-wing forecast traffic demand will continue to be accommodated by the Talkeetna Village Airstrip and the neighboring floatplane facilities at Christiansen Lake.

Table 2-3 shows the historic and forecast aircraft operations.

TABLE 2-3
Annual Aircraft Operations

Type of Operation	Estimated Actual							Forecasts		
	1980	1985	1990	1992	1994	1995	2000	2005	2010	2015
Fixed-wing Aircraft Operations										
Air Carrier/Air Taxi	3,500	5,000	9,500	11,500	13,000	12,500	15,900	20,300	26,000	33,100
General Aviation	3,000	4,000	5,000	5,500	6,000	6,500	7,200	8,000	8,900	9,900
Fixed-wing Total	6,500	9,000	14,500	17,000	19,000	19,000	23,100	28,300	34,900	43,000
Rotary-wing Aircraft Operations										
Commercial (air taxi/flightseeing)	N/A	N/A	N/A	N/A	N/A	900	2,160	2,628	3,197	3,890
National Park Service	N/A	N/A	N/A	N/A	N/A	N/A	410	440	450	480
Military	500	500	500	500	500	500	500	500	500	500
Other	N/A	N/A	N/A	N/A	N/A	N/A	50	50	60	60
Rotary-wing Total	500	500	500	500	500	1,400	3,120	3,618	4,207	4,930
Total Aircraft Operations	7,000	9,500	15,000	17,500	19,500	20,400	26,220	31,918	39,107	47,930

Source: USKH, 2001
Commercial Activity updated by CH2M HILL
NA = data not available

Table 2-4 shows forecasts for fixed-wing aircraft, further divided into GA-based aircraft and transient aircraft uses.

TABLE 2-4
Airport-Based and Transient Operations Forecasts

	1995	2000	2005	2010	2015
Airport-Based Operations	3,575	3,960	4,400	4,895	5,445
Transient Operations	2,925	3,240	3,600	4,005	4,455
Total	6,500	7,200	8,000	8,900	9,900

Source: USKH. 2001

2.3 Identification of Federal Action

The Federal Action requiring this EA consists of approval of the Airport Layout Plan (ALP) for Talkeetna Airport and FAA’s participation in funding the improvements described herein. The ALP will include improvements that comprise the Proposed Action (to be implemented by 2008), as well as a generic representation of projects required by 2015. However, this EA has been prepared to obtain environmental approval for only the projects slated for implementation by 2008.

As noted in Section 1, the following improvements comprise the Proposed Action and would be built and operational by 2008 to enhance safety, satisfy existing and forecast demand, and to improve the efficiency of airport operations.

- Construction of eight additional lease lots for use by commercial and GA tenants of the airport
- Construction of additional GA and transient aircraft parking positions and two new aircraft aprons
- Construction of 84 automobile parking spaces
- Construction of a heliport to accommodate nine helicopters
- Relocation of the existing helicopter parking area in compliance with FAA design standards to separate fixed wing and rotary aircraft
- Install security fence around the western perimeter of the airport to minimize trespass incursions by pedestrians and domestic animals and to segregate aircraft operational areas from public areas to enhance airport and public safety
- Pave the access road from Second Avenue to the ADOT&PF maintenance and operations facility, lease lots, and heliport
- Construction of a pedestrian safety path

Alternatives

Four build alternatives (Alternatives A, B, C, and D) were examined to enhance safety; to satisfy current and forecast demand for airport facilities; and to improve the efficiency of airport operations at Talkeetna Airport. Each of the four alternatives included the same improvement elements and thus would equally satisfy the purpose and need. Several factors were taken into consideration when developing the alternatives: engineering and design requirements; avoidance of wetlands and the 100-year floodplain; avoidance of two closed landfills on the airport property; and minimizing noise impacts on residences adjacent to the airport. These preliminary layout concepts were developed to meet both the 2008 (short-term) and 2015 (long-term) forecast demand to evaluate the compatibility of each alternative with future planned improvements. Alternatives considered but eliminated from further consideration are shown in Figures 3-1, 3-2, and 3-3. The impact assessment described in Section 5, Environmental Consequences, compares the effects of the Proposed Action (a refined Alternative D) and the No-Action alternatives.

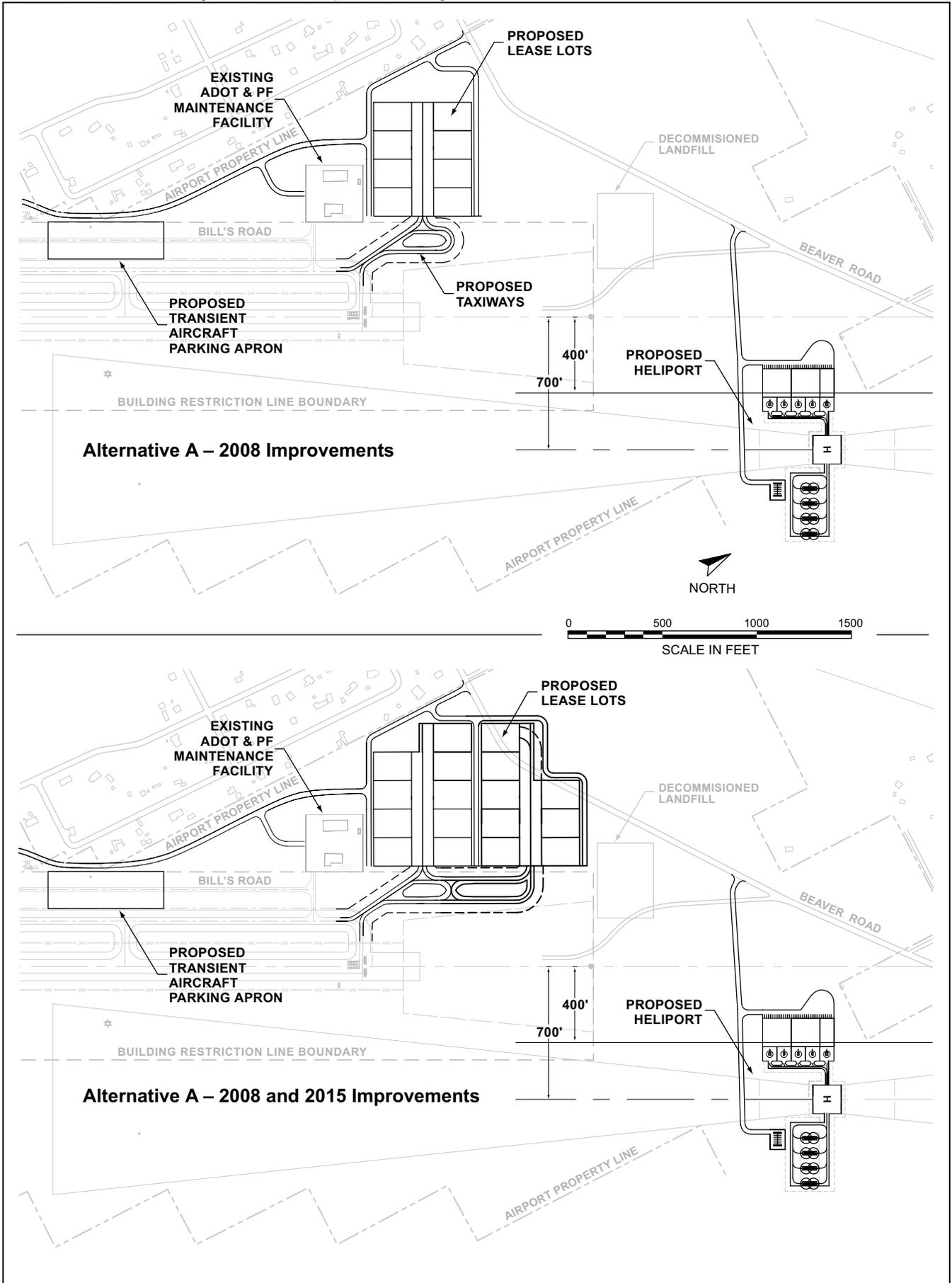
3.1 Alternatives Considered but Eliminated

3.1.1 Alternative A

Under Alternative A, the short-term lease lots would be located closer to the Denali subdivision, located west of and adjacent to the airport, than under the Proposed Action, and the long-term lease lots would be located in the same area as they would under the Proposed Action. However, for the 2015 improvements, the construction of the additional long-term lease lots would require the relocation of Beaver Road. Beaver Road would be used for access to the lease lots and the heliport (Figure 3-1), which would involve state maintenance and operations of a Mat-Su Borough-owned road. In addition, lease lots for both the short-term and long-term under this alternative would be in closest proximity to residences, thus increasing the probability of noise and related disturbance. For these reasons, this alternative was rejected from further consideration. Although the short-term layout was feasible, this alternative was rejected because the long-term layout would be located in the 100-year floodplain.

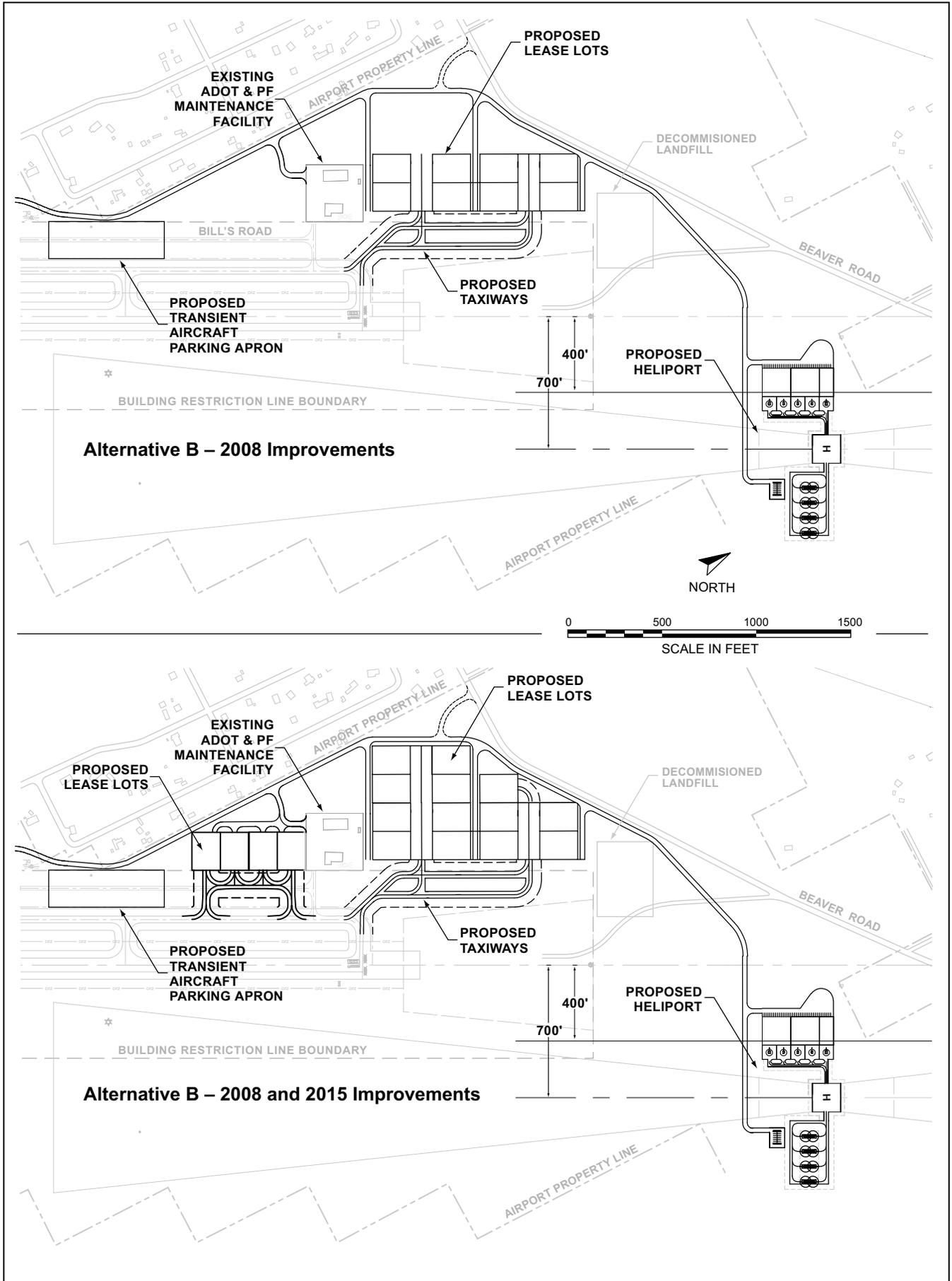
3.1.2 Alternative B

Alternative B is a refined version of Alternative A (Figure 3-2). The short-term lease lots would be located in the same location as they would be under the Proposed Action; however, for the 2015 improvements, long-term lease lots would be located both to the north and south of the existing maintenance facility. In the short term, Alternative B features two dead-end taxiways serving a total of four lease lots each, two lots deep. From an operational standpoint, this is preferred over a taxiway serving eight lots as would occur under Alternative A. This alternative also would provide more area for snow storage, and greater separation between airport operations and residential development adjacent to airport property. The long-term development under this alternative was designed to avoid the floodplain and avoid impacts to Beaver Road. This alternative was rejected from further



Talkeetna Airport Improvements
Environmental Assessment

Figure 3-1
Alternative A - 2008 and
2015 Improvements



Talkeetna Airport Improvements Environmental Assessment | Figure 3-2
Alternative B – 2008 and 2015 Improvements

consideration because the single-lane, dead-end taxiways would be inferior to the dual taxiway systems of other alternatives from an operational and safety standpoint.

3.1.3 Alternative C

Under Alternative C, the long-term lease lots would be located closer to the proposed heliport and farther away from the Denali Subdivision. Neither the short-term nor long-term improvements of this alternative would impact Beaver Road or the 100-year floodplain (Figure 3-3). The short-term lease lots would be located adjacent to the Denali Subdivision, which could increase the probability of noise impacts. This alternative would provide the greatest distance between aircraft ground operations and residential development adjacent to the airport. In the short-term, it would provide the most convenient airside and landside access of any alternative. This alternative was rejected, however, because development beyond the short-term would be within the Runway 18 runway protection zone (RPZ), which is contrary to FAA guidance.

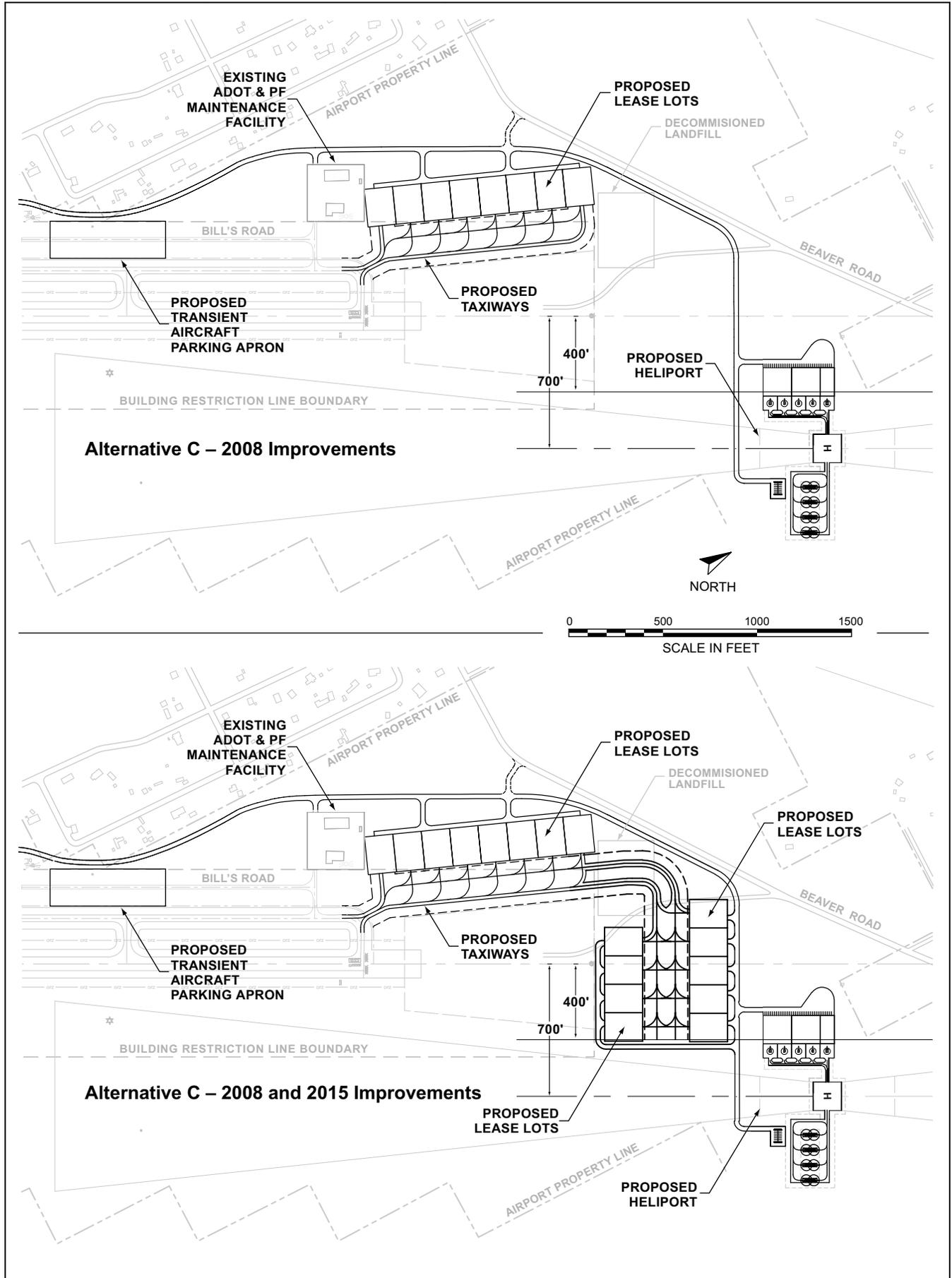
3.2 Proposed Action (Preferred Alternative)

3.2.1 Project Description

The Proposed Action (Alternative D) would distribute eight new lease lots in two adjacent north/south rows, consisting of five lots in the west row and three lots in the east row (Figure 3-4). The development area is located in the northwest corner of the airport property. Airside access from the lease lots would be provided through a bi-directional taxi lane system located between the two rows. This apron would be joined to the runway's parallel taxiway by a short east/west dual parallel taxiway. A new GA and transient aircraft parking apron would be constructed to the northwest of the existing runway end, and east of the lease lots. A new transient GA aircraft parking apron would be provided south of the existing M&O facility. A heliport would be constructed to the northeast of the existing runway end.

