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\*Following report.

ACRONYMS

AASP	Alaska Aviation System Plan
ALP	Airport Layout Plan
ARFF	Aircraft Rescue and Fire Fighting
DOT&PF	State of Alaska Department of Transportation and Public Facilities
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FBO	Fixed-Base Operator
FY	Fiscal Year
GA	General Aviation
ILS	Instrument Landing System
KGB	Ketchikan Gateway Borough
KIA	Ketchikan International Airport
KW	kilowatt
lf	linear feet
NAVAIDs	Navigational Aids
RPZ	Runway Protection Zone
RSA	Runway Safety Area
sf	square feet
SRE	Snow Removal Equipment
sy	square yards

## INTRODUCTION

The Federal Aviation Administration (FAA) developed the airport master planning process to assist the nation's airports in developing expansion plans to meet future aviation demand. The Master Plan for Ketchikan International Airport (KIA) located in Ketchikan, Alaska, serves as a development guide for the Airport's short-term (5- to 10-year) needs and also addresses the needs of the airport through the long term (20 years). The Master Plan uses 1998 for a baseline year, with a planning horizon extending through to the year 2018. The Master Plan also addresses those issues for key floatplane facilities located in the Ketchikan area. This Master Plan report is organized into the following sections:

- Airport Goals and Objectives
- Existing Airport Data
- Forecasts of Aviation Demand
- Summary of Airport Improvement Needs
- Recommended Airport Improvements
- Airport Layout Plans

This Master Plan includes information within a specific study area as a basis for research, data collection, and forecasts. The study area for this Master Plan encompasses KIA and the major floatplane facilities in the area: Murphy's Pullout, Peninsula Point, and the Tongass Avenue Floatplane Docks (see **Exhibit 1**).

## 1 AIRPORT GOALS AND OBJECTIVES

The goal of the airport master plan is to provide guidelines for future airport development which will satisfy aviation demand in a financially feasible manner, while at the same time resolving aviation, environmental, and socioeconomic issues associated with planned airport improvements. Specific objectives are:

- Map the airport property identifying contours, elevations, streams, wetlands, and man-made facilities.
- Identify and describe all local aviation facilities; describe past and current air traffic and forecast future air traffic.
- Describe age and condition of existing aviation facilities, existing and future capacity constraints, and assess deficiencies; and determine improvements needed to adequately serve current and future air traffic demand.
- Identify airport development alternatives feasible to address local and area aviation needs.
- Evaluate and compare the social, economic, and environmental impacts of the various aviation development alternatives to identify and support a preferred alternative and Airport Layout Plan (ALP).
- Update the Airport Master Plan, ALP, and improvement priorities to address current and anticipated future aviation needs in a cost-effective manner.
- Describe a continuing planning process to maintain a current ALP.
- Plan for improvement of floatplane facilities.

Several documents were prepared during the course of developing this Airport Master Plan, including a “*Condition and Needs Assessment*” and a “*Project Scoping Report*.” These reports were presented to the public throughout the Master Plan process and were subsequently revised based on community and user input. The public involvement process is documented in an “*Environmental Appendix*” document (March 2002). This Master Plan report provides summary information from previous documents and presents the final plan.

## 2 EXISTING AIRPORT DATA

This section of the Master Plan provides background information on KIA and the local floatplane facilities, and is organized into the following subsections:

- Ketchikan International Airport
- Floatplane Facilities
- KIA Ownership/Management

### 2.1 Ketchikan International Airport

Ketchikan is near the southern edge of the Southeast Alaska panhandle, which extends along the Canadian border from Yakutat to Ketchikan and farther south. Southeast Alaska is part of the Inside Passage, famous for its rugged coastline of mountains and densely forested islands. Ketchikan was established in 1887 as a fishing town when a salmon cannery was built near the mouth of Ketchikan Creek. Today, Ketchikan is the primary air and marine transportation hub in southern Southeast Alaska, serving neighboring communities such as Metlakatla, Klawock, and Craig. It is situated on the shoreline of Revillagigedo Island, which is on Tongass Narrows, approximately 600 miles north of Seattle and 650 miles south of Anchorage in the Tongass National Forest. From Ketchikan, no road access to the mainland or to any other islands in the area exists. **Exhibit 2** depicts the existing facilities at KIA.

KIA occupies approximately 2,689 acres on Gravina Island, west of downtown Ketchikan. The airport is bounded by rising terrain to the south and Tongass Narrows to the north, separating the airport from the community. Airport-operated shuttle ferries provide vehicle and passenger access to the airport. The State of Alaska Department of Transportation and Public Facilities (DOT&PF) owns the airport, but the Ketchikan Gateway Borough (KGB) operates and maintains the airport through a long-term lease. The airport is classified as a Regional Center Airport in the Alaska Aviation System Plan (AASP) and serves air carrier, commercial, general aviation (GA), cargo, and military air traffic.

### 2.2 Floatplane Facilities

The floatplane facilities at the airport include a floatplane pullout, a floatplane dock, and a launch ramp for loading and unloading floatplanes. All are located adjacent to the terminal area. Access to the floatplane dock is available via a passenger boarding ramp and a vehicle ramp (20,000 pounds capacity).

Off-airport floatplane facilities in Ketchikan range from public docks and pullout ramps to private individual docks. This Master Plan addresses off-airport floatplane facilities at Peninsula Point, Murphy's Pullout, and the Tongass Avenue floatplane docks. Peninsula Point is a state-owned facility in good condition, located approximately 2 miles northwest of the airport. Several commercial air taxi operators maintain docks and passenger terminal buildings along Tongass and Water Streets on the town side of Tongass Narrows. Commercial floatplanes in Ketchikan have historically been accommodated at these docks.

The Tongass Avenue floatplane docks are located in Ketchikan on Revillagigedo Island. The docks are used for aircraft fueling, for picking up passengers, and for U.S. mail and cargo. Both Tongass Avenue floatplane docks are in good condition.

A floatplane dock is located at Murphy's Point, about 3 miles northwest of the airport. The KGB owns, operates, and maintains Murphy's Pullout. The float has pullouts for eight floatplanes. All available spaces are occupied and there's a waiting list of approximately 16 aircraft owners, maintained by KIA Management.

Fueling for floatplanes is generally provided at private docks in the area. There is dockside fueling available for floatplanes at the airport via the floatplane dock. At KIA, Aero Services currently provides aviation gasoline to the floatplane dock, transported by fuel truck.

## **2.3 KIA Airport Ownership/Management**

### **2.3.1 Ownership/Management**

Airports in Alaska are typically owned by the State. In the case of KIA, the airport is owned by the State, but the KGB has the legal authority and responsibility to operate and maintain KIA through a lease agreement with the State of Alaska. The State, as owner and sponsor of capital improvement grants from the FAA, is accountable to the FAA for the continued operation and maintenance of the airport. The State is responsible for capital improvements to the airport, with the exception of Borough-owned facilities. In addition to their broad responsibilities of general government, their primary goal is to provide and maintain airport facilities that safely and efficiently serve the air transportation needs of the public. Peninsula Point and private floatplane docks and operating areas along the Ketchikan waterfront are not included in the airport's jurisdiction, but Murphy's Pullout is managed by the airport.

The KGB leases the KIA from the DOT&PF at a rate of \$1.00 per year under a 42-year lease agreement that expires on May 31, 2027. Under the terms of this lease, the Borough is required to operate the airport for the use and benefit of the public and to perform all maintenance and repairs to the landing field. The lease further provides that the cost of repairs to the State-owned facilities will be paid by the Borough if the cost does not exceed \$10,000, and that the State will pay for repair costs above that amount.

In addition, the lease requires the Borough to maintain an Airport Enterprise Fund and to account for all of the revenues, costs, and expenses of operating the airport in this fund.

### **2.3.2 KIA Financial Data**

The airport's financial results are reported within the *Comprehensive Annual Financial Reports* of the KGB. The Borough operates the airport as part of an enterprise fund. Such a proprietary fund is used to account for operations financed and operated in a manner similar to private business enterprises. The intent is that the costs of providing these services on a continuing basis be financed or recovered primarily through user charges. Costs include an allocation for depreciation expense.

The KGB operates under a financial reporting system that is based on a July 1 to June 30 fiscal year (FY). Therefore, all information contained in this analysis is presented in terms of the airport's FY detail, as opposed to calendar year.

**Airport Revenues.** Table 1 depicts the Airport's historical revenues from FY 1991 through FY 1998 and budget years FY 1999 through FY 2000. According to the documentation provided by the KGB, total operating revenues are reported from FY 1991 through FY 1994, after which operating revenues are broken down by field revenue, terminal revenue, floatplane revenue, and revenue from other governments (which comprises primarily grants).

As shown in Table 1, the major source of operating revenues at the airport in the years FY 1996 through FY 1998 (as well as budget years FY 1999 and FY 2000) is field and terminal revenue. Total historical operating revenues at the airport range from a low of \$1,316,479 in FY 1997 to a high of \$2,189,070 in FY 1994. Airport operating revenues through FY 1994 included revenue from the ferry operation. After that time, revenues from the ferry operation were accounted for under a separate ferry enterprise fund.

Historical non-operating revenues at the airport range from a low of -\$43,548 in FY 1995 to a high of \$266,200 in FY 1994. In budget year FY 2000, \$2.5 million in bond proceeds were budgeted as part of the terminal building renovation project.

Total historical airport revenues, as presented in Table 1, range from a low of \$1,330,521 in FY 1995 to a high of \$2,354,691 in FY 1993. Recent trends in airport revenues show a decrease from \$1,480,841 in FY 1996 to \$1,341,592 in FY 1997, representing a 9.4 percent decrease. Airport revenues did increase, however, from \$1,341,592 in FY 1997 to \$1,537,203 in FY 1998. This represents a 14.6 percent increase.