A single, two-lane, paved access road would provide vehicle access from Second Avenue to the existing M&O facility and would connect all new improvements, terminating at the heliport. Four-foot-wide paved shoulders would be provided on both sides of the access road from Second Avenue to the heliport. This shoulder would accommodate pedestrians. A spur road would serve the three lease lots nearest the runway, and provide landside access to the GA and transient aircraft parking apron. A pathway would be provided on airport property along Second Avenue, which would be separated from the road. Security fence with gates would be provided to separate public open areas from secure airport operational areas. The fencing along Second Avenue and around the existing south apron and lease lots would lie within the 100-year floodplain. Ski-plane parking would be located east of the existing ADOT&PF M&O facility. Snow storage areas would be south of the ADOT&PF M&O facility, north of the lease lots, and north of the new ramp area, all of which are northwest of the runway.

The Proposed Action has been refined to achieve the optimal layout, as shown in Figure 3-4, including:



Talkeetna Airport Improvements Environmental Assessment
Figure 3-3
Alternative C - 2008 and 2015 Improvements

- The lease lots and taxiways were moved further from the runway to avoid building height restrictions (less than 35 feet) on any lots.
- A new 140,000-sf GA and transient parking apron and taxiway was added on the air side of the access road east of the lease lots. This apron would accommodate 32 general aviation aircraft.
- Vehicle parking has been provided at the GA apron and lease lots. Along with planned parking of five spaces per lease lot, a total of 84 spaces would be provided.
- A 120,000-sf GA/transient apron would be provided south of the M&O facility. Airside access is via dual taxiways. Landside access is via the new access road, and a turnout for drop off and pick up is provided. This apron would accommodate 20 aircraft. The existing graveled transient apron would no longer be used for aircraft parking.
- Adjustments to the approximate 5,500-foot-long access road from Second Avenue to the heliport have been made to avoid and minimize impact to the 100-year floodplain to the extent practicable.
- An approximate 1,500-foot-long separated pathway along Second Avenue has been planned to separate pedestrians from automobiles. The pathway would be designed at or below existing ground elevations to avoid impacts to the 100-year floodplain.
- A heliport would be constructed north of the existing runway and sited to avoid the 100-year floodplain and high-value wetlands.
- Security fencing would be designed using fence fabric with nominal 6-inch by 6-inch openings, larger than the nominal 2-inch by 2-inch openings in chain link fence fabric, to minimize the effect on the base flood water surface elevation.

3.2.2 Future 2015 Airport Improvements

In addition to the 2008 Proposed Action improvements (Figure 3-4), the future 2015 improvements are shown in Figure 3-5 and would consist of the following:

- An additional 48,000-sf GA aircraft parking apron extension would be provided. The total transient and GA aircraft parking positions would thus equal 129 spaces, meeting the 2015 demand.
- An additional nine lease lots with new taxiway extensions would be provided
- The additional lease lots and taxiway would require a re-alignment of approximately 1,500 feet of the access road, and a similar amount of re-alignment to Beaver Road

The 2015 improvements have been designed to avoid impacts to the 100-year floodplain. The addition of lease lots, GA apron, and access road would require building an embankment over a closed landfill. Additional impacts to wetlands are not anticipated.

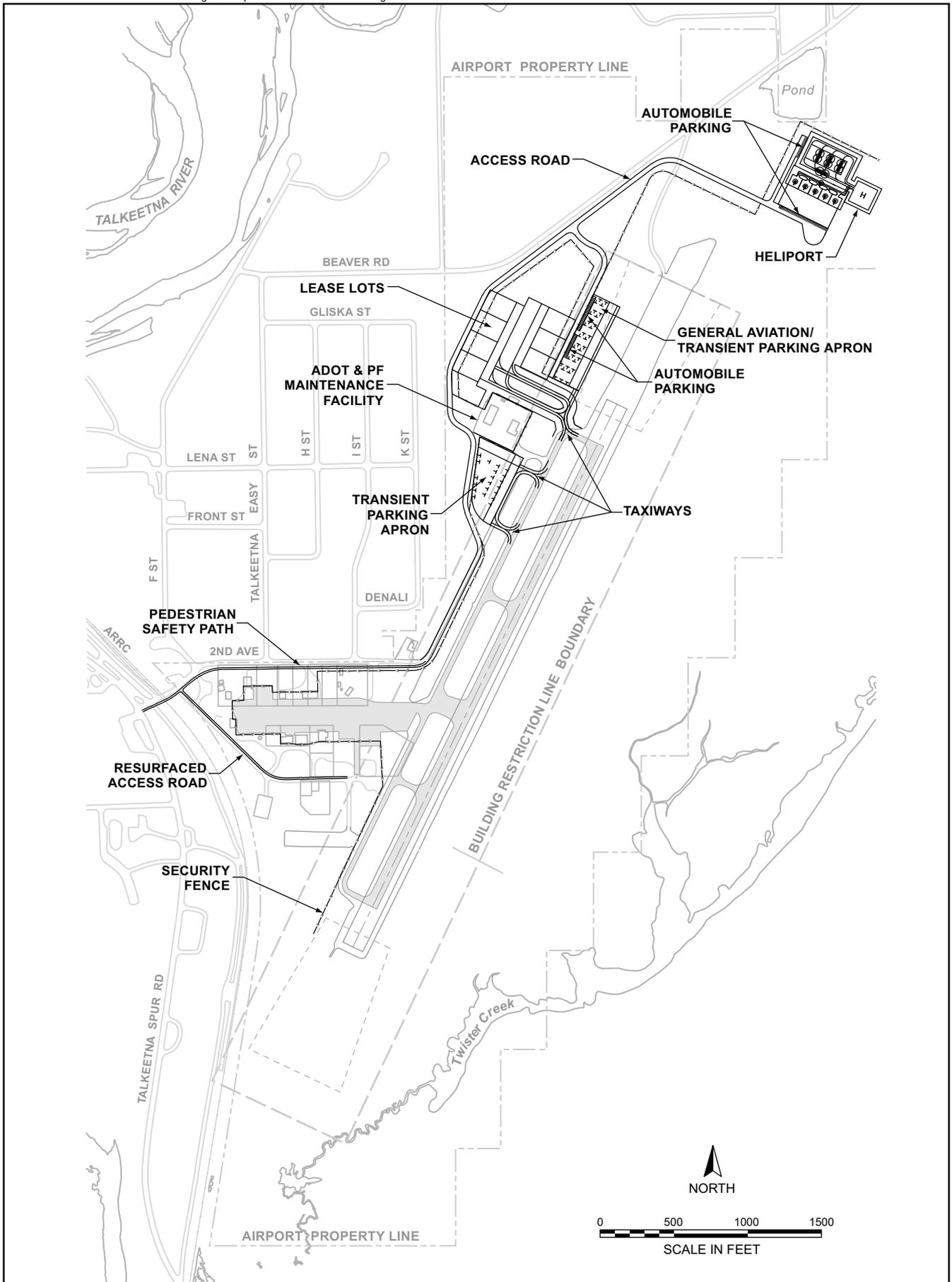
3.2.3 Required Permits and Approvals

Permits and approvals required for the Proposed Action include: Section 404 Permit from the U.S. Army Corps of Engineers (USACE) for fill in wetlands; a National Pollution Discharge Elimination System (NPDES) permit from the U.S. Environmental Protection

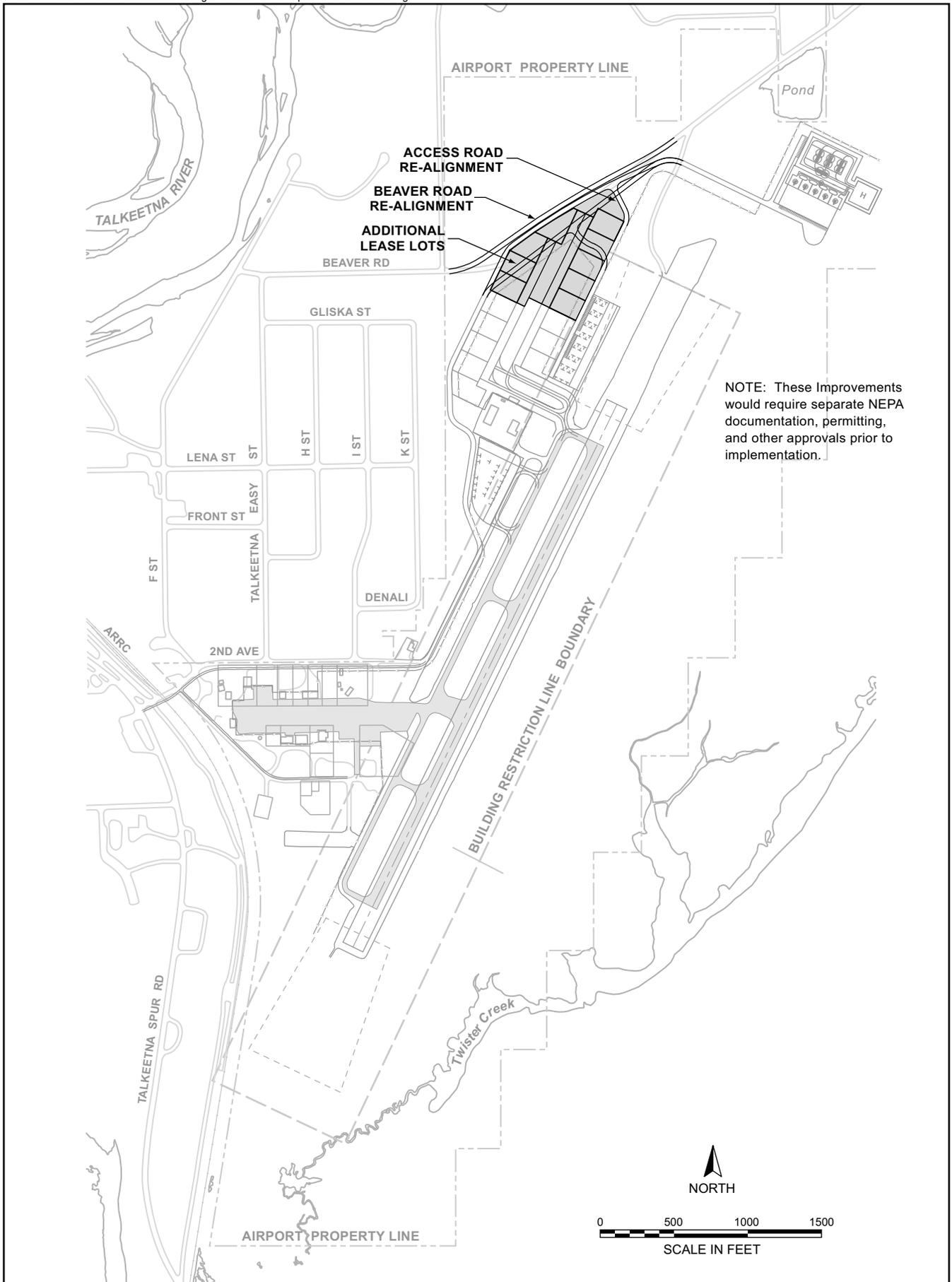
Agency (EPA); Section 401 Water Quality approval from the Alaska Department of Environmental Conservation (ADEC); Coastal Zone Consistency determination from the Alaska Department of Natural Resources (ADNR) and Office of Project Management and Permitting (OPMP); Floodplain Development Permit and Land Use Regulation Development consistency determination from Mat-Su Borough. Refer to Appendix A for more detailed information.

3.3 No Action Alternative

Under this alternative, no improvements would be made to the existing airport. The airport would continue to operate within its current configuration and receive forecast aviation operations. The No Action Alternative would not overcome the shortcomings inherent at the existing airport, nor would it allow for increased demand for space and services. An insufficient number of lease lots would be available to meet the existing and future demands. No additional wetlands would be affected, no vegetation would be cleared, and no permits would be required.



Talkeetna Airport Improvements Environmental Assessment | Figure 3-4 Proposed Action – 2008



Talkeetna Airport Improvements Environmental Assessment | **Figure 3-5**
Future 2015 Improvements

Affected Environment

4.1 Noise

Existing aircraft operations at TKA do not result in noise levels exceeding the FAA land-use compatibility threshold of Day-Night Average Noise Level (DNL) of 65 decibels (dB) based on a noise evaluation performed in 2002 (CH2M HILL, 2002) (see Appendix D). DNL of 65 dB generally indicates that the average noise level during the day is 65 dB. Noise at such levels starts to interfere with normal outdoor conversation. Refer to Figure 4-1 for existing noise contours. Existing peak-season DNLs are approximately 63 dB within the Denali Subdivision, the nearest residential area west of the airport. At a limited number of residences south of TKA and directly under the departure flight path, existing noise exposure approaches but does not exceed DNL 65 dB. At other locations in Talkeetna, aircraft noise exposure is well below the compatibility threshold.

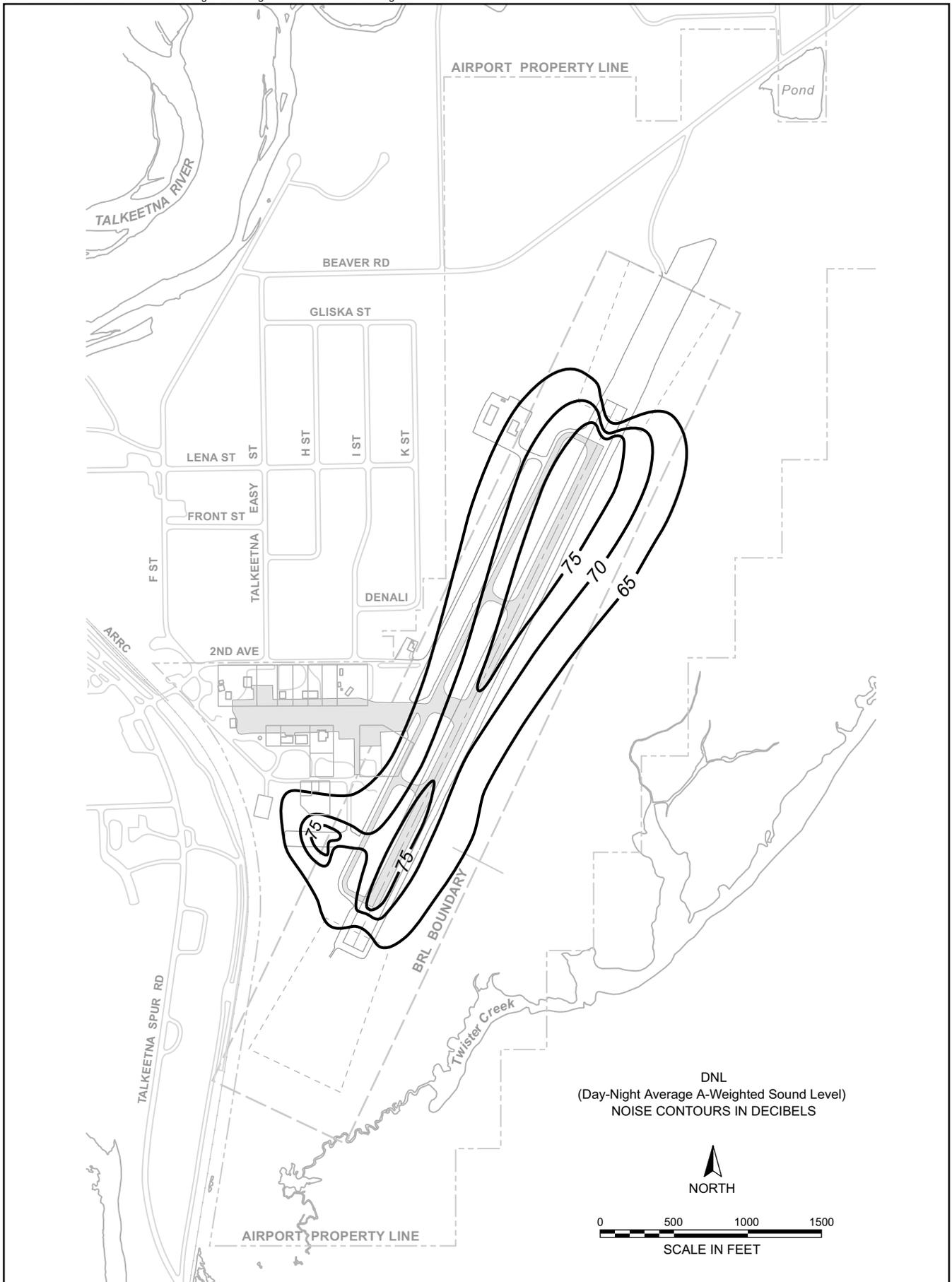
In the vicinity of the ARRC tracks, the highest noise levels are by far due to train movements and the use of warning horns by trains. Train movements are less frequent than aircraft flight activities and therefore do not contribute substantially to overall DNL values at most locations. At certain locations and during certain hours, however, train movements are the dominant sources of noise. For instance, at residential locations south of the airport, train noise combined with noise from aircraft flights results in overall noise levels exceeding the DNL 65 dB criterion. Vehicular traffic movements and other intermittent human activities also contribute slightly to overall noise exposure at most community locations.