**Airport Expenses.** Table 2 depicts the Airport's historical expenses from FY 1991 through FY 1998 and budget years FY 1999 through FY 2000. According to the documentation provided by the KGB, operating expenses are broken down by field, terminal, ferry (only through FY 1994), administration, Murphy's Landing, and depreciation. Airport operating expenses data provided for FY 1995, however, include only total airport operating expenses. As shown in Table 2, operating expenses through FY 1994 include expenses from the ferry operation; after which it is accounted for under a separate ferry enterprise fund.

Recent trends in airport operating expenses show an increase from \$1,387,131 in FY 1996 to \$1,610,658 in FY 1998, representing a 7.8 percent compounded annual increase. As shown for budget years FY 1999 and FY 2000, further increases in operating expenses are anticipated. Since FY 1995, field and terminal expenses combined to total approximately 70 percent of all operating expenses at the airport.

**Table 1**

**Ketchikan International Airport  
Historical and Budgeted Airport Revenues (Fiscal Years)**

	Historical								Budgeted	
	1991	1992	1993	1994	1995 <sup>1,2</sup>	1996 <sup>3</sup>	1997 <sup>3</sup>	1998 <sup>4</sup>	1999 <sup>3</sup>	2000 <sup>4</sup>
<b>Operating Revenues</b>										
Revenue from Other Governments						\$42,587	\$20,134	\$44,047	\$154,719	\$203,577
Field Revenue						\$782,986	\$678,879	\$757,619	\$886,000	\$809,500
Terminal Revenue						\$617,057	\$610,559	\$710,018	\$643,600	\$727,200
Seaplane Revenue						\$6,900	\$6,907	\$6,615	\$7,000	\$7,000
<b>Total Operating Revenues</b>	<b>\$1,946,832</b>	<b>\$2,188,484</b>	<b>\$2,088,491</b>	<b>\$2,189,070</b>	<b>\$1,374,069</b>	<b>\$1,449,530</b>	<b>\$1,316,479</b>	<b>\$1,518,299</b>	<b>\$1,691,319</b>	<b>\$1,747,277</b>
<b>Non-Operating Revenues</b>										
Bonds <sup>5</sup>	\$185,117	\$251,099	\$266,200	\$78,829	-\$43,548	\$31,311	\$25,113	\$18,904	\$10,000	\$13,500
<b>Total Non-Operating Revenues</b>	<b>\$185,117</b>	<b>\$251,099</b>	<b>\$266,200</b>	<b>\$78,829</b>	<b>-\$43,548</b>	<b>\$31,311</b>	<b>\$25,113</b>	<b>\$18,904</b>	<b>\$10,000</b>	<b>\$2,513,500</b>
<b>Total Revenues</b>	<b>\$2,131,949</b>	<b>\$2,439,583</b>	<b>\$2,354,691</b>	<b>\$2,267,899</b>	<b>\$1,330,521</b>	<b>\$1,480,841</b>	<b>\$1,341,592</b>	<b>\$1,537,203</b>	<b>\$1,701,319</b>	<b>\$4,260,777</b>

Source: Ketchikan Gateway Borough Alaska, Comprehensive Annual Financial Reports, various years.

NOTES:

<sup>1</sup>Ferry Enterprise fund established in Fiscal Year 1995.

<sup>2</sup>Detailed information not available for Fiscal Year 1995.

<sup>3</sup>Values taken from 1998/1999 Budget.

<sup>4</sup>Values taken from 1999/2000 Budget.

<sup>5</sup>Bond proceeds included in 1999/2000 budget.

**Table 2**

**Ketchikan International Airport  
Historical and Budgeted Airport Operating Expenses (Fiscal Years)**

	Historical								Budgeted	
	1991	1992	1993	1994	1995 <sup>2</sup>	1996 <sup>3</sup>	1997 <sup>3</sup>	1998 <sup>4</sup>	1999 <sup>3</sup>	2000 <sup>4</sup>
<b>Operating Expenses</b>					\$1,007,661					
Field	\$648,807	\$630,865	\$490,016	\$525,812		\$532,102	\$577,240	\$557,306	\$840,657	\$748,647
Terminal	\$375,436	\$468,945	\$406,773	\$387,181		\$430,528	\$437,329	\$463,129	\$586,118	\$824,697
Ferry <sup>1</sup>	\$769,806	\$988,694	\$798,791	\$920,243						
Administration	Detailed information not available		\$159,017	\$154,917		\$163,686	\$234,447	\$287,450	\$298,947	\$300,828
Murphy's Landing	Detailed information not available		\$7,727	\$1,166		\$3,194	\$1,730	\$1,505	\$1,882	\$1,912
Depreciation	\$255,232	\$284,008	\$327,093	\$319,030	\$252,451	\$257,621	\$269,127	\$301,268	\$0	\$325,000
<b>Total Operating Expenses</b>	<b>\$2,049,281</b>	<b>\$2,372,512</b>	<b>\$2,189,417</b>	<b>\$2,308,349</b>	<b>\$1,260,112</b>	<b>\$1,387,131</b>	<b>\$1,519,873</b>	<b>\$1,610,658</b>	<b>\$1,727,604</b>	<b>\$2,201,084</b>

Source: Ketchikan Gateway Borough Alaska, Comprehensive Annual Financial Reports, various years.

Notes:

<sup>1</sup>Ferry Enterprise fund established in Fiscal Year 1995.

<sup>2</sup>Detailed information not available for Fiscal Year 1995.

<sup>3</sup>Values taken from 1998/1999 Budget.

<sup>4</sup>Values taken from 1999/2000 Budget.

### 3 FORECASTS OF AVIATION DEMAND

This element of the KIA Master Plan provides estimates of future aviation demand at the airport and the floatplane facilities. Projections of short-, intermediate-, and long-term activity at the airport are based on 5-, 10-, and 20-year milestones (2003, 2008, and 2018), using 1998 as the base year of analysis. Projections of aviation demand are an important element of the master planning process as they provide the basis for several key analyses, including determining the role of the airport, with respect to the type of aircraft to be accommodated in the future, evaluating the capacity of existing airport facilities and their ability to accommodate projected aviation demand, and estimating the extent of airside and landside facilities required in future years.

This section of the report is organized into the following subsections:

- Overall Economic Outlook
- Effects of September 11, 2001
- Projections of Passenger Enplanements
- Aircraft Operations
- Aircraft Fleet Mix
- Air Cargo
- General Aviation Based Aircraft

#### 3.1 Overall Economic Outlook

The KGB economy historically has been based on the timber, fishing, mining, and tourism industries. Other strong economic forces include government, health care, and construction industries. Within the past few years, the three major natural resource industries: timber, fishing, and mining, have all experienced declines. The future of these natural resource industries in the KGB is generally uncertain.

Although the Ketchikan Pulp Mill closed in 1997, resulting in a major loss of jobs, sawmills continue to provide jobs in the Borough. The opening of a veneer plant at Ward Cove and the expanded Seley operations at the Lewis Reef site on Gravina Island (near the airport) gives one a sense of optimism with respect to the future potential of this industry. No mines in the Ketchikan Mining District are currently operational, but a significant potential for mining operations exists.

Despite the downward slide in the number of salmon permits fished by Ketchikan residents, there is guarded optimism for the success of alternative fisheries.

In contrast, tourism is very strong in the KGB. The number of cruise ship passengers has increased within the past 10 years. Government employment has experienced recent decreases and there may be some near-term declines based on a reduction in state revenue sharing.

The University of Alaska Southeast-Ketchikan Campus is historically included among the top 25 employers in Ketchikan. Health care jobs are also numerous; with Ketchikan General Hospital being the Borough's (current) largest private employer. Finally, construction jobs are positive in the near term because of several construction projects currently underway and potential large

projects in the future. The Alaska Department of Labor's population projections show the KGB population increasing somewhat. Unemployment rates have fluctuated, but in 1998 they were at a 10-year low.

Some of the recent declines in aviation activity may be the result of the slowdown in the natural resources industries in the KGB; however, the number of operations at the Tongass Avenue floatplane docks increased during that same time period. This may indicate a positive near-term outlook for the tourism industry in the Borough.

*Overall, the socioeconomic indicators for the Ketchikan area indicate that modest growth factors should be incorporated into projections of aviation demand. Baseline forecasts will generally apply modest growth rates to reflect this reality.*

### **3.2 Effects of September 11, 2001**

A significant event occurred in 2001 that is important to address. Through this discussion, we are attempting to put the event, as it relates to aviation demand, into an appropriate context.

On September 11, 2001, a group of terrorists hijacked four commercial airliners and caused the destruction of the World Trade Center buildings in New York City and a portion of the Pentagon in Washington, D.C. Following these events, all civilian airports in the U.S. were closed for several days and GA traffic was restricted for a longer time period.

Aviation activity following these events was reduced, at some locations by a significant margin. Based on this series of events, it is relevant to address their potential impacts on long-range planning. Overall, the demand for commercial airline service in the short term may not reach levels previously projected, even by the airlines. It is possible that increased use of private aircraft may result from these events. The bottom line is that it is too early to predict with confidence how quickly demand will return to "normal" levels. Many factors influence this, including a decrease in commercial airliner capacity. In the long term, however, it is believed that the U.S. aviation system and demand levels will reflect the strong growth we have seen over the past ten years.

Based on the many factors and uncertainties that lie ahead, which are a basic part of any forecasting effort, the facility planning efforts documented in subsequent elements of this Master Plan will utilize the long-range projections documented herein. Furthermore, implementation of the proposed improvements derived, in part, from the projections, can be adjusted as actual demand warrants.

### **3.3 Projections of Passenger Enplanements**

Tourism in Ketchikan was on the upswing for the latter few years of the 1990s, and projections of air carrier enplanements at KIA reflect this expectation. In addition, it is believed that the relatively positive outlook for industries such as alternative fisheries, construction, mining, and health care will increase the economic strength of the KGB region, making air travel to and from KIA more accessible. Projections of passenger demand are presented for KIA and the Tongass Avenue floatplane docks.

**KIA Passenger Enplanements.** Air carrier passenger enplanements at KIA are projected to increase from 100,538 in 1998 to 137,415 in 2018 under the medium-growth projection scenario, representing a compounded annual growth rate of 1.6 percent. **Table 3** presents the historical and projected air carrier passenger enplanements for the airport.