4.2 Land Use/Compatibility

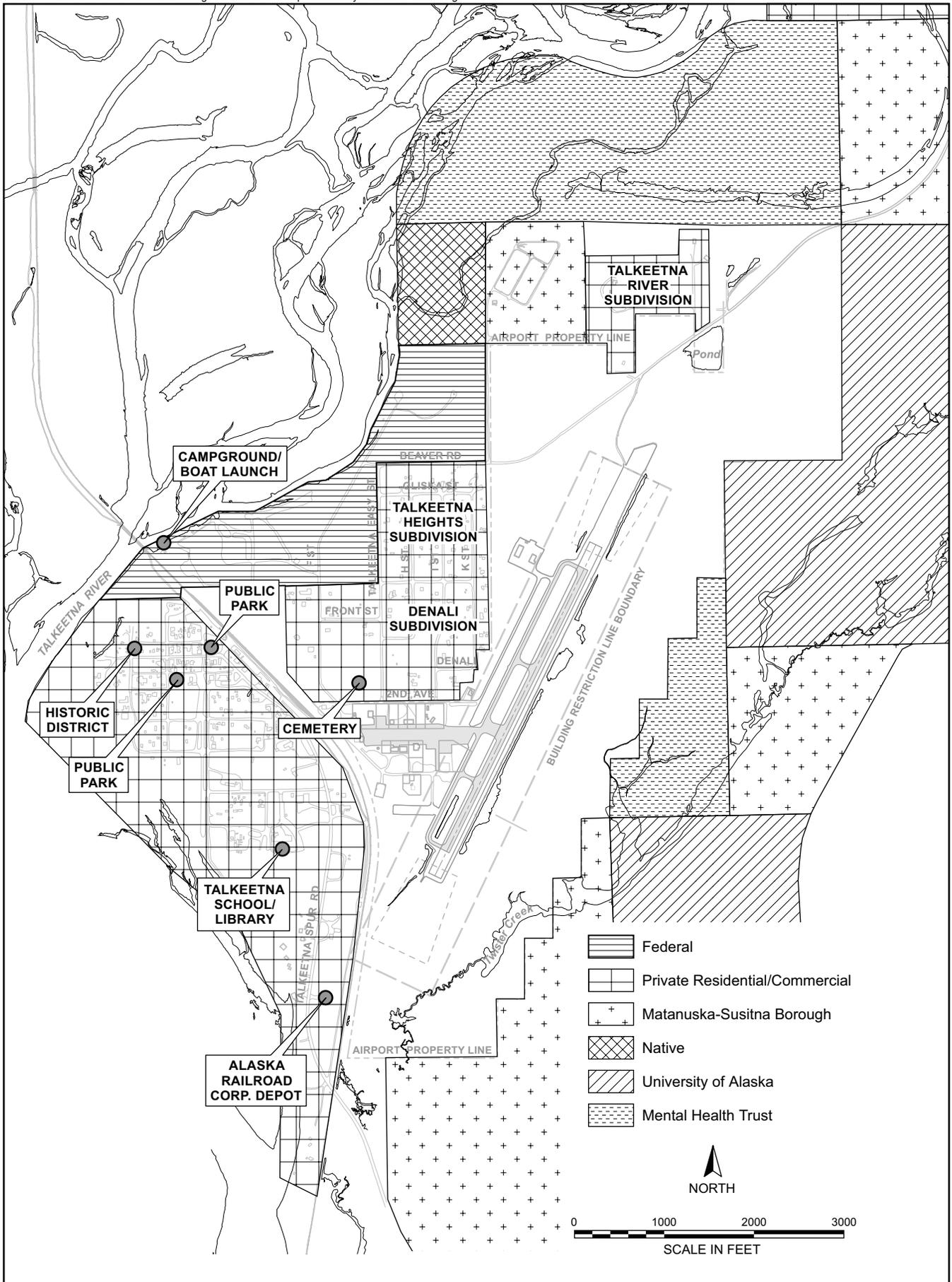
The Talkeetna planning area, as defined in the Talkeetna Comprehensive Plan (Mat-Su Borough, 1998), encompasses approximately 275,000 acres. The State of Alaska owns the majority of the land in the area – approximately 200,000 acres, including the 670-acre Talkeetna Airport property (Figure 4-2). Other large landowners in the area include the Mat-Su Borough and Cook Inlet Region, Inc.

The properties surrounding the Talkeetna Airport have numerous owners. The University of Alaska owns property to the east of the airport; the Mat-Su Borough owns property to the north and south; the Alaska Mental Health Trust Authority owns property to the north and west; and the Federal government owns property to the west. There is also Native ownership to the north and private residential/commercial ownership to the north and west.

Much of the land to the west and southwest of Talkeetna Airport is residential and commercial in nature, with limited residential development to the north. Residential developments located near the airport include the Denali Subdivision, immediately adjacent to the airport on the western side; the Talkeetna Heights Subdivision, adjacent to the Denali Subdivision and approximately 0.25 mile west of the airport; and the Talkeetna River. The



Source: CH2M HILL, 2005



Source: Talkeetna Comp Plan, 1998

Talkeetna Airport Improvements
Environmental Assessment

**Figure 4-2
Land Ownership and Community
Facilities**

Talkeetna Historic District, recognized on the National Register of Historic Places, is approximately 0.5 mile west of the airport and is located within the Talkeetna townsite. Recreation facilities near the airport include Village Park, Talkeetna River Park, and the Talkeetna Softball Field, all of which are located approximately 0.5 mile west of the airport. The property east of the airport has not been developed.

The area has no formal zoning but the Talkeetna Comprehensive Plan recommends a majority of the property surrounding the airport be used for residential purposes with an area of mixed residential/commercial around the townsite and industrial development to occur by the existing airport developments. The Mat-Su Borough classifies much of the property in the area as Residential Land Use Development (RLUD).

4.3 Socioeconomic Conditions

4.3.1 Local Government

Currently, Talkeetna is not incorporated but it does have the population base to incorporate if and when it is decided. Talkeetna is located in the Talkeetna Recording District, an area encompassing 41.6 square miles of land and 1.4 square miles of water. City residents form the Talkeetna Community Council, a seven-member council, which is recognized by government entities at the borough, state, and federal levels and provides the direction for Talkeetna. Talkeetna is within the Mat-Su Borough, a municipal government, incorporated in 1964 as a 2nd class general law borough. Mat-Su is an area of more than 25,000 square miles encompassing three incorporated cities and a number of small, unincorporated communities represented by 23 Community Councils. The Mat-Su Borough Assembly represents the Borough as a whole. The elected Borough Mayor and an appointed Borough Manager serve as the chief administrative officers. Seven Borough Assembly Representatives are elected to oversee area-wide services.

4.3.2 Population

The 2004 population of Talkeetna is estimated at 844 residents (ADCED, 2005). According to the 2000 U.S. Census, Talkeetna had a population of 772 residents. Talkeetna is projected to grow to a population between 914 and 1,485 by 2015. The population is primarily Caucasian (approximately 88 percent). Table 4-1 shows the population ethnicity of Talkeetna.

The Mat-Su Borough's population in 2000 was more than 59,000 residents (Census 2000) and was estimated at 70,148 residents in 2004 (ADCED, 2005). During the 1990s the population of the Borough increased by nearly 40 percent. If growth continues at its present rate, the population of the Mat-Su Borough will double in the next 20 years, bringing the population to more than 100,000.

TABLE 4-1
2000 Census Population Ethnicity, Talkeetna, Alaska

Ethnic Group	Talkeetna Number of Residents	Talkeetna (% of Population)
Caucasian	679	88
Black or African American	0	0
American Indian and Alaska Native	29	3.8
Asian	1	0.1
Native Hawaiian/Other Pacific Islander	0	0
Some other race	10	1.3
Two or more races	53	6.9
Hispanic	8	1

Source: US Census, 2000

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was issued to focus attention of federal agencies on human health and environmental conditions in minority and low-income communities.

The population of Talkeetna is comprised of 12 percent non-Caucasian population which is comparable to the Mat-Su Borough (12.3 percent) and lower than Alaska as a whole (30.7 percent). According to the 2000 Census, 7.2 percent of the families in Talkeetna are below the poverty level. For the Mat-Su Borough the percentage of families is 7.8 and for Alaska it is 6.7 percent.

EO 13045, *Protection of Children from Environmental Health and Safety Risks*, was introduced to minimize the environmental health and safety risks to children and to prioritize the identification and assessment of environmental health and safety risks that may have an impact on children. EO 13045 also ensures that federal agencies, policies, programs, activities, and standards address environmental and safety risks to children.

The children population (persons under the age of 18) in Talkeetna is 32.2 percent and 23.3 percent for the Mat-Su Borough (Census 2000). The TKA property is approximately a half mile from the schools and parks in the area.

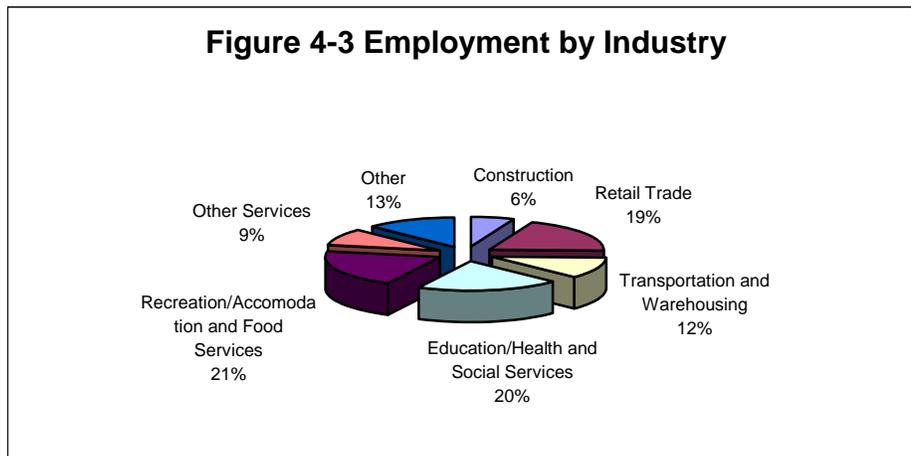
4.3.3 Economy, Employment, and Income

Talkeetna's economy is largely based on tourism and attracted approximately 30,000 tourists in 1990. Talkeetna is a take-off point for fishing and flight-seeing trips as well as a staging area for those seeking to climb Mount McKinley and Mount Foraker. The more than 1,000 climbers a year who attempt to summit Mount McKinley must first register in Talkeetna before climbing the mountain.

Talkeetna's major employment industries include the arts, entertainment, recreation, accommodation and food services; educational, health and social services; and the retail

trade – which provide more than 55 percent of the employment in the area (Figure 4-3). Ten Talkeetna residents hold commercial fishing licenses.

According to the 2000 U.S. Census, Talkeetna’s median household income is \$38,289; the Borough’s median household income is \$51,221; and Alaska’s median household income is \$51,571. Eleven percent of the Borough’s residents are at or below poverty level; Talkeetna poverty level is slightly less at 10.8 percent; 9.4 percent of Alaska’s residents are at or below poverty level.



4.3.4 Community Facilities

Community facilities in Talkeetna include the Talkeetna Elementary School and the Talkeetna Library – both are located within the townsite approximately a half-mile from the airport (refer to Figure 4-2). There are a number of recreational facilities in the area, including Village Park, River Park, Christiansen Lake Park, Talkeetna River boat launch and campground, and a community softball field. None of these facilities is in close proximity to the Talkeetna Airport.

4.4 Transportation

Access to Talkeetna is by the 14-mile-long Talkeetna Spur Road, off of the George Parks Highway. The George Parks Highway is considered the primary access to Talkeetna. Of the estimated 170 miles of roads within the Greater Talkeetna Road Service Area, most are unpaved. The only paved roads include the Talkeetna Spur Road, Main Street, Comsat Road and a portion of B Street.

Air transportation takes place at two airports in the area: Talkeetna Airport in east Talkeetna, which is owned and operated by the ADOT&PF, and Talkeetna Airstrip in downtown Talkeetna, which is administered by the U.S. Bureau of Land Management. Talkeetna Airport does not have scheduled air service, but is served year-round by many unscheduled air taxi operators, including seven who are based at the airport. Talkeetna Airstrip is not publicly maintained and has no airport runway facilities or building facilities. It is mostly used during the winter and spring months by ski-equipped planes that cannot land at the state-maintained airport. In addition to the two airports, Christiansen Lake, located

approximately 1 mile southeast of the Talkeetna Airport, is a base for private and commercial floatplanes.

ARRC provides service to Talkeetna. The ARRC is owned by the State of Alaska and provides service from the Gulf of Alaska to Fairbanks. Talkeetna is a regular passenger stop on the route from Anchorage to Fairbanks with daily stops in the summer season (mid-May to mid-September) and weekly stops during the rest of the year. Unscheduled freight service is also available to Talkeetna.

4.5 Subsistence

Unlike other areas in Alaska, subsistence fishing and hunting is substantially not a part of the local economy in Talkeetna. Within the Mat-Su Borough, the total annual harvest of food is approximately 29 pounds per person, which is the third lowest per capita of the 27 census areas in Alaska.

4.6 Historical, Architectural, Archaeological, and Cultural Resources

The Talkeetna Historic District is located in the Talkeetna commercial area, within a four-block area encompassed (approximately) by First, Front, B, and D streets (one lot is located east of D Street) (Figure 4-2). The district is a 43-lot area that includes 13 buildings built between 1919 and 1939. The NPS listed Talkeetna Historic District in the National Register of Historic Places (NRHP) in April 1994. The historic district is located outside the area of potential effect (APE) for the Proposed Action.

No resources within the APE were identified in the NRHP or the Alaska Heritage Resources Survey. The airport property and the right-of-way along Second Avenue were surveyed and evaluated for evidence of cultural resources (CH2M HILL, 2003). No evidence of historic, architectural, archaeological, or cultural resources was found.

4.7 Climate

Talkeetna's climate is affected by the coastal maritime and interior continental zones and is characterized by relatively cold winters and warm summers. Winter temperatures average below the freezing point and the summer temperatures average between 55 and 60 degrees. Total precipitation averages 28.18 inches per year, with August and September being the wettest months. Talkeetna also averages more than 115 inches of snowfall each year. Winds at the Talkeetna Airport are calm about 30 percent of the time and less than 4 knots about 46 percent of the time. The dominant wind direction is north, except during May through August, when winds from the south predominate.

4.8 Air Quality

Talkeetna is located within the Cook Inlet Intrastate Air Quality Control Region and is classified by the ADEC as an attainment area (Guay, 2005). There are no industrial

developments or large-scale agricultural, forestry, or other potential air pollution sources in the Talkeetna area, and air quality is generally assumed to be good.

4.9 Water Quality

The community of Talkeetna is located on the south bank of the Talkeetna River, near its confluence with the Susitna River. Twister Creek, which is a tributary of the Susitna River, flows through the airport property and parallels the airport runway to the east. A large system of wetlands associated with the creek is located to the east and south of the runway. (Figure 4-4). A flooded gravel pit pond is located approximately 800 feet north of the runway. The airport has no stormwater collection or treatment facilities.

No systematic water quality sampling has been completed at the airport or on Twister Creek. Water quality data for the Talkeetna River at the townsite wastewater treatment plant indicates occasional high total coliform counts.

The water table at Talkeetna Airport is close to the surface in most areas, and ponding is common. Diesel contamination was detected in groundwater during the decommissioning of an underground heating oil tank and an aboveground tank at the former FSS. Diesel-contaminated soil has been removed, and the site is still active in the ADEC contaminated sites database. Refer to Appendix C for complete information about this site.