**Table 3**  
**Ketchikan International Airport**  
**Projected Air Carrier Enplanements (Medium-Growth Scenario)**

<i>Historical:</i>	
1998	100,538
<i>Projected:</i>	
2003	110,730
2008	120,764
2018	137,415

Sources: Historical - FAA Terminal Area Forecast, 1999.  
 Projected - Mead & Hunt, Inc., 1999.

Air taxi enplanements at KIA are projected to increase with the medium-growth scenario from 41,365 enplanements in 1998 to 95,088 in 2018, representing a compounded annual growth rate of 4.2 percent. **Table 4** presents the historical and projected air taxi passenger enplanements for the airport.

**Table 4**  
**Ketchikan International Airport**  
**Projected Air Taxi Enplanements (Medium-Growth Scenario)**

<i>Historical:</i>	
1998	41,365
<i>Projected:</i>	
2003	51,795
2008	64,238
2018	95,088

Sources: Historical - FAA Terminal Area Forecast, 1999.  
 Projected - Mead & Hunt, Inc., 1999.

**Tongass Avenue Floatplane Docks Passenger Enplanements.** Medium growth projections of passenger enplanements at the Tongass Avenue floatplane docks assume a compounded growth rate of 2.2 percent, increasing from 140,800 in 1998 to 216,600 enplanements in 2018. **Table 5** presents the historical and projected passenger enplanements at the Tongass Avenue floatplane docks.

**Table 5**  
**Tongass Avenue Floatplane Docks**  
**Projected Air Taxi Enplanements (Medium-Growth Scenario)**

<i>Historical:</i>	
1998	140,800
<i>Projected:</i>	
2003	165,300
2008	190,300
2018	216,600

Sources: Historical - Estimates by Taquan Air, Promech Air, and Seaborne Aviation, 1999.  
 Projected - Mead & Hunt, Inc., 1999.

### 3.4 Aircraft Operations

**Ketchikan International Airport.** Medium growth projections of total operations at KIA assume a compounded annual growth rate of 1.5 percent, increasing from 35,547 in 1998 to 48,003 in 2018. **Table 6** presents historical and projected total aircraft operations for the airport.

**Table 6**  
**Ketchikan International Airport**  
**Total Projected Aircraft Operations (Medium-Growth Scenario)**

<i>Historical:</i>	
1998	35,547
<i>Projected:</i>	
2003	38,926
2008	42,106
2018	48,003

Sources: Historical - Airport Management records, Official Airline Guide, and estimates (military), 1999.  
 Projected - Mead & Hunt, Inc., 1999.

Aircraft operations at KIA consist of air carrier, air taxi, GA, military, and floatplane components. Air carrier operations are projected to increase from 5,906 in 1998 to 8,066 in 2018 under the medium-growth scenario at a compounded annual growth rate of 1.6 percent. Air taxi operations are projected to increase with the medium-growth scenario at a compounded annual growth rate of 4.0 percent, from 2,222 in 1998 to 4,862 in 2018. Under the medium-growth scenario, GA operations are forecast at a moderate growth rate of 1.0 percent, from 8,403 in 1998 to 10,253 in 2018. Military operations at KIA are shown to have been fairly static, although accurate records are not kept. A "best guess" estimate of recent demand of approximately 250 operations annually is assumed and is projected to remain constant in the future. Under the medium-growth scenario, floatplane operations

are forecast to increase at a modest annual rate of 1.4 percent, from a total of 18,766 in 1998 to 24,572 in 2018. **Table 7** presents historical and projected operations for these components.

**Table 7**  
**Ketchikan International Airport**  
**Projected Aircraft Operations (Medium-Growth Scenario)**

	Runway 11/29 @ KIA					Floatplane		
	Air Carrier	Air Taxi	GA	Military	Total	Air Taxi	GA	Total
<i>Historical:</i>								
1998	5,906	2,222	8,403	250	16,781	18,578	188	18,766
<i>Projected:</i>								
2003	6,650	2,974	8,832	250	18,705	20,014	208	20,221
2008	7,378	3,618	9,282	250	20,528	21,349	229	21,578
2018	8,066	4,862	10,253	250	23,431	24,292	279	24,572

Sources: Historical - Airport Management records, Official Airline Guide, and estimates (military), 1999.  
Projected - Mead & Hunt, Inc., 1999.

**Tongass Avenue Floatplane Docks.** Projections of total operations at the Tongass Avenue floatplane docks assume a compounded annual growth rate of 2.4 percent, increasing from 86,072 in 1998 to 137,951 in 2018. **Table 8** presents historical and projected aircraft operations for the Tongass Avenue floatplane docks.

**Table 8**  
**Tongass Avenue Floatplane Docks**  
**Projected Aircraft Operations (Medium-Growth Scenario)**

<i>Historical:</i>	
1998	86,072
<i>Projected:</i>	
2003	98,579
2008	111,869
2018	137,951

Sources: Historical - Estimates by Taquan Air, Promech Air, and Seaborne Aviation, 1999.  
Projected - Mead & Hunt, Inc., 1999.

**Murphy's Pullout Projected Floatplane Facility Operational Demand.** Aircraft operational demand at Murphy's Pullout is projected to increase from 1,600 operations in 1998 to 4,400 operations in 2018, representing a compounded annual growth rate of 5.2 percent.

**Peninsula Point.** A modest growth rate of 1.0 percent is assumed for projecting future Peninsula Point aircraft operations, increasing from 10,200 operations in 1998 to 12,400 operations in 2018.

### 3.5 Aircraft Fleet Mix

**Ketchikan International Airport.** The dominant aircraft at KIA has historically been the Boeing 737. The majority of the B737 operations are performed by Alaska Airlines. Air cargo operations conducted by Evergreen International Airlines, which began in 1994, account for the DC9-30 operations at the airport. Based on Alaska Airlines's fleet acquisition plans, it is projected that the Boeing 737 (including the -400 and advanced -700 and -900 series) will be the design aircraft at KIA through the planning period.

The historical air taxi fleet mix at KIA is made up of wheeled aircraft that use the runway and floatplane aircraft. The air taxi fleet mix on the KIA runway consists of approximately 90 percent single-engine aircraft and approximately 10 percent twin-engine aircraft. The floatplane air taxi fleet mix at KIA consists of approximately 90 percent single-engine aircraft, such as Otters, Beavers, and Cessnas; and approximately 10 percent twin-engine aircraft, such as Twin Otters. It is projected that this fleet mix will remain about the same in the future. In addition, many large corporate jets, such as Gulfstreams, Lears, and Cessna Citation Jets, use the airport on a regular basis.

**Tongass Avenue Floatplane Docks.** The historic air taxi fleet mix at the Tongass Avenue floatplane docks consists of approximately 90 percent single-engine aircraft, such as Otters, Beavers, and Cessnas; and approximately 10 percent twin-engine aircraft, such as Twin Otters. It is projected that this fleet mix will remain the same in the future.

**Murphy's Pullout.** The aircraft fleet mix at Murphy's Pullout consists of single-engine floatplanes only. The fleet mix at Murphy's Pullout is projected to remain constant.

**Peninsula Point.** It is assumed that operations at Peninsula Point consist of approximately 29 percent single-engine aircraft and approximately 71 percent helicopters. TEMSCO Helicopters uses HU-500, Bell 212, and A-Star helicopters. It is projected that this fleet mix is representative of the fleet mix at Peninsula Point in the future.

### 3.6 Air Cargo

Based on modest assumptions concerning the future of the local Ketchikan economy, air freight and U.S. Mail are projected to increase at a compounded annual growth rate of 1.0 percent, from a total of approximately 21.3 million pounds of air cargo in 1998 to approximately 26.0 million pounds of air cargo in 2018.

### **3.7 General Aviation Based Aircraft**

Forecasts for the future number of GA based aircraft are modest, projecting that the historical majority of single-engine piston aircraft will remain the majority aircraft in the future. Under the mid-growth scenario, GA based aircraft are projected to increase from 19 single-engine piston aircraft in 1999 to 26 single-engine piston aircraft in 2018, multi-engine piston aircraft are projected to increase from 1 in 1999 to 3 in 2018, and jet aircraft are projected to increase from 2 in 1999 to 3 in 2018.

## 4 SUMMARY OF AIRPORT IMPROVEMENT NEEDS

This section presents a summary of improvements needed at KIA, as well as those needed at off-airport floatplane facilities, to accommodate long-range aviation demand in the Ketchikan area.

### 4.1 Ketchikan International Airport Facility Needs

**Taxiway.** The addition of an exit taxiway on Runway 11 end will much improve airfield safety at the airport by eliminating the need for aircraft landing on Runway 29 or departing on Runway 11 to back-taxi on the runway itself. In addition, an exit taxiway on Runway 11 end would improve the demand/capacity situation at the airport.

**Helicopter Landing Area.** It was recommended in the master plan review that the delineation of a helicopter landing pad would be desirable. However, due to space limitations and the limited amount of helicopter activity, it was decided that delineating such a facility was not necessary at this time.

**Runway Safety Area.** The current Runway 11/29 runway safety area (RSA) does not meet FAA design criteria. It is 300 feet wide and extends 200 feet beyond each runway threshold. To meet FAA design criteria, the RSA should be 500 feet wide and should extend 1,000 feet beyond each runway threshold.

The proposed project shifts the runway 800 feet to the southeast and improves the RSA by clearing trees and terrain. The estimated cost for this project is \$17,600,000. This project is required to meet the FAA's standards for RSAs. The runway currently does not meet standards for RSAs, based on objects, such as terrain and trees, in the RSA. Much of the terrain off the runway ends is not currently capable of supporting an aircraft without causing structural damage, nor is it capable of supporting firefighting equipment if an aircraft undershoots or overruns the runway.

**FAR Part 77 Surfaces.** Removal of airspace obstructions on the runway approach, primary, and transitional surfaces is recommended.

**Passenger Terminal Building.** The current plan to renovate and expand the passenger terminal building will provide adequate facilities through the 20-year planning period. The possibility of implementing a remote terminal concept was also explored. The implementation of this concept would involve the separation of some passenger terminal building functions (e.g., ticketing, baggage check-in, baggage claim, concessions, rental car, etc.) to a remote passenger terminal building on Revillagiedo Island. Concourses would remain in the existing passenger terminal building on Gravina Island. The implementation of such a project would require the addition of a 23,000-square-foot (sf) building on Revillagiedo Island.

**General Aviation and Air Cargo Apron.** To provide for future GA parking and storage space demands at the airport, hangar space for a total of 23 based aircraft<sup>1</sup>, tie-down space for nine based aircraft<sup>2</sup>, and additional parking stalls for 16 automobiles is recommended.

To meet the needs of the existing and future transient aircraft fleet, a minimum of 11,500 square yards (sy) of apron is required. Based on the existing amount of 8,944 sy, additional apron area of at least 2,500 sy is required to accommodate the needs of transient aircraft through 2018.

Construction of two large-scale commercial lease lots is proposed with a minimum of 4,000 sy of additional aircraft apron on the west side of the Terminal. In addition, construction to the east side will provide lease area for the development of T-hangars, covered tie-downs, and executive hangars. This project also involves reserving an additional GA development area to the west of the runway. The estimated cost for this project is \$2,100,000. This project is necessary to meet adequate aircraft apron and storage requirements at KIA through 2018.

A total of 4,000 sy of air cargo apron is required to accommodate the needs of the existing and projected air cargo users. Based on the existing amount of approximately 3,500 sy, an additional 500 sy is required.

**ARFF Building and Maintenance/SRE Building.** The addition of approximately 6,000 sf of space to the Aircraft Rescue and Firefighting (ARFF) and Maintenance/Snow Removal Equipment (SRE) building would provide needed space for additional bays and storage.

The proposed project involves constructing a 6,000 sf addition to the ARFF/SRE building. The estimated cost of this project is \$1,100,000. This project is required because the existing building is currently inadequate. It was constructed in the early 1980s and was not designed with enough capacity or floor slab strength to accommodate the larger, modern equipment. These inadequacies cause the equipment to be exposed to the outside elements and the floors to crack and swell.

**KIA Fuel Storage.** The airport serves as a fueling facility for air carrier, air taxi, and GA aircraft operators; however, there is limited existing capacity for storing aviation fuels at the airport. Aircraft operators currently purchase aviation fuels from bulk suppliers in Ketchikan. The addition of a fuel farm with a storage capacity of 100,000 gallons is recommended at KIA.

**KIA Floatplane Facility.** The launch ramp at the KIA floatplane facility is currently aligned cross-wind and cross-current, often making aircraft entry and exit from the waterway difficult. An additional ramp should be oriented so that it is aligned approximately northwest-southeast (with prevailing winds).

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<sup>1</sup> An additional 17 aircraft hangar spaces are planned because hangar space is currently available for six aircraft.

<sup>2</sup> Tie-down spaces could be developed as covered tie-down spaces, if required, based on tenant preferences.

Construction of a floatplane pullout ramp is proposed at KIA. The estimated cost for the project is \$1,600,000. The existing orientation of the KIA floatplane ramp is such that aircraft being pulled out of the Tongass Narrows are often pushed to the side by the prevailing wind and tidal current. The existing ramp planks are in bad condition and the location conflicts with other activities.

**KIA Infrastructure.** The water line that supplies water to the airport is under-sized and needs to be upgraded to a minimum 10-inch line. The wastewater treatment plant outfall needs to be extended so that it is at least 4 feet below the mean lower low tide elevation. In addition, the emergency generator in the main terminal building needs to be replaced with a minimum 150-kilowatt (KW) generator.

#### 4.2 Off-Airport Floatplane Facility Needs

**Murphy's Pullout.** The addition of 16 pullout spaces at Murphy's Pullout is recommended to accommodate this component of demand. Auto parking (at a ratio of one space per two additional pullouts) is also recommended.

The proposed project includes the two-phased construction of two piers with eight pullout spaces each (total of 16 pullout spaces). The construction of additional automobile parking will also be required. The estimated cost of this project is \$2,200,000. This project is required to satisfy the demand for pullout spaces at Murphy's Pullout through the planning period.

**Peninsula Point.** The addition of a 10,000-sf hangar is recommended to accommodate projected aircraft activities at Peninsula Point.

**New Public Floatplane/Terminal Facility.** Based on comments received during public presentations of the Master Plan, the concept of a new public floatplane facility was developed. It is likely that such a facility can serve the needs of private and commercial floatplane operators, as well as Alaska Airlines (in terms of remote terminal functions). This facility will also serve to replace capacity at the Tongass Avenue floatplane docks.

The proposed project will construct a public-use floatplane/passenger terminal facility directly across (on Revillagigedo Island) the Tongass Narrows from KIA. This new facility will consist of a remote passenger terminal building, a floatplane passenger dock, an aircraft storage hangar, and spaces for buses and automobiles. The estimated cost for this project is \$20,000,000. This project will serve as a public use facility to consolidate the needs of airport users. It will meet demand for a remote air carrier passenger terminal and the need to develop public floatplane facilities for private users.

**Airport Parking and Circulation.** If the ferry continues to operate between Gravina and Revillagigedo Islands, vehicle parking needs will be met by existing parking areas and consideration of management options. If a hard-link is established, the addition of 80 auto parking spaces and associated circulation on Gravina Island is recommended.

The proposed project includes construction of a multi-level parking structure with a 5,500-sf footprint. The estimated cost of this project is \$1,080,000. This project is required to meet projected automobile parking requirements at KIA, if a hard link is constructed. In the event this road is not constructed, expansion of the existing long-term parking lot should be implemented instead.

## 5 RECOMMENDED AIRPORT IMPROVEMENTS

This section presents a summary of the recommended improvements for the various aviation facilities at KIA and the off-airport floatplane facilities.

**Airfield Facilities.** The recommended exit taxiway improvement, shown in **Exhibit 3**, includes the development of an exit taxiway from the terminal apron area to the Runway 11 end. The recommended RSA improvements, also shown in Exhibit 3, require an 800-foot shift to the southeast.

With respect to a helicopter landing area, the master plan review indicated that such a facility could be co-located with the exit taxiway in the vicinity of the terminal building. Guidance signage on the taxiway would be required to make pilots aware of the helicopter approach area. However; as was stated previously, due to the infrequency of such operations, it was decided that delineating such a facility was not necessary at this time. Airport management may choose to revisit this issue in the future, if the nature and volume of helicopter activity changes significantly.

**Passenger Terminal Facility Improvements.** Improvements planned for the existing passenger terminal building will provide adequate space through the planning period. However, developing a remote facility (across the Narrows) which would include key functional elements of a passenger terminal; such as parking, ticketing, baggage check-in, rental car, etc.; is recommended for KIA (see **Exhibit 4**). A concept that would co-locate these passenger terminal functions with floatplane passenger functions at a site across the Narrows is also part of this recommendation and would likely give such a project a greater chance of success (more efficient utilization of limited land available).

**General Aviation Facilities.** To accommodate current development and future needs the recommended GA facilities at KIA will be developed in two separate areas. Improvements to the existing GA facilities will be referred to as the East GA Apron.. The recommended improvements for the East GA Apron are depicted in **Exhibit 5**. The concept identifies lease area for the development of T-hangars, covered tie-downs, and executive hangars (two at 3,600 sf each). Existing apron space to accommodate aircraft tie-downs (which could be converted to additional covered tie-downs, if required by tenants) is also maintained under this concept.

A new GA facility will be located to the west of the terminal in the area of the proposed floatplane pullout and will be referred to as the West GA Apron. The recommended improvements for the West GA Apron are depicted in **Exhibit 6**. The concept identifies two lease lots to the northwest of the terminal. These lease lots are accessed by a new proposed taxiway from the aircraft apron. It provides two large-scale commercial lease lots (26,250 sf each) with a minimum of 4,000 sy of additional aircraft apron. These lease lots would provide the required 2,500 sy of additional transient aircraft apron and the required 500 sy of additional cargo apron.

In addition to the GA facility improvements shown on Exhibits 5 and 6, an additional GA development reserve area has been set aside on the west side of the runway (see **Exhibit 7**)

**Floatplane Facilities.** The recommended floatplane facility recommendations are made for KIA, Murphy's Pullout, Peninsula Point, and for a new public-use floatplane/terminal facility. For KIA, the recommended Floatplane Pullout Ramp improvements are depicted in **Exhibit 6**.

At Murphy's Pullout (see **Exhibit 8**), an additional 16 pullout spaces plus auto parking is recommended. At Peninsula Point, an additional 10,000-sf hangar is recommended<sup>3</sup> (see **Exhibit 9**).

It is recommended in this Master Plan that consideration be given for developing a new public-use floatplane/terminal facility directly across the Tongass Narrows from the airport. Although the specific facility needs for this facility are in excess of what is needed to meet future aviation demand based on the net effect of other facility recommendations, it is believed that such a facility could efficiently serve the needs of private and commercial floatplane operators, as well as Alaska Airlines (in terms of remote terminal functions). Specific facilities included in this concept (shown on **Exhibit 10**) include: 23,000 sf of passenger terminal space, 30 floatplane slips, 800 linear feet of floatplane passenger dock, 5,000 sf of floatplane freight/storage space, 5,000 sf of aircraft storage hangar, 225 linear feet (lf) of curbside, 220 auto parking spaces, as well as bus parking spaces.

**Support Facilities.** Support facility recommendations include a 6,000-sf addition to the ARFF/SRE building (see **Exhibit 11**) and a 100,000-gallon fuel farm southeast of the terminal area (near the airport access road, see Exhibit 5).

**Surface Transportation and Auto Parking.** Plans for an airport bypass road that provides access between developments on Gravina Island without requiring traffic to travel through the terminal area is recommended. The bypass should accommodate future taxiway and apron development on the south side of the runway.