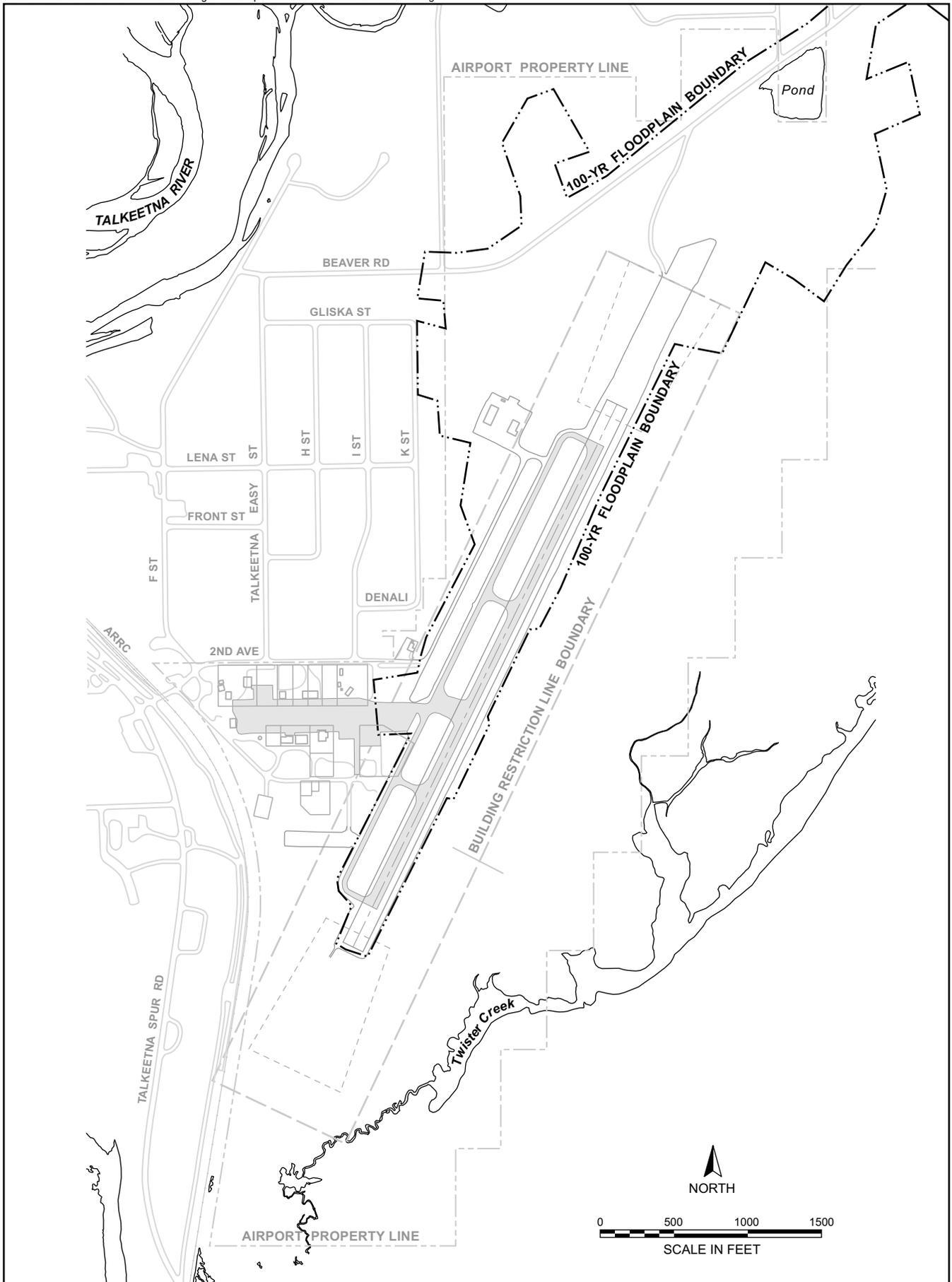
4.10 Floodplains

The entire Talkeetna townsite, along with low-lying areas to the north, east, and south, are located in the 100-year base floodplain. The Susitna, Talkeetna, and Chulitna rivers converge near the townsite, and major flooding occurred in Talkeetna in 1942, 1971, and 1986.

In 1985, the Federal Emergency Management Agency (FEMA) published a Flood Insurance Rate Map that included the community of Talkeetna. The map describes the floodplain near the Talkeetna Airport as Flood Zone A, which indicates that the limits for the 100-year flood have no associated water surface elevations. The floodplain delineation was further revised by the USACE in 1996, 1997, and 1999 (Lagare, 1996, 1997, and 1999). FEMA considers the 1999 revision to contain the preliminary Flood Insurance Rate Map for Talkeetna. This map implies that the airport apron area and gravel runway overrun at the southwest end of the runway is within the 100-year floodplain.

A Hydrologic/Hydraulic Assessment (URS, 2004) was conducted to further define the limits of the 100-year floodplain, estimate the surface water elevations during a 100-year peak event, and evaluate flood impacts of the proposed airport improvements and potential mitigation measures.

Figure 4-4 shows the limits of the 100-year floodplain in the vicinity of the airport, as delineated in the 2004 Talkeetna Airport Hydrologic/Hydraulic Assessment. Existing embankments and developed airport-operating areas are located outside the floodplain, with the exception of the airport apron area and the southerly gravel surfaced runway safety area.



Source: 100-Yr Floodplain Limit, URS, 2004

Talkeetna Airport Improvements
Environmental Assessment

**Figure 4-4
Floodplain and Water
Resources**

4.11 Coastal Resources

Within the project area, the inland coastal zone boundary includes the Susitna, Talkeetna, and Chulitna rivers and all lands and waters within the 100-year floodplain or within 200 feet of the ordinary high water mark – whichever is greater. As shown in Figure 4-4, much of the area surrounding the project is within the 100-year floodplain, and, therefore, within the coastal zone boundary and is regulated by ADNR Office of Project Management and Permitting and Mat-Su Borough.

Coastal barriers, as defined in the Coastal Barriers Resources Act of 1982, and as amended by the Coastal Barrier Improvement Act, do not occur in this area.

4.12 Fish, Wildlife, and Plants

4.12.1 Fish

The National Marine Fisheries Service (NMFS) considers all catalogued anadromous streams to be essential fish habitat (EFH). The Magnuson-Stevens Fishery Conservation and Management Act defines EFH as “waters necessary to fish for spawning, breeding, feeding, or growth to maturity.”

Twister Creek parallels the existing airport runway to the east and flows to the Susitna River. A search of the Alaska Department of Fish and Game (ADF&G) *Catalog of Waters Important to Spawning, Rearing or Migration of Anadromous Fishes* found that the following fish streams within the project area are anadromous:

- Talkeetna River 247-41-10200-2370
- Susitna River 247-41-10200
- Chulitna River 247-41-10200-2381
- Twister Creek 247-41-10200-2362 (King and Coho rearing)

The Susitna River provides spawning and rearing habitat for five species of pacific salmon: Chinook, coho, chum, sockeye, and pink salmon. The river is used by salmon as a migration route to Cook Inlet. Resident fish in the Susitna River drainage include lake trout, rainbow trout, arctic grayling, burbot, Dolly Varden, and round whitefish. The Talkeetna River is also an important fish stream containing both anadromous and resident species.

Based on communication with ADF&G staff (Jeff Davis, 2003), adult and juvenile coho, chinook, and sockeye salmon have been observed and captured in the main channel Twister Creek. ADOT&PF conducted a fish habitat survey in July 2003 that identified high densities of rearing coho, as well as stickleback and rainbow trout, in a tributary to Twister Creek that runs south of the airport runway. It is likely that wetlands associated with Twister Creek at the south end of the airport are used as rearing habitat for juvenile coho, and should be considered as EFH. According to ADF&G, Twister Creek and associated wetlands may also provide rearing habitat for juvenile sockeye and Chinook salmon.

4.12.2 Wildlife

Terrestrial mammals that occur in the Talkeetna Airport area include moose, brown and black bear, wolf, coyote, and red fox. Smaller mammals that occur in the region are beaver,

lynx, marten, mink, muskrat, river otter, weasel, porcupine, snowshoe hare, and red squirrel. Caribou do not occur in the vicinity of Talkeetna Airport.

Moose are the most conspicuous large mammal in the area, particularly during the winter when they browse on dense patches of willow in open wetlands and riparian areas. The airport is located within a recognized winter concentration area for moose. Rutting concentration areas for moose occur east of Talkeetna along the floodplains of the Talkeetna and Sheep rivers, and a moose calving concentration area is present east and south of Talkeetna (USKH, 2000).

Brown and black bear are present along the banks of the Talkeetna and Susitna rivers and the lower portion of Twister Creek when they are in search of salmon during the summer. Black bear are occasionally observed in the vicinity of the Talkeetna Airport during the summer. Beaver are present along the floodplain of Twister Creek where they construct and maintain beaver ponds in wetland areas south of the existing runway (USKH, 2000).

Bird species that occur in the area include waterfowl, geese, raptors, passerines, spruce grouse, and willow ptarmigan. ADOT&PF conducted an eagle survey in the project vicinity in spring 2003. No eagle nests were identified within 1 mile of the airport, but three nests were identified between 1 and 5 miles of the airport. Only one of these three nests was active in 2003.

Waterfowl are present in the Talkeetna area. Although the Talkeetna Airport is not documented as a known concentration area for spring or fall staging, nesting, or molting, geese occasionally rest and stage in open areas surrounding the Talkeetna Airport during spring (USKH, 2000). Waterfowl have been observed using the pond at the north end of the runway. There are no eagle nests reported near the airport, based on a 2005 Eagle Nest Survey conducted jointly by the ADOT&PF and the U. S. Fish and Wildlife Service (USFWS).

4.12.3 Vegetation

Vegetation on the airport property include both upland and wetland communities.

The upland habitat surrounding the Talkeetna Airport includes forest, scrub-shrub, and herbaceous meadows. The predominant upland community is mixed spruce-birch forest, which covers most of the airport property to the west and north of the runway. This forest community is typically dominated by paper birch (*Betula papyrifera*) and white spruce (*Picea glauca*) in the overstory, and devil's club (*Oplopanax horridus*), early blueberry (*Vaccinium ovalifolium*), and highbush cranberry (*Viburnum edule*) in the understory.

A small area of scrub-shrub upland occurs at the north end of the runway. It is dominated by willow shrubs (*Salix spp.*), bluejoint reedgrass (*Calamagrostis Canadensis*), and lady fern (*Athyrium filix-femina*). Other vegetation includes paper birch, highbush cranberry, and, to some extent, Sitka alder (*Alnus sunuata*).

An area of herbaceous meadow, dominated by bluejoint reedgrass, and fireweed (*Epilobium angustifolium*), runs along the western edge of the runway.

A large wetland system associated with Twister Creek is located on the east side of the airport property. Most of the wetland area along the creek is grass and sedge meadow with inclusions of forested wetland. Fingers of forested, scrub-shrub, and sedge meadow wet-

lands occur in abandoned drainages in upland forest communities. A long sedge meadow wetland runs along the east side of the runway. Wetland communities are described in more detail in Section 4.13.

4.12.4 Threatened and Endangered Species

Neither NMFS nor the USFWS has identified the presence of threatened or endangered species in the project area (USFWS, 2004; Peltz, 2004).

4.13 Wetlands

A wetland delineation was conducted in 2003 on airport property to the north and west of the runway, which encompasses the area of the proposed airport improvements (Appendix B). The delineation was based on field investigations and examination of aerial photos. Wetland boundaries were surveyed using global positioning system (GPS) equipment. An assessment of wetlands on the east side of the airport property and associated with Twister Creek was conducted in 1996 (B&B Environmental, Inc., 1996), and is summarized in this section. Figure 4-5 shows the wetland communities identified on the airport property.

Palustrine forested wetland (PFO1) occur throughout the study area, and is intermixed within upland forested communities. Many of the forested wetlands appear to be linear remnant channels. The tree canopy in these areas is typically dominated by black spruce (*Picea mariana*), paper birch, Sitka alder, bluejoint reedgrass, and beaked sedge (*Carex rostrata*). Saturated soils and inundation observed at the ground surface were the primary indicators of hydrology, and low chroma soils were evident.

Two palustrine scrub-shrub wetlands (PSS1) within the study area are closed depressional wetlands surrounded by upland forest. Vegetation in these areas is typically dominated by young Sitka alder, bluejoint reedgrass, and lady fern. Other vegetation includes paper birch and highbush cranberry. Saturated soils and water marks observed at the ground surface were the primary indicators of hydrology. Low chroma mineral soils were evident, with typically 2 to 4 inches of fibric peat in the surface horizon.

Palustrine emergent wetlands (PEM2) occur along the eastern edge of the airport property, and in drainages to Twister Creek, on the western side of airport. Vegetation in these areas is typically dominated by beaked sedge and bluejoint reedgrass. Presence of black spruce diamond willow (*Salix pulchra*), and paper birch were observed in the vicinity. Adjacent upland vegetation was typically dominated by paper birch, white spruce, devil's club, highbush cranberry, and common horse tail (*Equisetum sylvaticum*). Saturated soils in the upper 12 inches and water marks observed at the ground surface were the primary indicators of hydrology, and low chroma soils were evident.

A large wetland complex consisting of forested and wet meadow wetland habitats is associated with Twister Creek on the eastern side of the airport (USKH, 2000). Common species included black spruce, dwarf black spruce, sedges, rushes, and bluejoint reed grass. Most of this area is inundated with 1 to 6 inches of water and was permeated by small tributaries leading to Twister Creek. This wetland complex is directly connected to Twister Creek and is thought to provide essential rearing habitat to salmon and other anadromous fish species.



Source: Wetland, Vegetation, and Wildlife Report, CH2M HILL, 2005

A linear palustrine emergent wetland (PEM1) runs along the eastern edge of the runway, and may have been an area excavated for airport fill material. It is characterized by standing water and emergent vegetation, such as cotton grass, sedges, and rushes (*Juncus sp.*).

No wetlands occur within the right-of-way of 2nd Avenue or the existing airport access road.

4.14 Hazardous Materials

A Preliminary Site Assessment (PSA) was conducted for the 2000 EA (USKH, 1997). CH2M HILL conducted a Supplemental Phase I Site Assessment inspection (CH2M HILL, 2005) (Appendix C) to verify and update the findings for selected sites described in the PSA. A regulatory database search identified five sites of contamination within 1 mile of Talkeetna Airport (see Figure 4-6):

1. ARRC - Talkeetna Railroad Yard, Mile 227 Alaska Railroad, Talkeetna, Alaska. This site is active in the ADEC leaking underground storage tank (LUST) database.
2. ARRC - Talkeetna North of Fairview Inn, Talkeetna, Alaska. This site is active in the ADEC LUST database.
3. Three Rivers Tesoro, 13605 East Main Street, Talkeetna, Alaska. This site is active in the ADEC LUST database and Contaminated Sites database.
4. Matanuska Telephone Association (MTA) Talkeetna Central Office, Corner of Second and B Streets, Talkeetna, Alaska. This site is active in the ADEC Contaminated Sites database.
5. FAA Talkeetna FSS, Airport Road, Talkeetna, Alaska. This site is active in the ADEC Contaminated Sites database.

The 1997 PSA report identified the former ADOT&PF M&O building and FAA FSS as contaminated sites. These buildings have since been removed. The ADOT&PF M&O building was not found on ADEC's list of contaminated sites or UST database. In July 1997, Montgomery Watson prepared a Decommissioning Assessment Report (Montgomery Watson, 1997) for decommissioning of a 500-gallon diesel storage tank at the former FSS. Groundwater samples collected as part of the release investigation indicated contamination. The FAA FSS is still active in the ADEC contaminated sites database, pending implementation of an approved groundwater monitoring program.

Two closed landfills are located on airport property: one at the south end of the runway and the other at the north end of the runway (Figure 4-6). The south airport landfill was reported to have been used sometime in the late 1940s and 1950s. The landfill area located north of the airport property was reportedly used as the City of Talkeetna dump site between 1965 and 1975. Use of these landfills was discontinued prior to the enactment of current ADEC requirements for landfill closures. An investigation of the abandoned landfills has not been conducted. A Corrective Action Plan may be required before implementation of any project elements that would occur within the area of the landfills.

As part of the Supplemental Phase 1 Site Assessment (Appendix C), a reconnaissance was conducted on the alignment of the proposed pedestrian safety path along Second Avenue. Scattered debris that included 55-gallon drums were observed on one property adjacent to

the Second Avenue right-of-way. The soil at this site had a strong petroleum odor, but the cause of the odor was not identified.

The Mat-Su Borough transports solid waste to a central landfill located between Palmer and Wasilla. The former Talkeetna landfill has been closed and converted to a transfer operation. The transfer station is located near the intersection of Talkeetna Spur Road and the George Parks Highway, and is a secure location with residents disposing of their waste in dumpsters, which are then taken to the landfill and emptied.