Should the Gravina Island Crossing be constructed, additional parking near the airport will be needed. This parking need should be met by constructing a parking structure adjacent to the terminal building (as shown in **Exhibit 12**). If a hard-link is not constructed, it is recommended that improvements be made to the long-term parking lot.

**Utilities.** It is recommended that the outfall at the wastewater treatment plant be extended at least 4 feet below the mean lower low tide elevation. It is also recommended that the deficiencies be addressed. It is recommended that the emergency generator in the terminal building be replaced with a minimum 150-KW generator. The water line should be replaced with a new line and the heating oil fuel tank should be replaced.

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<sup>3</sup> It is also recommended that Peninsula Point remain the primary location for helicopter operations in Ketchikan.

## 6 AIRPORT LAYOUT PLAN

This section of the Master Plan presents the approved ALP set for KIA, Peninsula Point, and Murphy's Pullout and provides discussion of the various sheets in the ALP set. The section is organized into the following subsections (and the ALP sheets are included in **Appendix A** of this report):

### *Ketchikan International Airport (total of 22 sheets)*

- Sheet 1 - Narrative Report
- Sheet 2 - Existing Airport Layout Drawing
- Sheet 3 - Ultimate Airport Layout Plan
- Sheets 4 to 5 - Part 77 Airspace
- Sheets 6 to 9 - Inner Portion of Approach Surface
- Sheets 10 to 12 - Approach Surface & Runway Surface Profiles
- Sheets 13 to 16 - Feature & Obstruction Table
- Sheet 17 - Existing Terminal Area Drawing
- Sheet 18 - Ultimate Airport Terminal Area Drawing
- Sheet 19 - Ultimate Floatplane Terminal Area Drawing
- Sheet 20 - Airport Land Use Drawing
- Sheet 21 - Airport Reserve Land Use Drawing
- Sheet 22 - Property Map

### *Peninsula Point (one sheet)*

- Sheet 1 - Peninsula Point Floatplane Facility Airport Layout Plan

### *Murphy's Pullout (one sheet)*

- Sheet 1 - Murphy's Pullout Floatplane Facility Airport Layout Plan

## 6.1 Ketchikan International Airport

**Sheet 1 - Narrative Report.** This sheet of the ALP set provides key information from the Master Plan research, including projected aircraft operations, passenger enplanements, and the critical aircraft. In addition, the sheet provides text descriptions of some of the key improvement projects, along with the estimated project budgets.

**Sheet 2 - Existing Airport Layout Drawing.** This sheet presents key technical data for the airport, including wind roses, airport data (such as elevation, navigational aids [NAVAIDs], and airport reference point coordinates), and runway data (such as runway and safety area dimensions, pavement strength, and runway end coordinates). The existing buildings/facilities at the airport are identified and coded with a table indicating what they are. The sheet also shows the existing airfield and terrain surrounding the airfield, as well as the runway protection zones (RPZs) off each runway end.

**Sheet 3 - Ultimate Airport Layout Plan.** This sheet is similar to the previous one, except that it also depicts proposed airport improvements (such as the taxiway to Runway 11, the runway shift, and the ultimate GA development areas). This sheet is the most important in the entire ALP set and is generally referenced by the other sheets in the set.

**Sheets 4 to 5 - Part 77 Airspace.** These two drawings depict the plan view of imaginary surfaces defined under Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*. The drawings define surfaces around the airport operating area that should not be penetrated by any objects, with certain exceptions. The airspace off the end of Runway 11 is shown in greater detail since that is the runway with the precision instrument landing system (ILS) approach.

**Sheets 6 to 9 - Inner Portion of Approach Surface.** These sheets depict more detail of the FAR Part 77 surfaces, in plan view.

**Sheets 10 to 12 - Approach Surface & Runway Surface Profiles.** These sheets depict the profile views of Runway 11/29, as well as the approaches off the runway ends. For Runway 11 end, a 50:1 approach surface is shown, since it has a precision instrument approach, while on Runway 29 end a 34:1 approach surface is shown, since it has a non-precision instrument approach. The significance of these sheets is that they indicate the areas where some terrain or object penetrates the approach surfaces.

**Sheets 13 to 16 - Feature & Obstruction Table.** These sheets provide a detailed listing of objects that penetrate, or obstruct, the airspace around the runway. The list also indicates what the planned disposition of the obstruction is. As shown in the tables, there is a considerable amount of trees and terrain that represent obstructions.

**Sheet 17 - Existing Terminal Area Drawing.** This sheet has similar information as shown on the Existing Airport Layout Drawing, except it is shown at an enlarged scale and zooms in on the area around the terminal. It provides an improved scale for viewing the existing buildings and other facilities in the airport terminal area, including the GA facilities.

**Sheet 18 - Ultimate Airport Terminal Area Drawing.** Similar to sheet 17, this sheet shows buildings and other facilities in the terminal area at a scale that improves clarity. This sheet, however, depicts improvements planned for KIA based on the Master Plan recommendations, and based on those improvements needed in order for the airport to accommodate aviation demand in the long run.

**Sheet 19 - Ultimate Floatplane Terminal Area Drawing.** This sheet depicts a planned concept for developing a new public-use floatplane facility and passenger terminal. This facility would include floatplane pullout docks, fixed-base operator (FBO) services, a passenger terminal building (to serve floatplane as well as air carrier passengers in a remote setup), and parking.

**Sheet 20 - Airport Land Use Drawing.** This sheet depicts the various on-airport land uses designated for KIA. It earmarks specific portions of the airport land envelope for specific functions, including: aviation use, terminal area (airside and landside), commercial aviation, GA, air cargo, airport development reserve, airport reserve, general, and general revenue support.

**Sheet 21 - Airport Reserve Land Use Drawing.** This sheet delineates airport reserve land into the following land use categories: aviation, airport reserve, airport development, heavy industrial, light industrial, and general commercial.

**Sheet 22 - Property Map.** This sheet provides a general depiction of existing airport property, including a listing of who the parcels were purchased from and the dates the parcels were purchased.

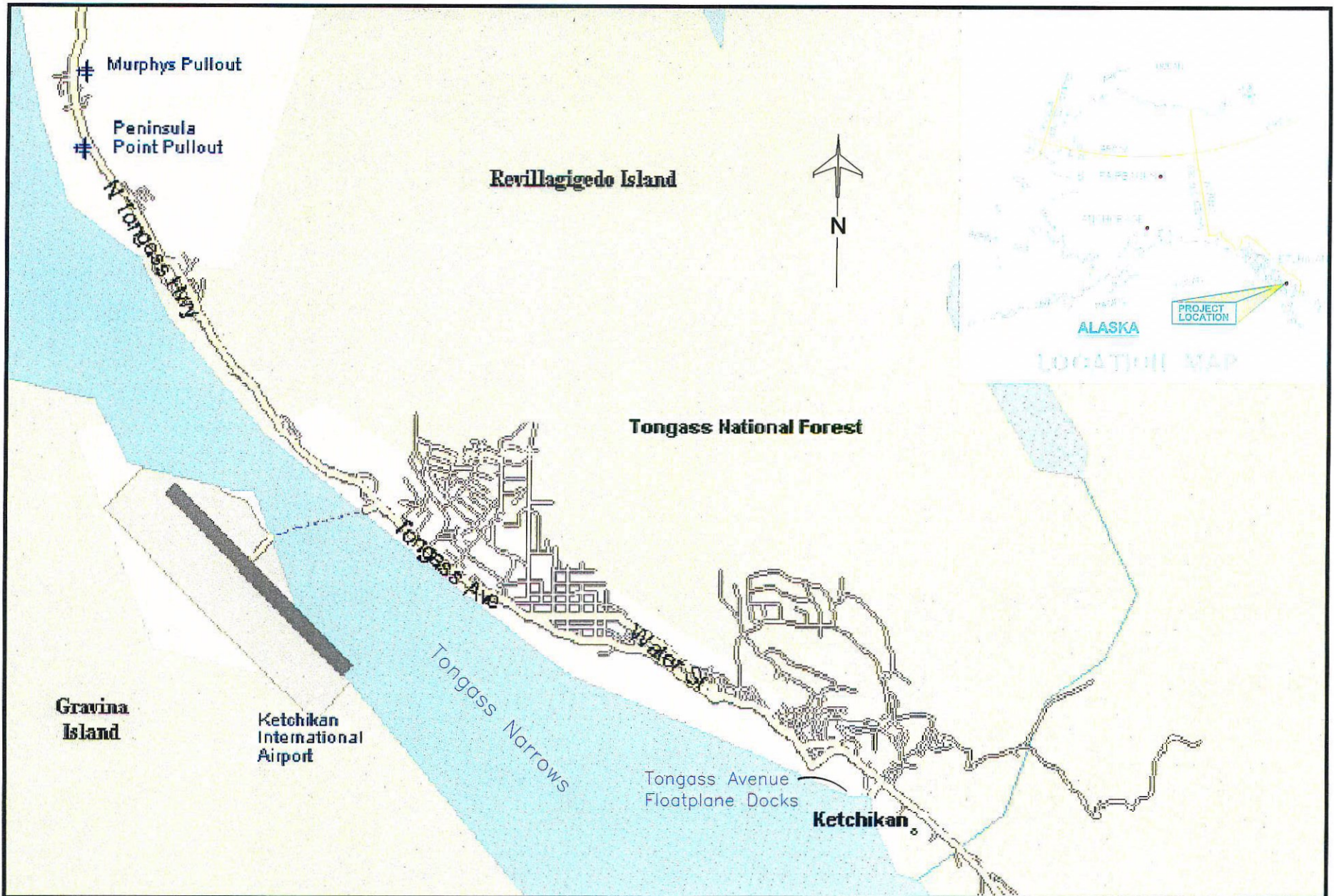
## **6.2 Peninsula Point**

**Sheet 1 - Peninsula Point Floatplane Facility Airport Layout Plan.** This sheet comprises the ALP for the Peninsula Point Floatplane Facility. The plan indicates existing buildings and other facilities on this site, as well as proposed new hangars.