4.15 Water Supply and Wastewater

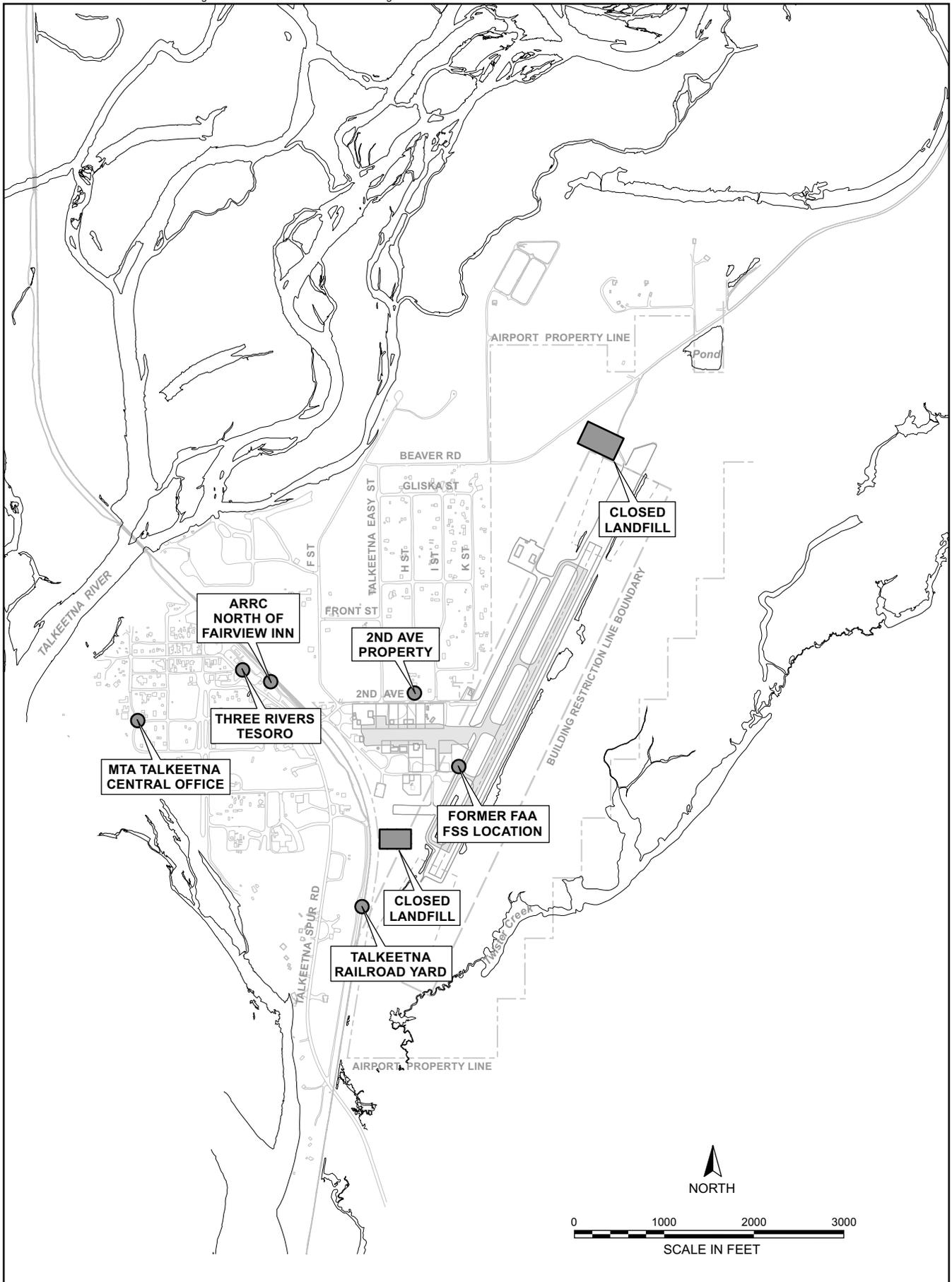
Talkeetna has water and sewer systems owned by Mat-Su Borough; however, the majority of the residents are not on the public water and sewer systems. The system covers the townsite area of Talkeetna and provides service to approximately 15 percent of the residents. The remaining residents receive water from on-site wells and sewer is handled through on-site systems such as a septic system, privy, or composting toilets. The public water and sewer system was established in 1989 to prevent contamination of groundwater. The system is designed to serve a population of 600 and is based on the sewage system's capacity. The sewage lagoon for the public sewer system is located just north of the airport property. The southwestern section of the Talkeetna Airport is within the Talkeetna Water and Sewer service area. Water and wastewater service is provided by the community service to the ADOT&PF O&M facility located at the airport (Mat Su, 1998).

4.16 Wild and Scenic Rivers

No rivers in the project area are designated as Wild and Scenic under the Wild and Scenic Rivers Act, Public Law 90-542 (NPS, 2005).

4.17 Farmlands

There are no farmlands in the Talkeetna area. Alaska does not have any prime and unique agricultural lands, as defined by the Farmland Protection Policy Act of 1981, Public law 97-98 (USDA, 2005).



Source: Supplemental Phase I
Site Assessment, CH2M HILL, 2005

Talkeetna Airport Improvements
Environmental Assessment

Figure 4-6
Landfills and Identified Contaminated Sites

Environmental Consequences

5.1 Introduction

This section describes the environmental consequences of the proposed improvements for Talkeetna Airport and compares them with the No Action Alternative. This section follows the FAA Order 1050.1E for policies and procedures for compliance with NEPA and implementing regulations. Appendix A of 1050.1E lists potential impact categories. Through scoping activities and preliminary environmental analyses, ADOT&PF has determined that the following resources are not near nor would they be affected by the Proposed Action:

- Subsistence: The improvements would occur on ADOT&PF airport property where no subsistence activity is currently allowed.
- Department of Transportation Act, Section 4(f) resources: No parks, wildlife refuges or management areas, or cultural resources eligible for listing in the National Register of Historical Places are present on the airport property (Bittner, 1996).
- Water Supply and Wastewater: Water and wastewater service is provided by the community service to the ADOT&PF O&M facility located at the airport. There are no water supply or wastewater improvements to the existing systems associated with the airport improvements.
- Farmlands: There are no farmlands in the Talkeetna area. Alaska does not have any prime and unique agricultural lands, as defined by the Farmland Protection Policy Act of 1981, Public law 97-98 (USDA, 2005).
- Wild and Scenic Rivers: There are no Wild and Scenic Rivers in the project area (NWSRS, 2005).
- Coastal Barriers: There are no coastal barriers in the State of Alaska.

Therefore, these resources will not be discussed further in this section.

5.2 Noise

A detailed noise study was conducted using FAA's Integrated Noise Model (INM) Version 6.1 (Appendix D). For aircraft noise exposure in the vicinity of residential areas, the forecast of 2008 flight operations was modeled in terms of Day-Night Level (DNL) as recommended by the EPA and adopted by the Federal Interagency Committee on Noise (FICON) in 1992. FAA defines the principal criterion used to determine the significance of noise exposure at noise-sensitive areas. FAA has established DNL 65 dB as the threshold of incompatibility for residential and other noise-sensitive land uses, such as schools, hospitals, and religious facilities, located in the vicinity of civilian airports. If that condition already exists under the No Action Alternative, then an increase of DNL 1.5 dB compared to No Action would be considered an impact. To analyze and validate all operations at Talkeetna

Airport, sample noise level measurements were collected from taxiing single- and twin-engine propeller aircraft in June 2002 (CH2M HILL, 2002). The fleet mix for the existing and future noise conditions modeling included both fixed wing and helicopter aircraft. Existing noise conditions are discussed in Section 4.1.

5.2.1 No Action Alternative

Although the No Action Alternative would result in no airport improvements, the forecast projects a 19 percent increase in aircraft operations between 2000 and 2005 and another 19 percent increase through 2010. The fleet mix would be consistent with existing conditions. The modeled noise contours, as depicted in Figure 5-1, show that two residences within the Denali subdivision would be subject to noise levels above the DNL 65-dBA threshold in 2008 under the No Action Alternative.

5.2.2 Proposed Action Alternative

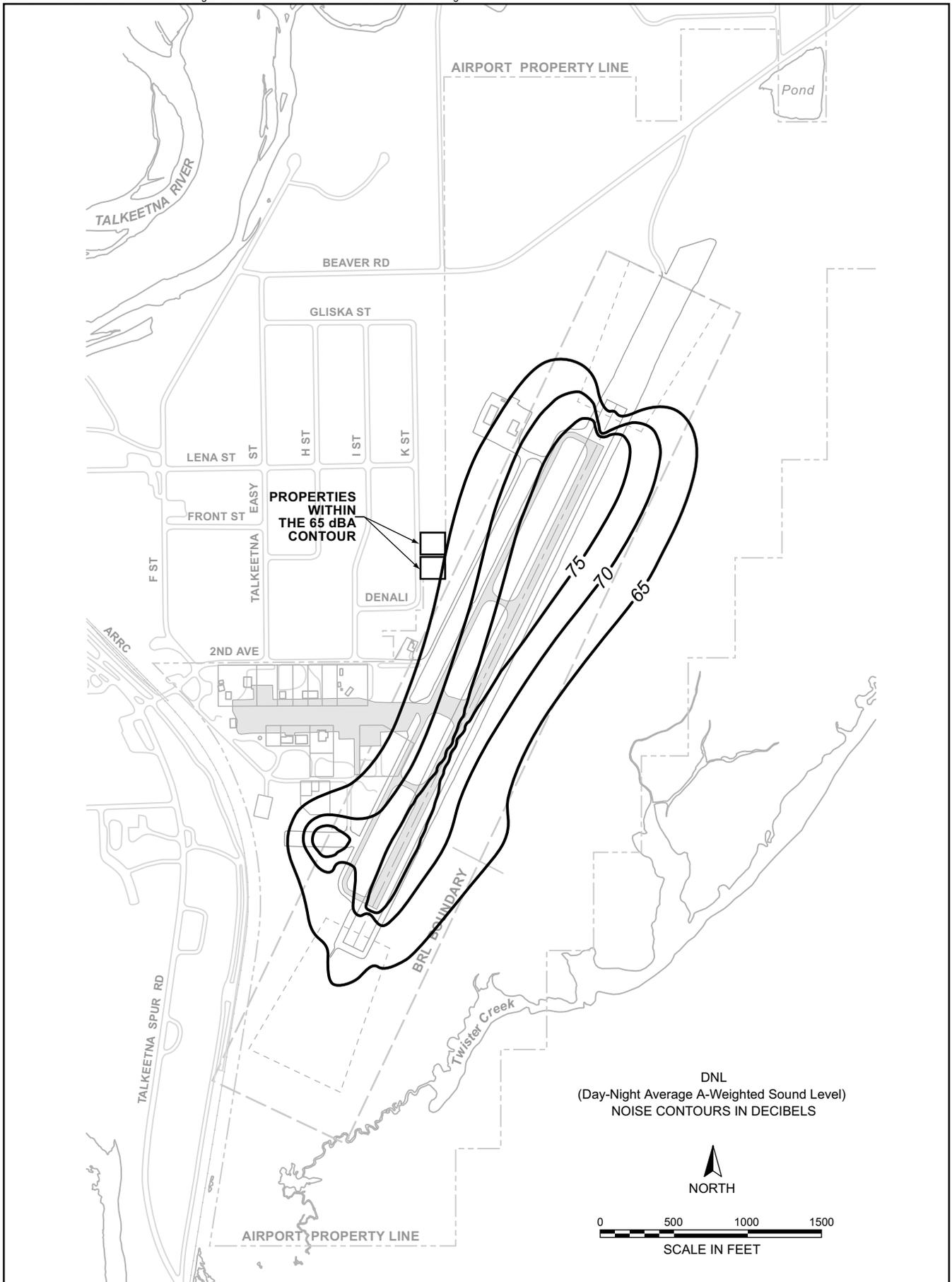
The noise effects of the Proposed Action Alternative do not differ from the No Action Alternative, in that the same two residences would be subject to noise levels above DNL 65-dB, the threshold of incompatibility for residential and other noise-sensitive land uses, as illustrated in Figure 5-2. Proposed Action noise levels would not increase more than DNL 1.5 dB in 2008 when compared with No Action Alternative; therefore, there would be no additional impacts on nearby residences (CH2M HILL, 2004). In addition, the flight approach and take-off noise levels would not change; therefore, the noise pattern would be similar to current conditions (Figure 5-1). Noise due to aircraft ground movements to and from the proposed North Apron would not significantly increase noise exposure within residential parcels in close proximity to the North Apron. Single noise events due to aircraft taxiing operations would not be expected to interfere with speech communication at exterior areas of nearby residences. The nearest residential parcels are approximately 400 to 500 feet away from the closest aircraft parking locations. At such distances, maximum noise levels from individual aircraft taxiing in and near the North Apron would be below 60 dB.

By removing the helicopter parking and building a heliport at the northeast end of the airport, future noise exposure of residents in the Denali Subdivision near the southwestern section of the airport would be reduced, especially as the projected frequency of aircraft operations materialized over time. As shown in Figure 5-2, the DNL 65 dB for the new heliport would not extend beyond the airport boundary and no residences or other noise-sensitive land uses would be affected.

Because the access road and lease lots are planned to be located in close proximity to residential areas, construction equipment is expected to cause temporary noise impacts. Contractors would be required to comply with local noise ordinances and restrict noise near residential property between the hours of 7 a.m. and 7 p.m. on weekdays; 9 a.m. and 6 p.m. on Saturdays; or at any time on Sundays and nationally recognized holidays (Mat-Su, 2005).

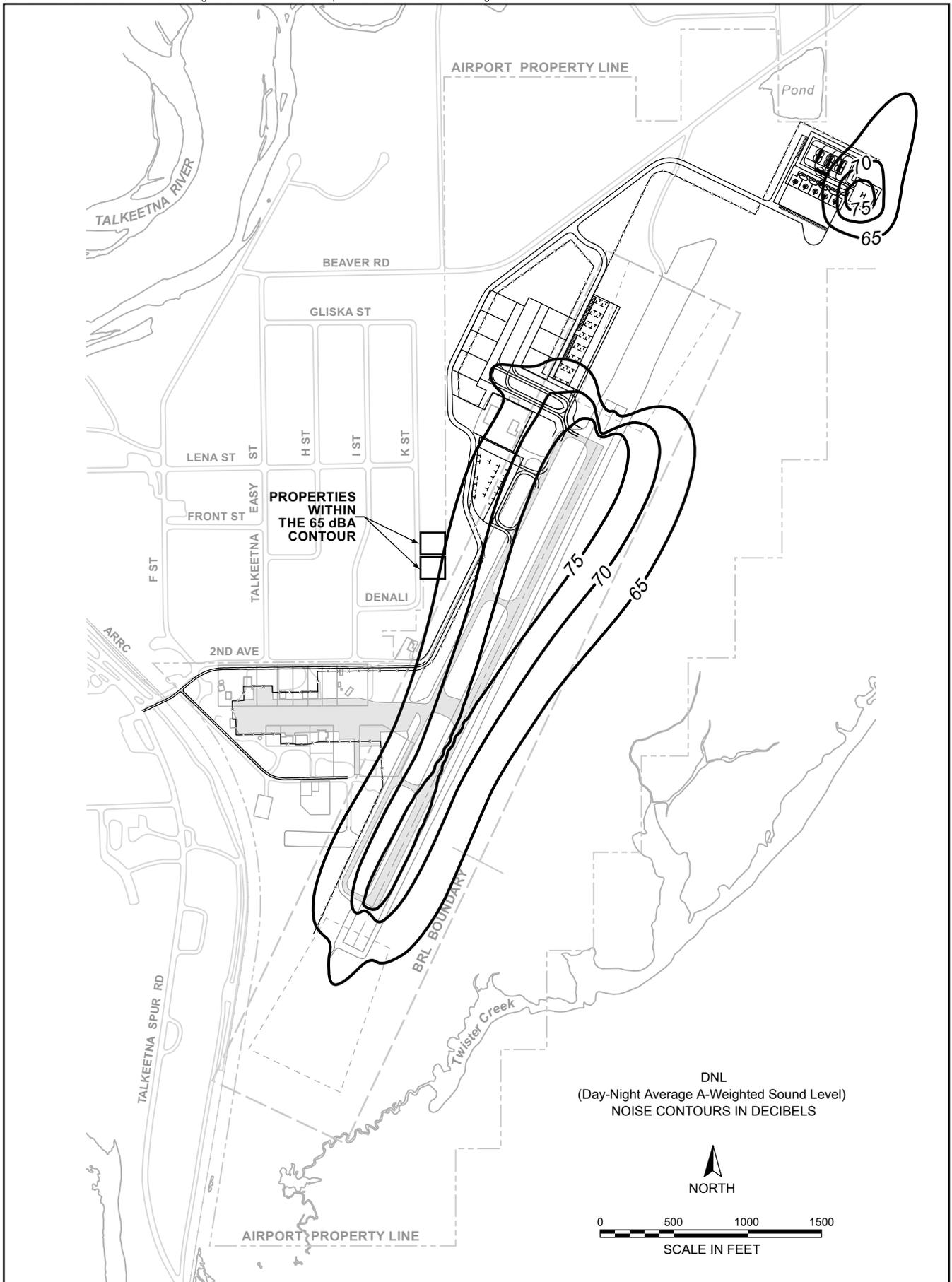
5.3 Compatible Land Use

Land uses surrounding the airport property were evaluated for compatibility with potential changes to existing and planned land uses. Project plans were used to determine whether



Source: Noise Technical Study, CH2M HILL, 2005

Figure 5-1
Noise Contours for the No Action
Alternative in 2008



Source: Noise Technical Study, CH2M HILL, 2005

Talkeetna Airport Improvements
Environmental Assessment

Figure 5-2
Noise Contours for the Proposed
Action Alternative in 2008

the alternatives were consistent with the Talkeetna Airport Master Plan and the Talkeetna Comprehensive Plan (1998).

5.3.1 No Action Alternative

No changes to existing or future land use would occur as a result of the No Action Alternative. However, helicopters would continue to use the existing helipad, with continued noise impacts to the surrounding land uses.

5.3.2 Proposed Action Alternative

The Proposed Action is consistent with the Talkeetna Airport Master Plan (2001) and supports the need to provide for the continued improvement of the airport as noted in the Talkeetna Comprehensive Plan (1998).

In comparing the No Action and Proposed Action 65-dBA contours (Figures 5-1 and 5-2), changes occur only in the area of the existing helicopter landing area for No Action and the proposed heliport for the Proposed Action. These changes do not represent an increase in noise exposure to any noise sensitive receptors under the Proposed Action, in comparison to the No Action alternative.

No property acquisition or easements would be required for the Proposed Action. The airport improvements would occur within the existing property boundaries of the Talkeetna Airport, owned by the ADOT&PF. The pedestrian safety path along Second Avenue would be constructed in existing roadway right-of-way.

During construction there would be an increase in construction traffic along Second Avenue and along Talkeetna Spur Road, but these increased traffic volumes are expected to be temporary and unlikely to impact adjacent land use.