## **6.3 Murphy's Pullout**

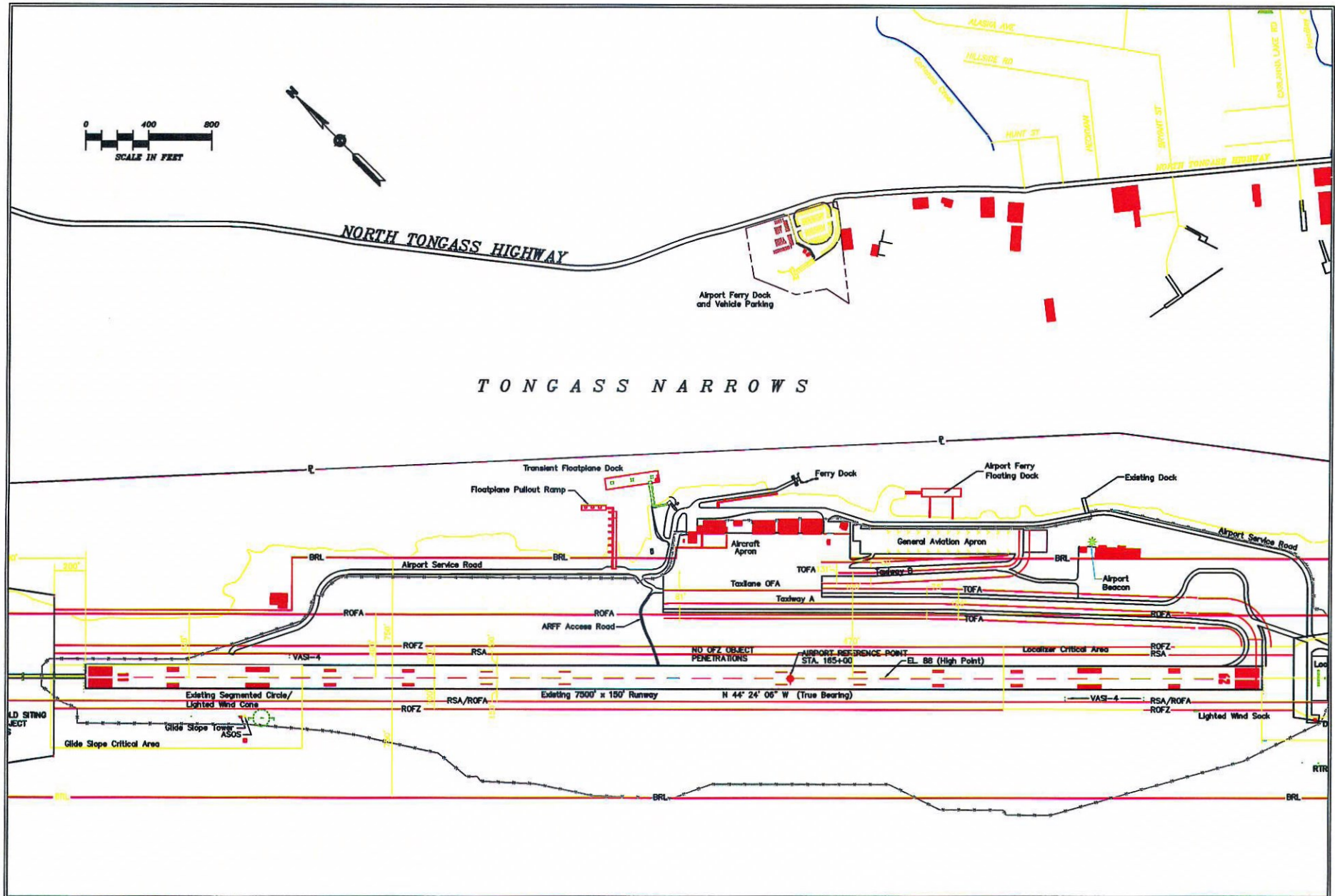
**Sheet 1 - Murphy's Pullout Floatplane Facility Airport Layout Plan.** This sheet comprises the ALP for Murphy's Pullout Floatplane Facility. The plan shows the existing floatplane pullout ramp and vehicle parking (in the center) and proposed new pullout ramps and vehicle parking (on both sides of the existing facility).

**Exhibits**



**Ketchikan International Airport  
Master Plan**

Exhibit 1  
Study Area/Location Map



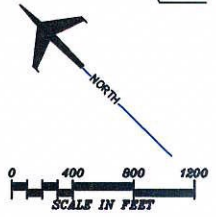
Ketchikan International Airport  
Master Plan

Exhibit 2  
KIA Existing Facilities

TONCASS NARROWS

Taxiway Improvements

Ultimate Runway Safety Area



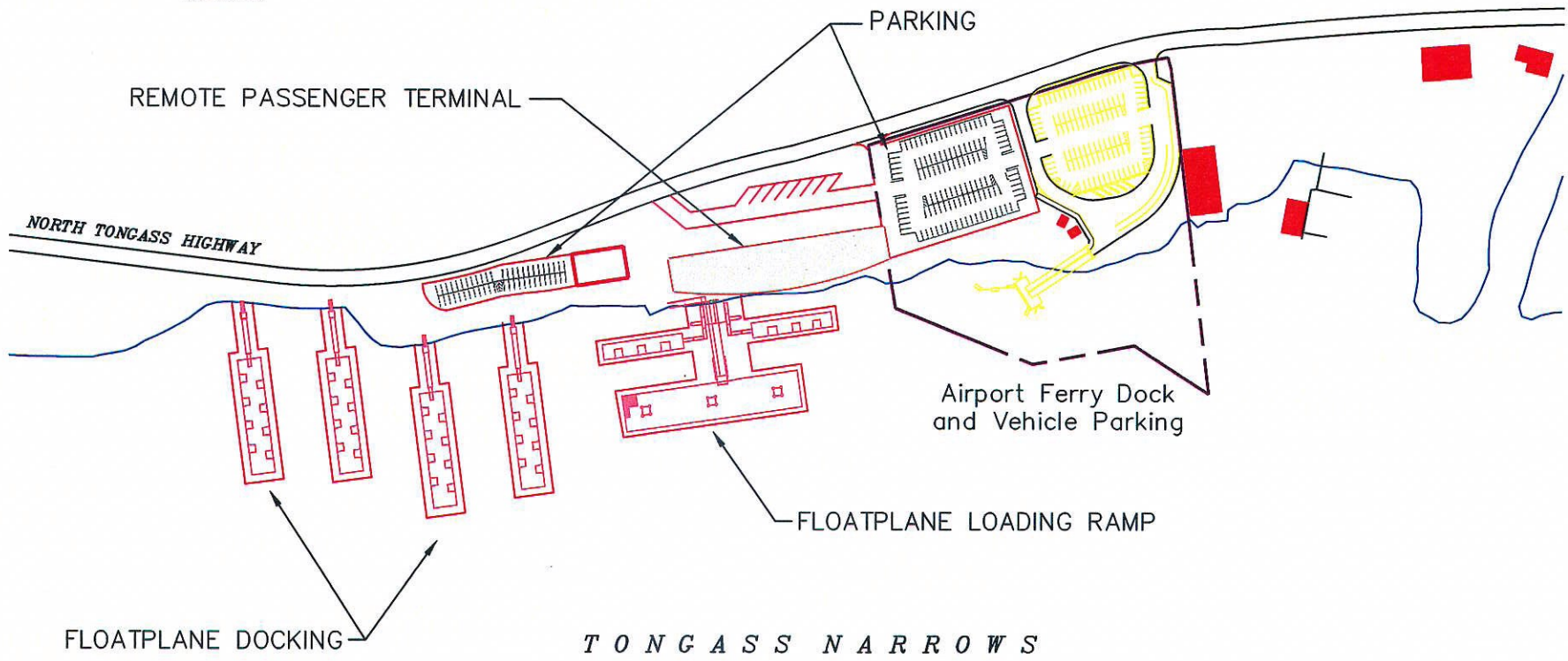
Ketchikan International Airport  
Master Plan