5.4 Air Quality

A study of air quality at Alaskan airports as it relates to size of airport, aviation operation volume, and types of aircraft is currently being conducted for ADOT&PF (CH2M HILL, 2005). Talkeetna Airport falls between a small to sub-regional-sized airport. The study employs the FAA Emissions and Dispersion Modeling System (EDMS), which is the approved method for performing air quality analyses for aircraft operations. It contains numerous aircraft engine emission factors and performance characteristics needed to quantify aircraft emissions. The emissions attributed to a complete landing/take-off cycle (LTO) for the specific aircraft types were computed using the emission factors provided in EDMS. The Talkeetna Airport is in an attainment area for all of the National Ambient Air Quality Standards (NAAQS) criteria pollutants, so the General Conformity Rule per 40 CFR part 93, subpart B, does not apply to this project.

5.4.1 No Action Alternative

The 2008 forecast demand indicates that a growing volume of aircraft operations could overburden the existing aircraft aprons, causing congested taxiing and apron areas, and resulting in longer periods of running aircraft engines in stationery positions within close proximity of the Denali residential subdivision.

The Alaskan Airport study (CH2M HILL, 2005) shows that the small aircraft (e.g., Cessna) use lead-rich fuels that release carbon monoxide at higher proportions relative to total emissions than modern aircraft. However, due to the relative low volume of aircraft operations and the mixture of the fleet during peak season in an area of air quality attainment, concentrations would not exceed the NAAQS.

5.4.2 Proposed Action Alternative

The Proposed Action is not expected to have long-term direct impact on air quality from airport operations in the design year. There would be no change in the types of aircraft using the airport, and changes in operations forecasts would occur independent of the proposed improvements.

The Proposed Action generally represents a relative improvement in air quality over the No Action Alternative. The additional lease lots and GA/transient apron area would operate more efficiently and reduce delays in aircraft taxiing and therefore reduce the amount of carbon monoxide released in the area, relative to the No Action Alternative.

Construction activities may cause temporary increase of PM_{2.5}/fugitive dust during grading and other earth-moving activities. Any such temporary construction impact would be minimized to the fullest extent practicable through use of Best Management Practices (BMPs) such as regular watering and sweeping during construction, a standard requirement for any ADOT&PF construction project.

5.5 Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks

Socioeconomic impacts are economic and physical impacts on the local population from the project. Presidential EOs 12898 and 13045 require considerations of project impacts on minority and low-income populations and how environmental factors caused by the project may affect children's health. There is no evidence of minority and low-income populations concentrations who qualify for consideration under EO 12898 in the project area.

5.5.1 No Action Alternative

The local economy is expected to grow in accordance with projected rates through 2015. The No Action Alternative may inconvenience airport users due to future congestion, but the socioeconomic effect of No Action is not quantifiable because little specific baseline data is available on the historic economic influence of the airport in Talkeetna. The No Action Alternative would have no disproportionate effect on minority or low-income populations and would have no disproportionate effect on children's health and safety.

5.5.2 Proposed Action Alternative

Similar to the No Action Alternative, businesses in the area may realize increased economic benefits from projected growth in flightseeing tourism activities. During construction there is the potential for a short-term influx of income to the local economy due to construction-related jobs and the purchase of local materials and services. Following completion of

construction, airport tenants and users will experience a more efficient operation that may enhance the socioeconomic standards in the area.

A security fence around portions of the airport and the construction of a pedestrian safety path separated from Second Avenue would improve safety for children and other pedestrians. Tourism in Talkeetna is expected to exceed the state average for growth, especially with the completion of the McKinley Princess Wilderness Lodge and the development of access to the south side of DNPP. Improvements associated with the Proposed Action would facilitate projected tourism-related growth by enhancing airport safety and efficiency in meeting projected airport demand.

The Proposed Action would not require any property acquisition or relocation of any residences or businesses; alter surface transportation within the community; divide or disrupt established communities; nor disrupt planned growth. The Proposed Action would not have a high or disproportionate affect on minority or low-income populations nor disproportionate health and safety risks to children.

5.6 Historical, Architectural, Archeological, and Cultural Resources

5.6.1 No Action Alternative

This alternative would not affect historical, architectural, archaeological, or cultural resources.

5.6.2 Proposed Action Alternative

The State Historic Preservation Office (SHPO) concurred there is no record or evidence of historical, architectural, archaeological, or cultural resources on the airport property (Bittner, 1996). As such, the Proposed Action is not anticipated to affect any such resources. However, there is always a possibility that cultural or archaeological resources could be discovered during project construction. In this case, the project construction would cease and the SHPO would be contacted. Construction would not resume in the vicinity of the site until written clearance from the SHPO is issued to the project engineer.

No mitigation measures are required beyond following proper protocol in the case of discovery during construction consistent with EO 11593, Protection and Enhancement of the Cultural Environment.

5.7 Water Quality

5.7.1 No Action Alternative

There would be no change in water quality under the No Action Alternative. There would be no changes to existing storm drainage patterns or excavation of potentially contaminated soils associated with the closed landfills, or the former ADOT&PF M&O building and FAA FSS.

5.7.2 Proposed Action Alternative

This alternative would not impound, divert, drain, control, or otherwise modify the waters of any stream or other body of water.

Excavation for the proposed project would not come in contact with the diesel contamination at the former FSS because the project construction limits are outside of the FSS. No excavation would occur over the closed landfills or the former ADOT&PF M&O building.

The addition of approximately 36 acres of impervious surface area would increase the amount of stormwater runoff from the airport. The additional impervious area may collect petroleum hydrocarbon fuel products from aircraft operations and maintenance. Runoff from the proposed improvements sheet flows to adjacent areas. Areas adjacent to impervious surfaces would either be surfaced with gravels to support aircraft operations, or be covered with topsoil and seeded to create grassy swales. Any runoff from gravel areas would also be routed to grassy swales. Grassy swales are expected to provide filtration and treatment so that water quality would not be negatively impacted by the Proposed Action.

Potential contaminant sources that could affect surface-water quality during construction include the following:

- Increase in erosion and discharge of sediment resulting from disturbance of existing soils, wetlands, and areas adjacent to the project area
- Petroleum hydrocarbon fuel products, such as diesel or gasoline, used to fuel construction equipment and vehicles

All work will be done in accordance with the current NPDES General Permit of Construction Activities in Alaska and the Section 401 Water Quality Certification issued by the ADEC. Because of the relatively flat nature of the project area (average slope of less than 0.1 percent), erosion will likely be a minimal concern. However, a Storm Water Pollution Protection Plan (SWPPP) will be developed and an Erosion and Sedimentation Control Plan will be incorporated into the final design plans as a preventive measure. BMPs such as silt fencing, grassy swales, and straw bales will be implemented to help minimize temporary impacts on water resources. All exposed soil surfaces will be replanted using appropriate native grass species.

5.8 Fish, Wildlife, and Plants

5.8.1 No Action Alternative

No impacts to fish, wildlife, or plants would occur as a result of the No Action Alternative.

5.8.2 Proposed Action Alternative

No streams or other water bodies occur within the construction limits of the Proposed Action. No EFH, including Twister Creek and its associated wetlands, would be affected by the Proposed Action. Runoff from impervious surfaces would sheet-flow through upland vegetation before entering Twister Creek.

Approximately 44 acres of vegetation would be cleared to construct the airport improvements. Most of this vegetation is upland forest habitat. Wildlife that uses this habitat would be permanently displaced, and wildlife in adjacent habitat would be disturbed during project construction.

Given the relatively minor acreage involved in the proposed action, when compared to the surrounding undeveloped lands, all displaced wildlife would be absorbed in the adjacent habitat. A security fence will be installed along the western margin of the proposed improvements to separate airport operations from public areas. Because the area is not within an animal migrations route, and the fencing would be limited to the western margin of existing and proposed facilities where there would be human disturbance, the fencing is not expected to adversely affect wildlife movement in the area. There would be no restriction to animal movement to and use of Twister Creek and its associated wetlands. No threatened or endangered species would be affected by the Proposed Action. USFWS guidelines for the Talkeetna area recommend that vegetation clearing should not occur between May 1 and July 15 to protect nesting migratory birds that may be on the project site. Vegetation clearing for the proposed project will be completed outside the May 1 to July 15 timing window.

5.9 Wetlands

5.9.1 No Action Alternative

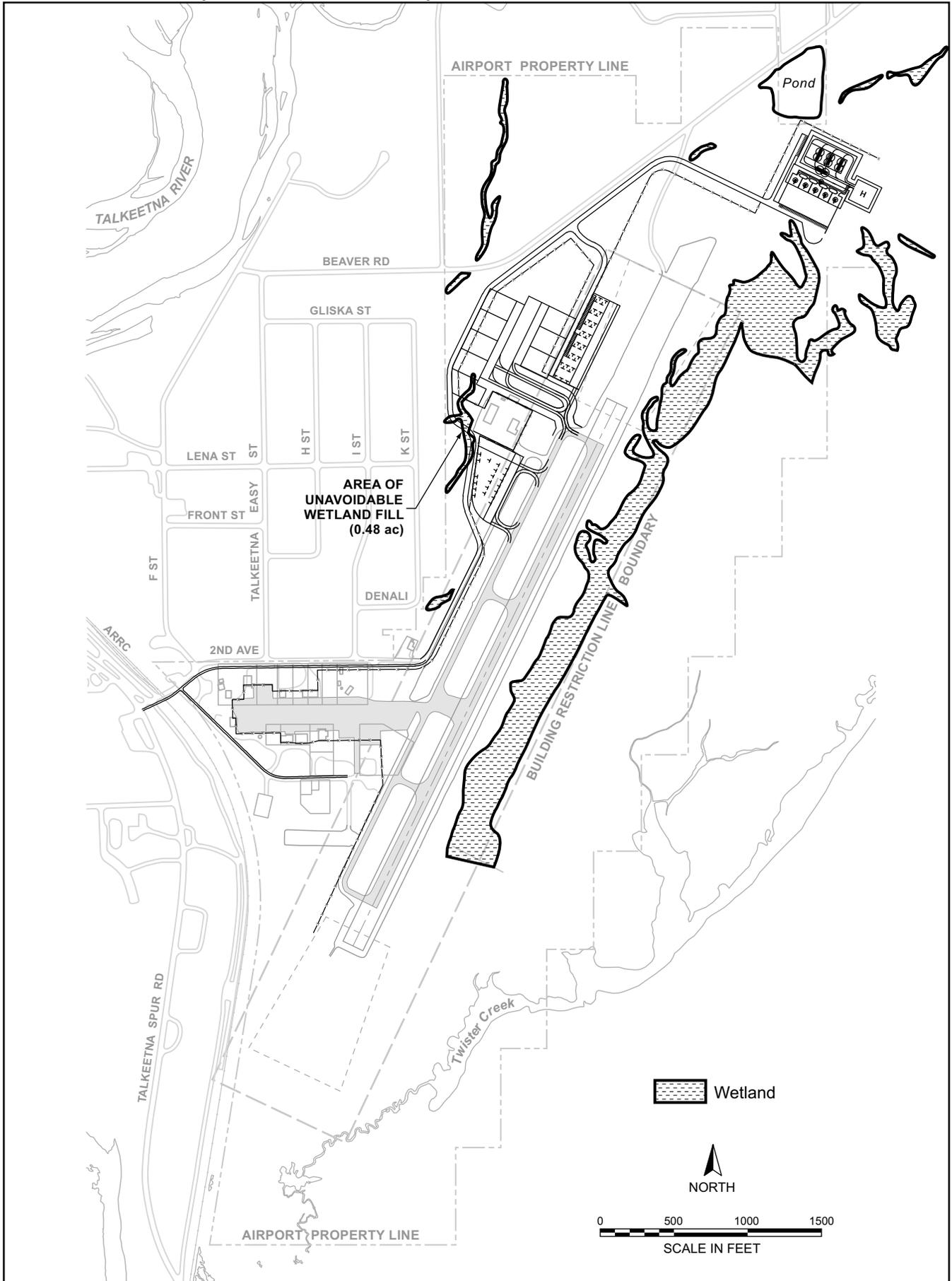
No wetlands would be affected as a result of the No Action Alternative.

5.9.2 Proposed Action Alternative

The Proposed Action would result in 0.48 acre of unavoidable wetland fill. This fill would occur in one small, emergent wetland along the western side of the existing runway. This wetland occurs in a remnant, abandoned stream channel and is not associated with Twister Creek (Figure 5-3). This wetland is a 0.6 acre depressional wetland with no direct surface water connection. Because of its small size, single habitat type, and location adjacent to existing airport facilities, this wetland has low to moderate value in sediment, nutrient, and toxics removal, floodflow alteration, and wildlife habitat.

The Proposed Action was designed to completely avoid impacts to high-quality wetlands associated with Twister Creek and to minimize impacts on other wetlands to the extent practicable. Developable area on airport property is highly constrained by the 100-year floodplain, two closed landfills, and wetlands. Wetland impacts occur only where necessary to avoid development in the floodplain and excavation in the closed landfills.

Mitigation for the 0.48 acre of wetland impact will be in conformance with the 2003 Interagency Memorandum of Agreement Regarding Impacts to Wetland and other Aquatic Resources Mitigation, Airport Improvement Projects in Alaska (Interagency MOA). Under this agreement, in lieu of wetland mitigation, unavoidable impacts can be compensated by ADOT&PF through deposits into the Alaska Wetland Conservation Fund on a \$500 per acre of impact basis. These funds will be used to address FAA's mitigation requirements identified in FAA-approved NEPA documents or USACE permit for FAA approved and funded development.



Source: Wetland, Vegetation, and Wildlife Report, CH2M HILL, 2005

Figure 5-3
Wetlands Impacts Associated with
the Proposed Action Alternative

ADOT&PF has submitted a permit application to the USACE under Section 404 of the Clean Water Act for this unavoidable impact.

5.10 Floodplains

Consistent with EO 11988, alternatives are evaluated to determine whether they encroach on the 100-year floodplain, which could impact human safety, health, and welfare from displacing flood event flows.

5.10.1 No Action Alternative

Under the No Action Alternative, no new development would occur within the 100-year floodplain.

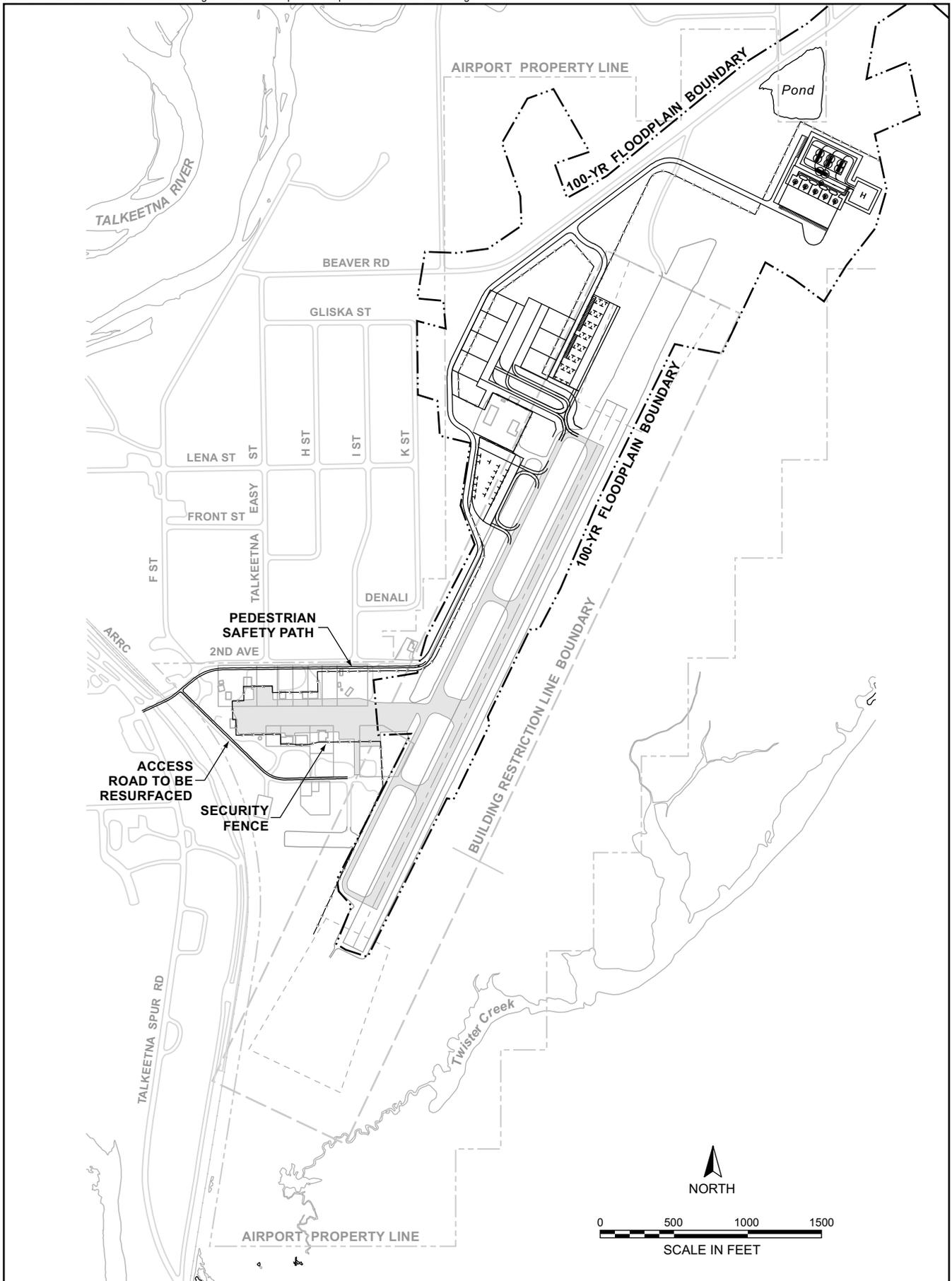
5.10.2 Proposed Action Alternative

Under the Proposed Action, unavoidable construction activity within the 100-year floodplain would include constructing portions of the new pedestrian safety path along Second Avenue (which is along a public roadway already located within the floodplain), resurfacing a portion of an existing airport access, and constructing portions of the security fence (Figure 5-4). The pedestrian safety path and airport access resurfacing would be constructed at existing elevations to avoid any impediment to flood flows or changes to the base flood elevation.

The proposed security fencing that is within the floodplain was studied extensively to prepare the Mat-Su Borough's Floodplain Development Permit application. Multiple fence types (chain link, moose fence, barbed wire, split rail, board, etc.) were considered in the search for a fence that would allow the required security function while minimizing the effect on base flood water surface elevation. Chain link fence and moose fence were found to be acceptable by ADOT&PF in satisfying the security requirement. (Moose fence is essentially identical to chain link fence, except that the opening size in the fabric is nominally 6 inches by 6 inches, compared to the nominal 2-inch by 2-inch opening in chain link fence fabric.) Their effects on base flood water surface elevations were estimated through calculations using established hydraulic relationships and through estimates of the amount of debris blockage likely to occur during a flood. Chain link fence was found to have a greater effect, so moose fence would be used for the project.

The Proposed Action would not have a high probability of loss of human life; it would be unlikely to have encroachment losses; and it would not have substantial adverse effects on the beneficial or natural floodplain values.

A Floodplain Development Permit Application has been submitted, reviewed, and approved by the Mat-Su Borough for sections of security fencing that would be located in the floodplain. As part of that permit, ADOT&PF has agreed to survey the estimated base flood water surface elevation and mark it at each fence gate within the floodplain, and to educate airport users and the public. Subject to FAA acceptance, the airport operating procedures will require opening all gates within the floodplain when a flood is imminent, thereby minimizing the potential effect on the base flood water surface elevation.



Source: 100-Yr Floodplain Limit, URS, 2004

5.11 Coastal Resources

5.11.1 No Action Alternative

The No Action Alternative would not require a coastal consistency determination.

5.11.2 Proposed Action

The Mat-Su Borough Coastal Zone Management Program is applicable to all land and water uses and activities within the district coastal area, which would include the 100-year floodplain in Talkeetna. The only improvement within the 100-year floodplain would be a portion of the pedestrian safety path along Second Avenue, a portion of the security fence, and resurfacing of the existing airport driveway. Construction of the pathway or fence, or drive resurfacing, would not increase the base flood elevation in the project area. A Coastal Project Questionnaire and Certification Statement was prepared for the EA and is included in Appendix A. Furthermore, a Floodplain Development Permit Application has been approved by the Mat-Su Borough.

5.12 Natural Resources and Energy Supply

5.12.1 No Action Alternative

The No Action Alternative would have no effect on natural resources in Talkeetna environs.

5.12.2 Proposed Action Alternative

This alternative would result in a minimal increase in airport lighting, and the available energy supply exceeds the projected increase.

The only substantial uses of natural resources for the Proposed Action Alternative include approximately:

- 123,000 cubic yards of excavation (organic and unsuitable soils) from the airport
- 284,000 cubic yards of borrow material for fill
- 51,000 tons of crushed aggregate base course
- 25,000 tons of bituminous material for asphalt areas

These materials would be provided by the construction contractor from permitted borrow sites (see Section 5.16, Material Site Impacts). As such, the Proposed Action would not affect the availability of energy or natural resources.

5.13 Hazardous Materials, Pollution Prevention, and Solid Waste

5.13.1 No Action Alternative

This alternative would have no effect on identified contaminant sources. Solid waste would continue to be transported off site. There would be no new efforts toward pollution prevention under this alternative.

5.13.2 Proposed Action Alternative

No identified contaminant sources would be affected by the Proposed Action (Figure 5-5).

Construction activities pose a potential threat for spills and/or the identification of other contaminated areas. Under such a situation, the contractor would be obligated to comply with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). BMPs and immediate notification to ADEC would be the responsibility of the contractor.

5.14 Light Emissions and Visual Impacts

5.14.1 No Action Alternative

The No Action Alternative would not change light emissions nor involve visually altering Talkeetna Airport.

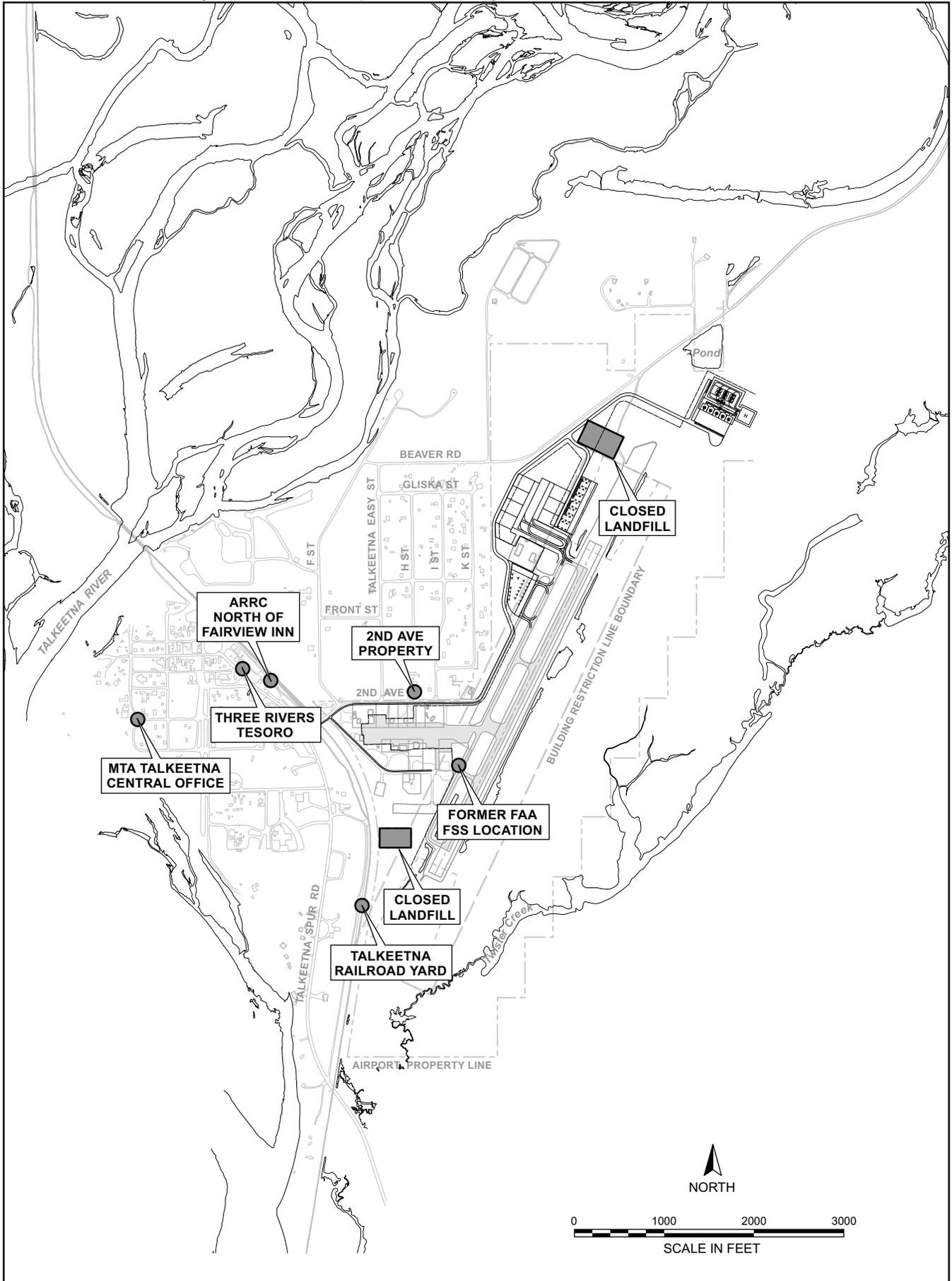
5.14.2 Proposed Action Alternative

New overhead lighting would be installed at the heliport. The closest residence to the heliport is more than 1,000 feet away and is screened with existing forest vegetation and thus no impact would result. No other new overhead lighting is planned.

Construction of the access road and lease lot apron would remove the upland forest vegetation near the Talkeetna Heights Subdivision. This change would open views from residences into the Talkeetna Airport facility and onto expanses of asphalt.

To minimize visual changes perceptible from adjacent residences, a minimum of 25 feet of vegetated buffer will remain between the access road and the nearest residential property boundary, based on the requirements in the Mat-Su Borough Code.

Construction during non-summer seasons may require additional lighting to maintain safe working conditions due to low-light conditions. Views from adjacent residences would be temporarily affected by vegetation removal, construction equipment, storage of materials, and dust from construction activities. However, these impacts would be temporary and last only through the construction period.



Talkeetna Airport Improvements
Environmental Assessment

**Figure 5-5
Landfills and Identified Contaminated Sites
with the Proposed Action Alternative**

5.15 Construction Impacts

5.15.1 No Action Alternative

No construction would occur under the No Action Alternative. Consequently, none of the adverse or beneficial impacts of construction activity would be experienced by the community.

5.15.2 Proposed Action Alternative

Many construction impacts are already regulated through permit requirements, such as compliance with Clean Water Act Section 401, Water Quality Certification. A list of required permits is shown in Section 6.3 of this EA.

Construction components vary by airport purpose, but construction will generally include 1) utility repositioning/ placement; 2) clearing and grubbing organic materials and surface soil; 3) excavation and embankment buildup; 4) subgrade construction; 5) laying aggregate base and paving; and 6) finish work. The proposed project is expected to require 18 months to construct. Short-term effects are those that can be remedied or that cease in a relatively short period, such as the noise arising from construction equipment.

Primary construction impacts have been discussed under noise, air quality, water quality, cultural resources, hazardous materials, light and visual resources. A summary of temporary construction impacts includes the following:

- Construction vehicle noise and exhaust emissions
- Potential for spills and additional erosion
- Minor traffic circulation inconveniences along Second Avenue and along designated haul routes
- Dust and debris
- Visual intrusion of equipment and lighting disturbances
- Development of material sites, disposal sites, and haul routes

The Proposed Action would also have beneficial short-term economic effects through the potential for generating new construction jobs, the purchase of materials required for construction, and the purchase of additional goods and services related to the Proposed Action.

5.15.3 Construction Mitigation Measures

All construction will be conducted in conformance with *Occupational Safety and Health Standards for the Construction Industry*, (29 CFR 1926) as amended and consistent with FAA *Advisory Circular 150/5370-10, Standards for Specifying Construction of Airports*, recent edition. The FAA document provides standards for construction of airports and addresses earthwork, drainage, paving, and lighting. These standards are recommended by the FAA,

are mandatory for all federally funded projects, and should be used to develop construction specifications.

ADOT&PF will require construction contractors to implement BMPs to minimize effects during construction. Construction mitigation measures to minimize noise, waste and stormwater management, traffic, and dust are discussed below.

Construction Noise

To minimize construction-related noise, haul trucks and other engine-powered equipment would be equipped with mufflers that meet the minimum original equipment manufacturer specifications. Haul trucks would be operated in accordance with posted speed limits.

Waste and Stormwater Management

A Hazardous Materials Control Plan (HMCP) would be developed and implemented by the project contractor. Mitigation measures identified in the HMCP would describe measures to prevent pollution from the use, disposal, and cleanup of any hazardous material during the construction phase of this project. The HMCP would detail plans for storage, handling of fuel and petroleum products, and containment and spill reporting and response.

All work would be done in compliance with the NPDES Construction General Permit (Permit AKR100000) requirements for construction activities in Alaska. As part of the NPDES permit, a SWPPP would be implemented by the contractor during construction. The SWPPP would identify BMPs to minimize effects from stormwater pollution, such as silt fences, straw bales, and check dams. Erosion and Sedimentation Control Plans would also be developed during final design of the project.

Emergency response actions/protocol would be identified and implemented by the construction contractor in coordination with local law enforcement officials and/or EPA to address accidental spills. These protocols would include appropriate cleanup and offsite transport and disposal of solid or hazardous waste that might be generated as a result of an accident.

Traffic and Circulation

Second Avenue is the only road in and out of Talkeetna Airport and residential areas. Due to the dependence on this road for all residences and airport users, as well as for construction, a Traffic Control Plan would be implemented to keep circulation moving safely with minimal inconvenience to automobile and pedestrian passage during construction.

Dust Reduction

To reduce unwanted dust and debris from construction activities, the following fugitive dust control measures discussed in the Air Quality and Hazardous Materials section would be implemented:

- Restrict speeds of vehicles in and around the construction activities and along material haul routes.
- Minimize the area of disturbed lands.

- Minimize the time between initially disturbing the soil and revegetation or other surface stabilization.
- Water active grading and other disturbed, unpaved areas as appropriate during dry periods.

In addition, solid waste would be disposed of in accordance with ADEC's solid waste program.

5.16 Material Site Impacts

5.16.1 No Action Alternative

The No Action Alternative would have no material site impacts in the Talkeetna area.

5.16.2 Proposed Action Alternative

Approximately 284,000 cubic yards of fill material and 51,000 tons of crushed aggregate would be needed for construction of the Proposed Action.

An existing, commercial borrow source, referred to as the Mincher Enterprises property, is located at about milepost 3.0 to 3.5 on the Talkeetna Spur Road (Figure 5-6). A State of Alaska Department of Natural Resources Mining and Reclamation permit (permit 5001781) has been obtained by the property owner for the borrow pit. CH2M HILL, on behalf of ADOT&PF has confirmed with the property owner that the site could provide all the fill and aggregate material needed for the Talkeetna Airport improvements. Borrow operations would expand into currently undisturbed areas of the source to obtain the needed volume. Material would be excavated and processed, if needed, during the summer and fall of 2007 or 2008. The material would be loaded onto trucks and hauled to the airport along Talkeetna Spur Road and Second Avenue.

The Mincher property has also been identified as a disposal area for unsuitable material excavated from the airport during construction of the airport improvements. The unsuitable material would be backhauled along Second Avenue and Talkeetna Spur Road for disposal. Approximately 123,000 cubic yards of material would be placed in this disposal area.

Should the contractor chose to obtain material from another borrow site or dispose of unsuitable material at another site, ADOT&PF contract language requires the contractor to be responsible for ensuring all required permits and clearances are obtained before construction starts.

5.17 Cumulative Impacts

The cumulative impact assessment was prepared in accordance with the requirements of NEPA and guidance from the Council on Environmental Quality's (CEQ's) *Considering Cumulative Effects Under the National Environmental Policy Act*. The intent is to review the Proposed Action Alternative, "which when reviewed with other Proposed Actions have cumulative significant impact and should therefore be discussed" (40 CFR 1508.25 [a] [2]).



Talkeetna Airport Improvements Environmental Assessment Figure 5-6 Commercial Materials Site

According to guidance from the CEQ:

In a broad sense, all the impacts on affected resources are probably cumulative; however, the role of the analyst is to narrow the focus of the cumulative effects analysis to important issues of national, regional, or local significance. ... Not all potential cumulative effects issues identified during scoping need to be included in an EA or an EIS. Some may be irrelevant or inconsequential to decisions about the Proposed Action and alternatives. Cumulative effects analysis should “count what counts” (CEQ, 1997).

Cumulative Impacts Analysis Process

The scope of this analysis will focus on those environmental resources that would be affected by the proposed project and, when combined with other projects in or near the project area, may result in cumulative effects. Those resources of concern are:

- Hazardous Materials
- Water Quality
- Visual
- Wetlands
- Floodplains
- Noise

Identification of actions and projects were collected via consultation with the Mat-Su Borough and the Talkeetna Airport staff. Past actions were those that occurred from the point at which the area began to be homesteaded in the early 1850s to the beginning of this study in 2001. The present includes the period of time from 2002 through 2008, the anticipated timeline for the Proposed Action Alternative to be completed. The foreseeable future extends 10 years beyond the project construction, but only for projects that can be reasonably forecasted. This includes projects that are currently funded or at a minimum for which an application has been submitted to a local, state, or federal agency.

Baseline and Past Projects

The landscape surrounding Talkeetna Airport is surrounded by the rural community of Talkeetna, upland conifer forest, and marsh-wetlands that drain into the Talkeetna River and Twister Creek. Settlement began with the construction of the ARRC railroad between the 1900s and mid-1960s. The first airstrip was constructed in 1938. Apart from the road and the few residential subdivision- and tourist-oriented uses, the surrounding landscape appears to be representative of an upland conifer forest.

Present Projects

Aside from a few potential home constructions each year, the only project being planned is the Talkeetna Airport improvements. There are no other present projects to be considered under cumulative impacts.

Future Projects

The Talkeetna Airport is planning to expand the number of lease lots as demand increases. It is expected that Talkeetna Airport would build an additional nine lease lots north of those currently proposed, as well as additional GA aircraft apron by 2015 to meet rising demand. This will require minor modifications to the automobile access road into the apron area and realignment of a 1,500-foot segment of Beaver Road.

The Proposed Action, together with improvements to meet 2015 airport demand, is not expected to have significant cumulative impacts on the human, biological, or physical environment. The airport improvements would not induce development at the airport or within the surrounding community. The airport and the surrounding community are expected to continue to grow even without construction of the Proposed Action. The Proposed Action would improve safety and efficiency at the airport and would also meet the existing demand requirements for airport services.