Exhibit 3  
Recommended Airfield Improvements



0 100 200 300  
SCALE IN FEET

REVILLAGIGEDO ISLAND

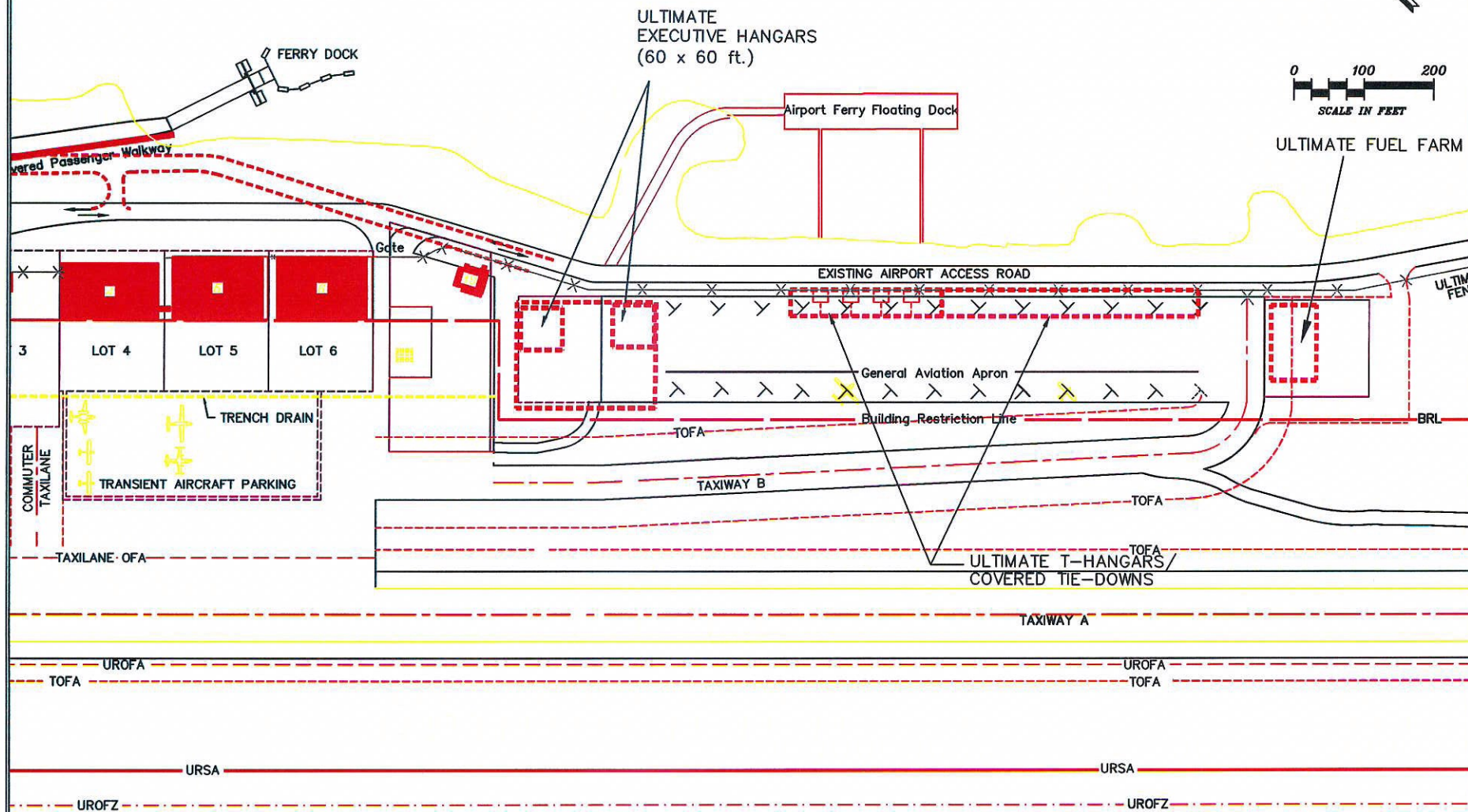
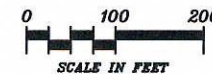


Ketchikan International Airport  
Master Plan

Exhibit 4  
Remote Passenger Terminal Concept

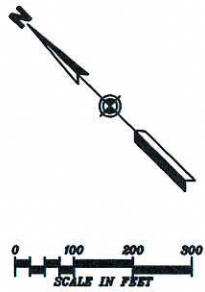
TONGASS NARROWS

EAST APRON



Ketchikan International Airport  
Master Plan

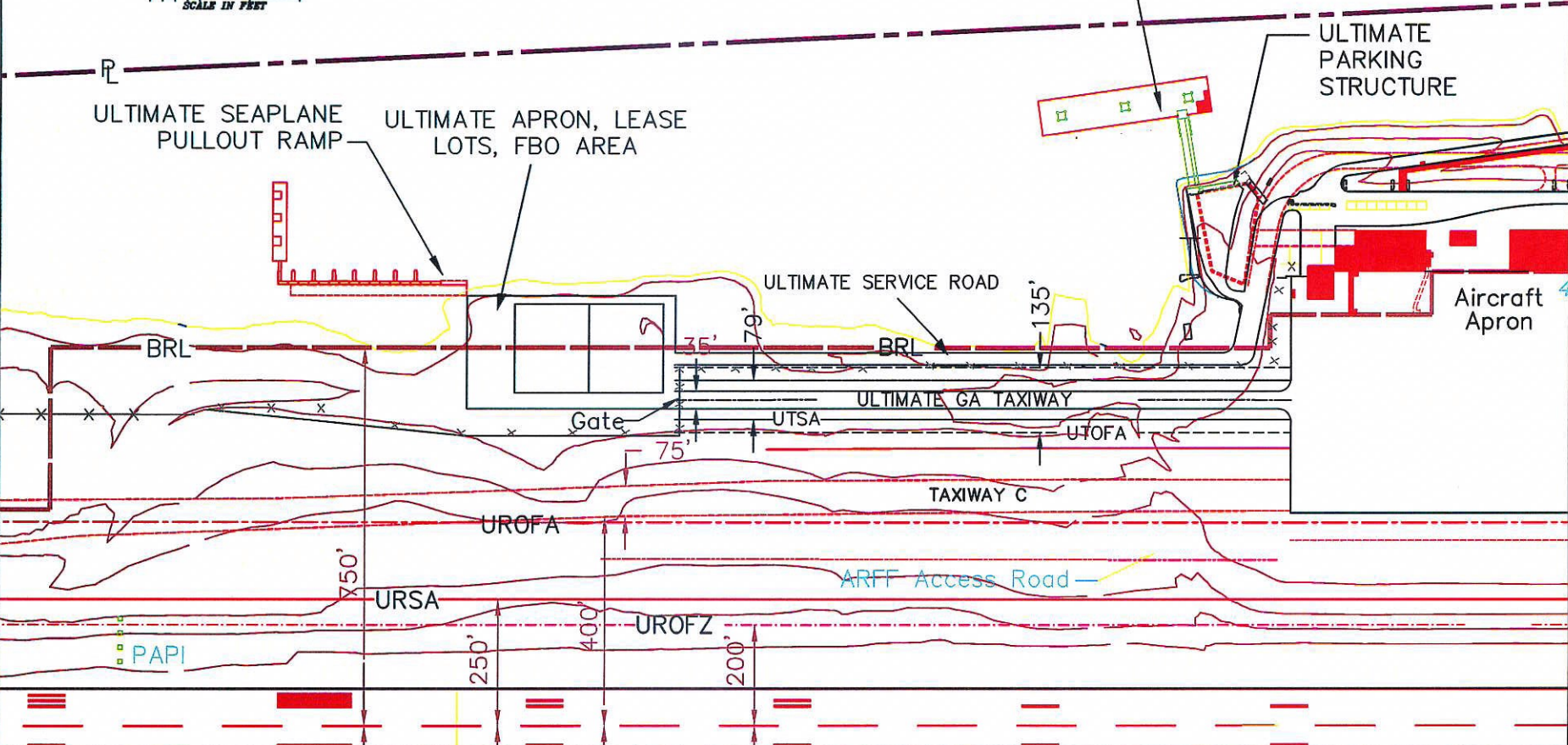
Exhibit 5  
Recommended Fuel Farm and  
General Aviation Improvements