The proposed improvements would increase the total impermeable surface area, which would increase stormwater runoff. However, this is not expected to adversely impact water quality because the stormwater would drain into vegetated swales where it would be infiltrated instead of draining directly into water bodies. The visual effect of the large, impermeable surface associated with eight additional lease lots could be visible to residents on adjacent properties if not adequately screened by vegetation.

Past and presents projects have filled or will fill in wetlands in the area. For the Proposed Action, 0.48 acre of wetland would be filled for construction of the short-term improvements. No additional wetland would be filled for the airport long-term improvements. Although the airport improvements contribute to net loss of wetland in the area, high-quality wetlands associated with Twister Creek would be avoided.

Much of the Talkeetna area lies within the 100-year floodplain of the Talkeetna and Susitna Rivers and is subject to flooding. The Proposed Action and planned long-term improvements at Talkeetna Airport would not be located in the 100-year floodplain and would not contribute to the cumulative affect of development elsewhere in the floodplain.

For the 2015 airport improvements, the addition of lease lots, GA apron, and access road could require building an embankment over the closed landfill at the north end of the airport. ADOT&PF would coordinate with ADEC regarding the need for a Corrective Action Plan, if needed.

The 2015 airport improvements would have the potential to contribute to cumulative noise impacts in the Talkeetna area. Noise impacts would be evaluated in detail during environmental review for these future projects.

5.18 Summary of Mitigation Measures

Table 5-1 summarizes all mitigation measure proposed for the Proposed Action Alternative.

TABLE 5-1
Summary of Mitigation Measures

Resource	Proposed Mitigation Measures
Noise	<ul style="list-style-type: none"> Haul trucks and other engine-powered equipment shall be equipped with mufflers that meet the minimum original equipment manufacturer specifications. Haul trucks shall be operated in accordance with posted speed limits.
Compatible Land Use	<ul style="list-style-type: none"> See construction mitigation, below.
Socioeconomic Impacts, Environmental Justice, and Children’s Environmental Health and Safety Risks	<ul style="list-style-type: none"> Refer to noise, air quality, and hazardous materials mitigation measures.
Historical, Architectural, Archeological, and Cultural Resources	<ul style="list-style-type: none"> If cultural sites are found during construction, project construction would cease and the State Historic Preservation officer would be contacted.
Air Quality	<ul style="list-style-type: none"> Increased levels of dust during construction activities would be a temporary impact that would be mitigated through regular watering and sweeping.
Water Quality	<ul style="list-style-type: none"> Work would be performed in accordance with the NPDES General Permit. An approved SWPPP would be required to minimize effects of erosion and potential contaminants into nearby water bodies. An Erosion and Sedimentation Control Plan would be included in the final design.
Fish, Wildlife, and Plants	<ul style="list-style-type: none"> BMPs, such as drainage controls and grassy swales to prevent erosion and sedimentation to water bodies (including wetlands), would be implemented. Vegetation clearing would be done outside the May 1- July 15 nesting periods for migratory birds in accordance with USFWS guidelines.
Wetlands	<ul style="list-style-type: none"> Compensatory mitigation in conformance with the Interagency MOA. In-lieu fee compensation for unavoidable loss of wetland at a fee of \$500 per acre shall be deposited into the Alaska Wetland Conservation Fund.
Floodplains	<ul style="list-style-type: none"> The pedestrian pathway and airport access resurfacing would be designed and constructed at or below existing elevations, thereby avoiding any effect on floods. The security fence would be designed with moose fence fabric to reduce any potential effect on base flood water surface elevation. Also, ADOT&PF would modify its operating plan, as FAA may allow, to open gates to reduce their effect on flow when a flood is predicted.
Coastal Zone Management Program	<ul style="list-style-type: none"> See mitigation measures for Floodplain; Wetlands; and Fish, Wildlife, and Plants sections.
Light Emissions and Visual Impacts	<ul style="list-style-type: none"> To minimize visual intrusion on the adjacent residences, a minimum of 25 feet of vegetated buffer would remain between the access road and the nearest residential property boundary.
Transportation	<ul style="list-style-type: none"> Refer to mitigation measures for construction impacts, below.
Construction	<ul style="list-style-type: none"> Haul trucks and other engine-powered equipment would be equipped with mufflers that meet the minimum original equipment manufacturer specifications. Haul trucks would be operated in accordance with posted speed limits. A Hazardous Materials Control Plan (HMCP) would be developed and implemented by the project contractor. Emergency response actions/protocol would be identified and implemented by the construction contractor. A Traffic Control Plan would be implemented to keep circulation moving safely with minimal inconvenience to automobile and pedestrian passage during construction Vehicle speed would be restricted in and around the construction activities and along material haul routes. The area of disturbed lands would be minimized. The time between initially disturbing the soil and revegetation or other surface stabilization would be minimized Water active grading and other disturbed, unpaved areas as appropriate during dry periods, would be used.

Agency Coordination and Public Involvement

6.1 Introduction

This section documents the agency coordination and public involvement conducted for the Talkeetna Airport Improvements Environmental Assessment project. The comments received during these meetings are herein summarized and incorporated as part of the public and agency comment record. Four meetings have been held in Talkeetna to facilitate agency coordination and to involve members of the public since the project began: a design public meeting on October 17, 2001; a public workshop on February 6, 2003; a scoping meeting on August 17, 2004; and the public hearing on May 18, 2006, on the *Draft Environmental Assessment*. While the project has evolved as a result of the input from agencies and the public, the basic purpose and need to enhance safety, provide needed facilities, and to improve overall efficiency remains the same.

6.1.1 Agency Coordination and Public Involvement

Communication supporting public and agency meetings involved the use of mail, newspapers, radio and internet, including the following:

- **Mailing:** A project mailing list was developed from a commercially purchased mail list of residences and businesses located within the Talkeetna zip code. The original mail list, purchased in 2002, is continually revised to include new members of the public who show interest in the project from their correspondence, comments, and/or meeting attendance. The updated list has approximately 1,000 contact names and addresses, which include properties adjacent to the project, the Matanuska-Susitna Borough, and other state and federal agencies with interest in the project.

Letters, post cards, and a project-information newsletter were mailed to all parties on the public and agency mailing lists in advance of the meeting (an EA Scoping meeting), encouraging agencies and members of the public to attend and participate.

- **Newspapers:** Project meetings were also advertised in local and regional newspapers (*The Talkeetna Good Times* and the *Frontiersman*, respectively).
- **Radio Stations:** Public Service Announcements advertising the meetings were sent to and broadcast by radio stations within the Matanuska-Susitna Borough.
- **Internet:** Project information and meeting announcements were posted on the ADOT&PF project web site (http://www.dot.state.ak.us/stwdplng/projectinfo/proj_master.html)

6.1.2 Public and Agency Meeting Summary

Four public meetings (including a formal scoping meeting) have been held to date. In addition, numerous agency meetings have been held to discuss the project. This section documents and summarizes the purpose for and outcome of those meetings.

6.1.2.1 Design Public Meeting – October 17, 2001

This meeting, held at Talkeetna Elementary School, was the first of three public information meetings developed for the Talkeetna Airport Improvements project. The purpose for this meeting was to introduce the design team and to solicit public comments and suggestions concerning the project.

The meeting presentation materials included graphics describing general airport improvements, relocation of existing helicopter parking, noise analysis, hydrologic/hydraulic studies, and floodplain mitigation measures. Project planning and engineering staff were available throughout the meeting to answer questions. Input received at the meeting was considered for development of preliminary design, preparation of engineering studies and environmental documentation for the project.

A public comment period was open between October 17 and November 19, 2001.

A summary of the discussions held during this meeting is included in Appendix E.

6.1.2.2 Public Workshop – February 6, 2003

The purpose for this meeting was to present and discuss the Draft Hydrologic and Hydraulic Assessment, Heliport Relocation/Noise Study and to solicit public comments concerning the project. An informational newsletter was distributed and Draft Technical Reports were made available at the Talkeetna Library, Elementary School, U.S. Post Office, Airport Flight Service Station, National Park Service Ranger Station, to Talkeetna Community Council officers and by via ADOT&PF's web site.

A public comment period was open between February 6 and 22, 2003.

The meeting was attended by 64 members of the public who signed the log. Following the meetings, 37 written comments were received by ADOT&PF.

6.1.2.3 Agency Site Visit – September 25, 2004

A site visit was conducted with representatives from the USACE, USFWS, US EPA, and ADF&G to discuss potential locations of the proposed helipad and floodplain mitigation options. The meeting started with an overview of the project and alternatives under consideration. This was followed by a site visit to allow the resource agencies to view the areas of potential impact. The primary concern expressed by the agencies was to avoid impacts to high-quality wetlands associated with Twister Creek.

6.1.2.4 Agency Scoping Meeting – August 17, 2004

This meeting was held at the ADOT&PF Talkeetna Airport Maintenance office from 1 to 4 p.m. A brief presentation provided project update, previous work completed, review of the proposed action, and review of known resource information. A site visit was also

arranged to allow resource agencies the opportunity to walk around the potential development areas within the airport property.

The comments received from the agencies during the formal scoping comment period are summarized in Table 6-1.

TABLE 6-1
Summary of Agency Comments Received and Responses

Commenter	Comment	Response
National Marine Fisheries Service	<ul style="list-style-type: none"> The NMFS has reviewed the Agency Scoping letter for the ADOT&PF Talkeetna Airport Improvements. NMFS has no additional information regarding threatened and/or endangered species. NMFS has no other information and/or data on EFH species. 	<ul style="list-style-type: none"> Comment noted. No further response necessary.
Mat-Su Borough Public Works	<ul style="list-style-type: none"> Avoid Flood Hazard Areas. Comply with Borough Land Use Regulations. Attention to the Talkeetna Water and Sewer mainlines. Keep Talkeetna Community Council informed. Consider closing the old airfield. 	<ul style="list-style-type: none"> The project was redesigned to move all improvements that could be moved out of the flood hazard areas. ADOT&PF applied for and received a Floodplain Development Permit for that part of the project that is within the flood hazard area. The Borough Coastal Management Enforceable Policies were reviewed for project consistency. The "Applicant's Signature" on the Floodplain Development Permit includes an agreement to conform to all applicable laws of the Mat-Su Borough. By signing the application, ADOT&PF agreed to comply with the Borough's land-use regulations at the airport. ADOT&PF plans do not include any connections to, or changes of, the Talkeetna water and sewer systems. ADOT&PF will continue to communicate with the Talkeetna Community Council. ADOT&PF supports closing the old airfield.
Alaska Department of Natural Resources Habitat	<ul style="list-style-type: none"> Project does not directly affect Twister Creek or the wetlands within the Twister Creek drainage, and thereby avoids any impacts to the State resources this area provides. Mention the perimeter fencing in analysis of effects. No state authorization will be required pursuant to AS 41.14.840 or AS 41.14.870 for construction of the Talkeetna Airport Improvement project as currently designed. 	<ul style="list-style-type: none"> Comment noted. No further response necessary. The limited perimeter fencing is not expected to affect wildlife migration Comment noted. No further response necessary

TABLE 6-1
Summary of Agency Comments Received and Responses

Commenter	Comment	Response
National Park Service	<ul style="list-style-type: none"> • The NPS uses the Talkeetna Airport as a key access point to park lands. • Of major concern is the location of the new heliport and the ability to expedite patient transport during emergency situations. • Will the proposed security fence allow for access to both the heliport and the designated patient transfer location? We understand the proposed improvements would bring electricity to the new heliport, which will be needed for our fueling system. Water and sewer would be a positive addition to this site • Additional traffic along Beaver Road may adversely affect the residential community. 	<ul style="list-style-type: none"> • NPS would be allowed access to any airport location that would be necessary for patient transport during emergency situations. • No elements of this project will change operating procedures at the Talkeetna Airport. • The safety fencing will not inhibit patient transfer logistics • Electricity will be provided to the heliport site. • Water and sanitary sewer will not be extended to the heliport site at this time • The heliport relocation site will be accessed via Second Avenue and remains within the airport property boundaries.

6.1.3 Public Scoping Meeting – August 17, 2004

This meeting was held at the Talkeetna Elementary School, from 6 to 9 p.m. Presentations were given at 6 and 7 p.m. Between presentations, an open-house style format allowed the public to ask questions of project planners and engineers and to review graphic displays of the project area and alternatives.

Members of the public were encouraged to attend, ask questions, and submit comments. A public comment period was open between August 17, 2004, and September 16, 2004.

Sixteen public members signed in at the meeting. Five consultant representatives from CH2M HILL, eight ADOT&PF representatives, two FAA representatives, one Mat-Su Borough representative, and one National Park Service representative were also in attendance. Two people submitted recorded verbal testimony during the meeting.

6.1.4 Public Hearing for the Draft Environmental Assessment – May 18, 2006

The public hearing and open house was held at the Talkeetna Elementary School from 6:00 p.m. to 9:00 p.m. One presentation was made at 7:00 p.m., after which the public was invited to give oral testimony. Before and after the presentation, an open-house style meeting allowed the public to ask questions of project planners and engineers and to review graphic displays of the project alternatives and associated environmental impacts. Attendees were invited to submit comments—either orally during the hearing and open house, or in writing. The comment period was originally scheduled to close on May 30, 2006; however, in response to public comments it was extended to June 10, 2006. All comments received were accepted.

All comments on the *Draft Environmental Assessment*, along with ADOT&PF responses, are provided in Appendix F.

6.2 Persons and Agencies Consulted

The list of persons and agencies consulted to facilitate development of this EA is presented in Table 6-2. Agency correspondence is provided in Appendix E.

TABLE 6-2
Persons and Agencies Consulted

Name	Agency/Organization
Lovett, John	Federal Aviation Administration, Airports Division
Howell, Leslie	Federal Aviation Administration, Airports Division
Moss, Katrina	Federal Aviation Administration, Airports Division
Carlton, Dave	FEMA Region 10
Eberlein, Mark	FEMA Region 10, Regional Environmental Officer
Hanson, Jeanne	NOAA Fisheries
Tranel, Mike	National Park Service
Miller, Daryl	National Park Service, Talkeetna Ranger Station
Gammon, Shirley	Natural Resources Conservation Service
Joy, Skip	U.S. Army Corps of Engineers, Wetlands
Legare, Harlan	U.S. Army Corps of Engineers, Floodplain
Hanson, Mary	U.S. Bureau of Land Management
Duncan, Steve	U.S. EPA, Alaska Operations Office
Mann, Francis	U.S. Fish and Wildlife Service
Rappoport, Ann	U.S. Fish and Wildlife Service
Francel, Steve	U.S. Geological Survey, Chief, Water Resources
Theodore, Carol	Knik Tribe, President
Cook, Dorothy	Native Village of Eklutna, President
Baxter, Don	ADOT&PF
Golden, Dan	ADOT&PF
Hanson, Steve	ADOT&PF Airport Maintenance
Moffat, Alisa	ADOT&PF
Mulcahy, Laurie	ADOT&PF
Norton, Bob	ADOT&PF Leasing
Walker, Anna	ADOT&PF
Miller, Christy	Alaska Department of Community and Economic Development
Roche, Fran	Alaska Department of Environmental Conservation
Bittner, Judith	Alaska DNR, State Historic Preservation Office
Davis, Jeffrey C.	Alaska DNR, Mat-Su Area Office
Sullivan, Mike	Alaska DNR, Mining, Land, and Water
Zuelow-Osborne, Cynthia	Alaska DNR, Office of Project Management and Permitting
Hudson, Ken	Mat-Su Borough Coastal Program
Duffy, John	Mat-Su Borough Planning Department
Gooddale, Greg	Mat-Su Borough Public Works
Shiesl, Don	Mat-Su Borough, Public Works Director
O'Brien, Murph	Mat-Su Borough

TABLE 6-2
Persons and Agencies Consulted

Name	Agency/Organization
Dickinson, Susan	Mat-Su Borough
Braun, Chuck	Mat-Su Borough, Operations & Maintenance
Wood, Ruth	Talkeetna Community Council
Postmaster	Talkeetna Post Office
Librarian	Talkeetna Public Library
Brooks, Tom	Alaska Railroad Corporation
Hotchkins, Barbara	Alaska Railroad Corporation
McGee, Kirk	Land Office/Real Estate, Cook Inlet Region, Inc., Vice President
Mincher, Dorothy	Mincher Enterprises

6.3 Permits and Approvals

Permits required for the preferred alternative are summarized in Table 6-3.

TABLE 6-3
Permits and Clearance

Permit Title/ Responsible Agency	Regulatory Authority	Status of Acquisition
Section 404 Nationwide Permit/ USACE	Section 404, Clean Water Act	Permit application completed and ready for submittal.
Section 401 Water Quality Certification/ADEC	Section 401, Clean Water Act	USACE to coordinate with ADEC for approval.
Coastal Project Questionnaire and Certification Statement/ADNR- OPMP	Coastal Zone Management Act	Questionnaire completed and ready for submittal.
Floodplain Development Permit/ Mat-Su Borough (includes Land Use Regulation Permit)	MSB Code Chapter 17.29 – Flood Damage Prevention	Permit application and attachments completed, submitted, and approved.
Determination of No Historic Properties Affected/SHPO	Section 106, National Historic Preservation Act	Concurrence obtained.
Stormwater NPDES General Permit for Construction Activities/EPA Region 10	Section 402, Clean Water Act	To be completed by contractor prior to construction phase.

SECTION 7

List of Preparers

Project Development and Supervision

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SECTION 8

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