TONGASS NARROWS

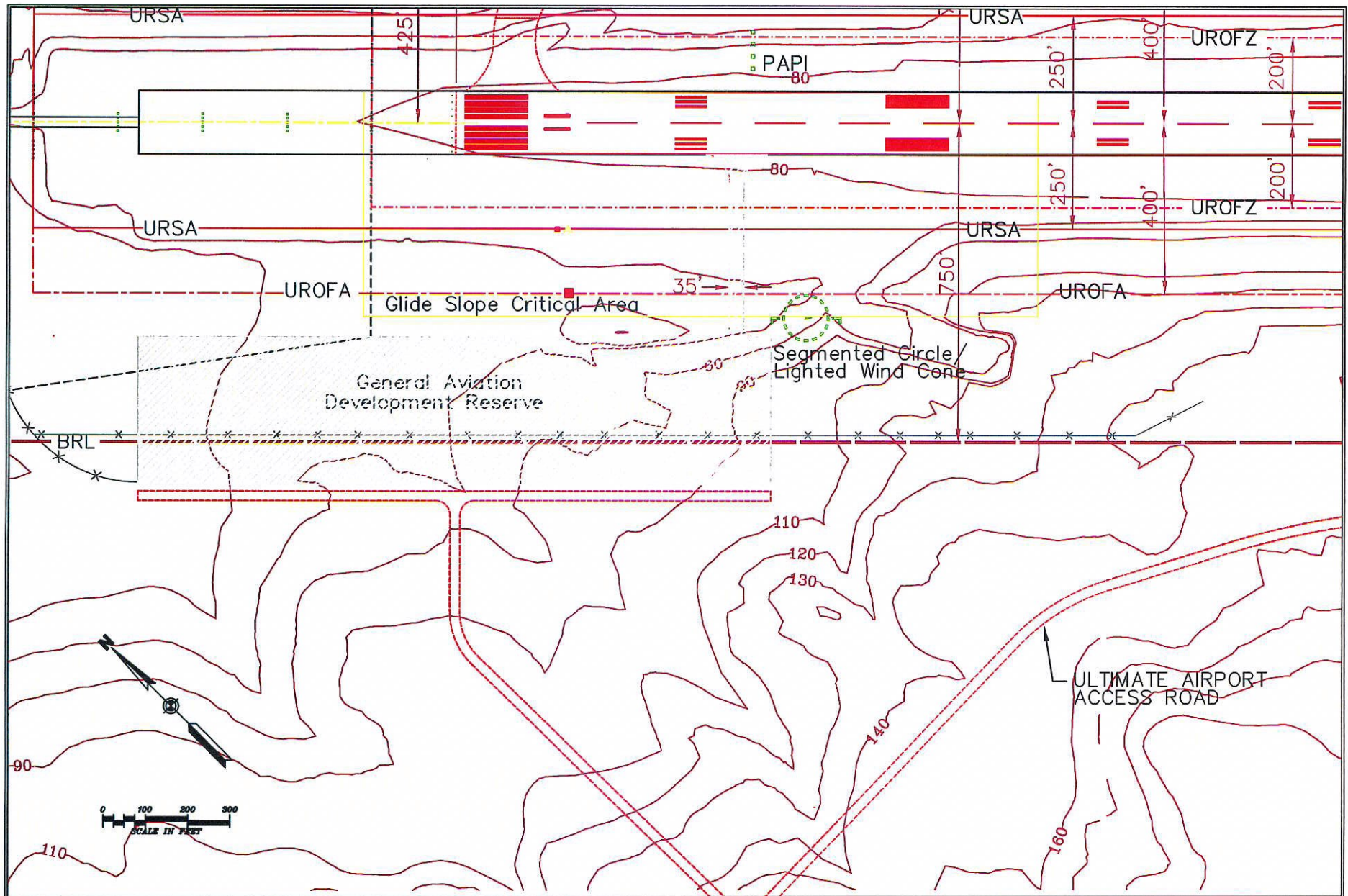
WEST APRON

Transient Floatplane Dock



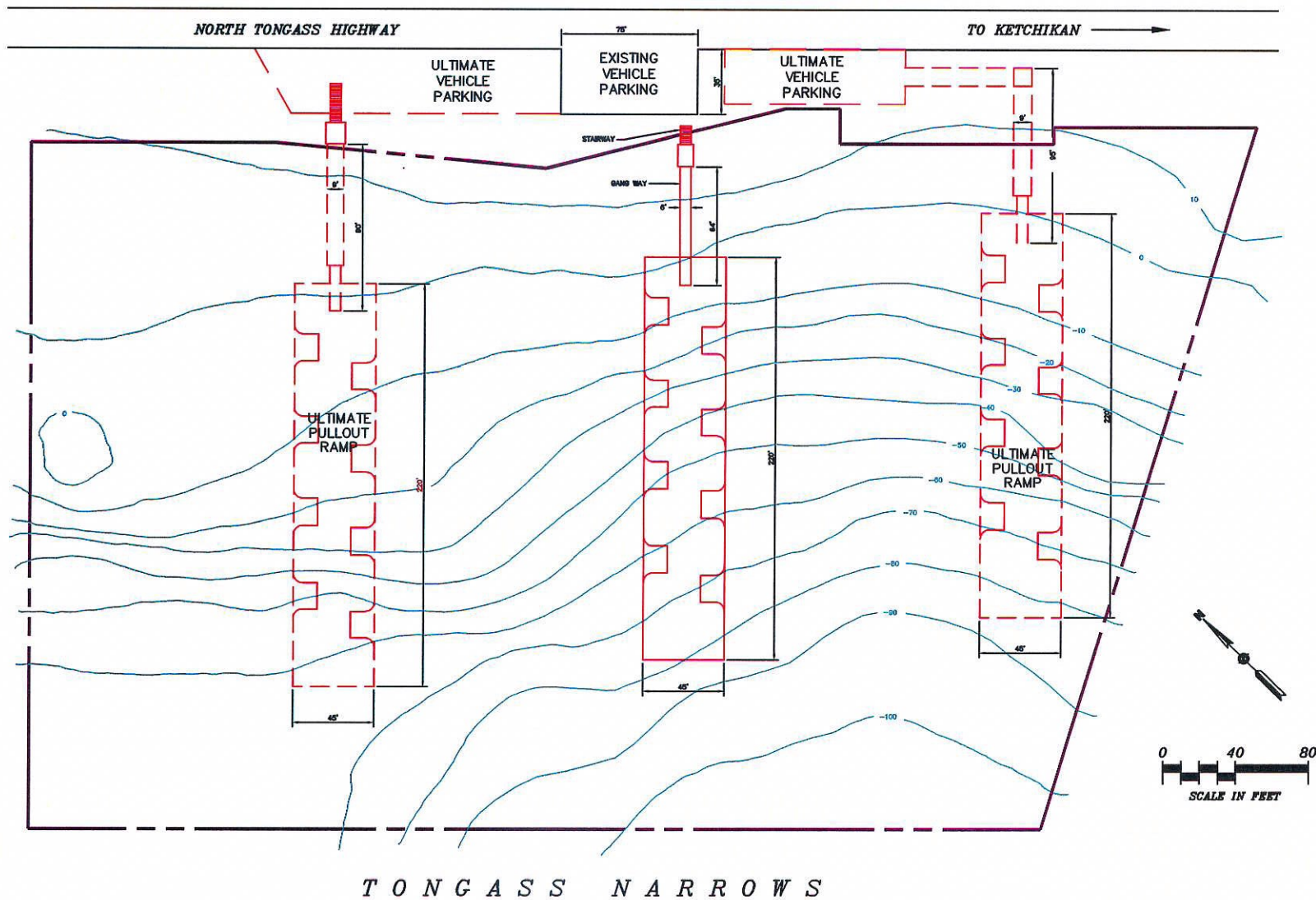
Ketchikan International Airport  
Master Plan

Exhibit 6  
Recommended General Aviation and  
KIA Floatplane Improvements



Ketchikan International Airport  
Master Plan

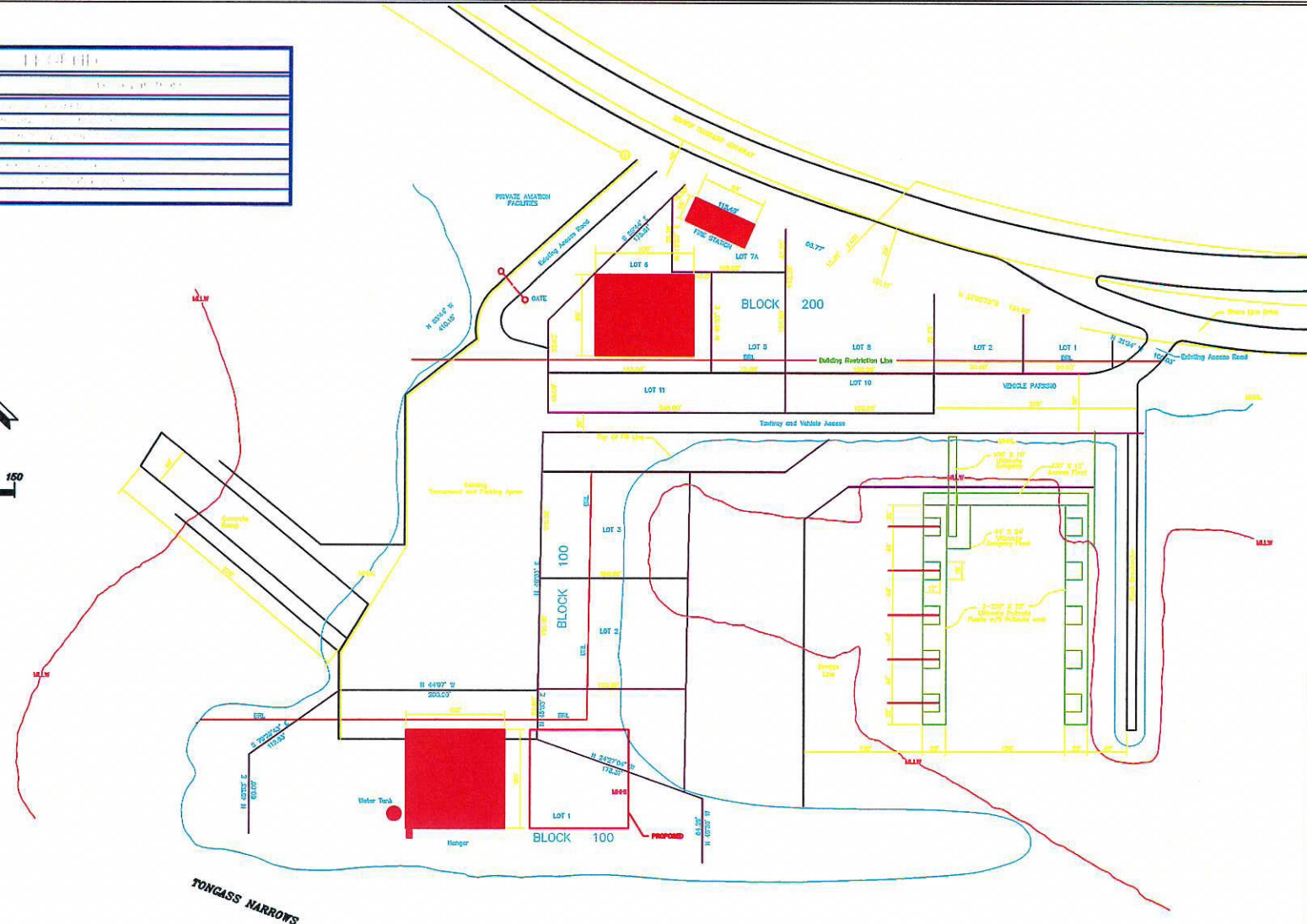
Exhibit 7  
General Aviation Development Reserve



LEGEND		
Symbol	Description	Notes
[Red Shaded Area]	Proposed Building Footprint	
[Red Line]	Proposed Building Restriction Line	
[Blue Line]	Proposed Vehicle Access Road	
[Green Line]	Proposed Utility Line	
[Yellow Line]	Proposed Easement	
[Black Line]	Proposed Property Line	
[Circle with 'X']	Proposed Gate	
[Circle with 'O']	Proposed Water Tank	
[Circle with 'S']	Proposed Fire Station	
[Circle with 'T']	Proposed Taxiway	
[Circle with 'R']	Proposed Runway	
[Circle with 'A']	Proposed Taxiway Access Road	
[Circle with 'B']	Proposed Building Access Road	
[Circle with 'C']	Proposed Control Tower	
[Circle with 'D']	Proposed Deicing Pad	
[Circle with 'E']	Proposed Deicing Tank	
[Circle with 'F']	Proposed Deicing Building	
[Circle with 'G']	Proposed Deicing Apron	
[Circle with 'H']	Proposed Deicing Stand	
[Circle with 'I']	Proposed Deicing Pad	
[Circle with 'J']	Proposed Deicing Tank	
[Circle with 'K']	Proposed Deicing Building	
[Circle with 'L']	Proposed Deicing Apron	
[Circle with 'M']	Proposed Deicing Stand	
[Circle with 'N']	Proposed Deicing Pad	
[Circle with 'O']	Proposed Deicing Tank	
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[Circle with 'Q']	Proposed Deicing Apron	
[Circle with 'R']	Proposed Deicing Stand	
[Circle with 'S']	Proposed Deicing Pad	
[Circle with 'T']	Proposed Deicing Tank	
[Circle with 'U']	Proposed Deicing Building	
[Circle with 'V']	Proposed Deicing Apron	
[Circle with 'W']	Proposed Deicing Stand	
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[Circle with 'Z']	Proposed Deicing Building	



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SCALE IN FEET



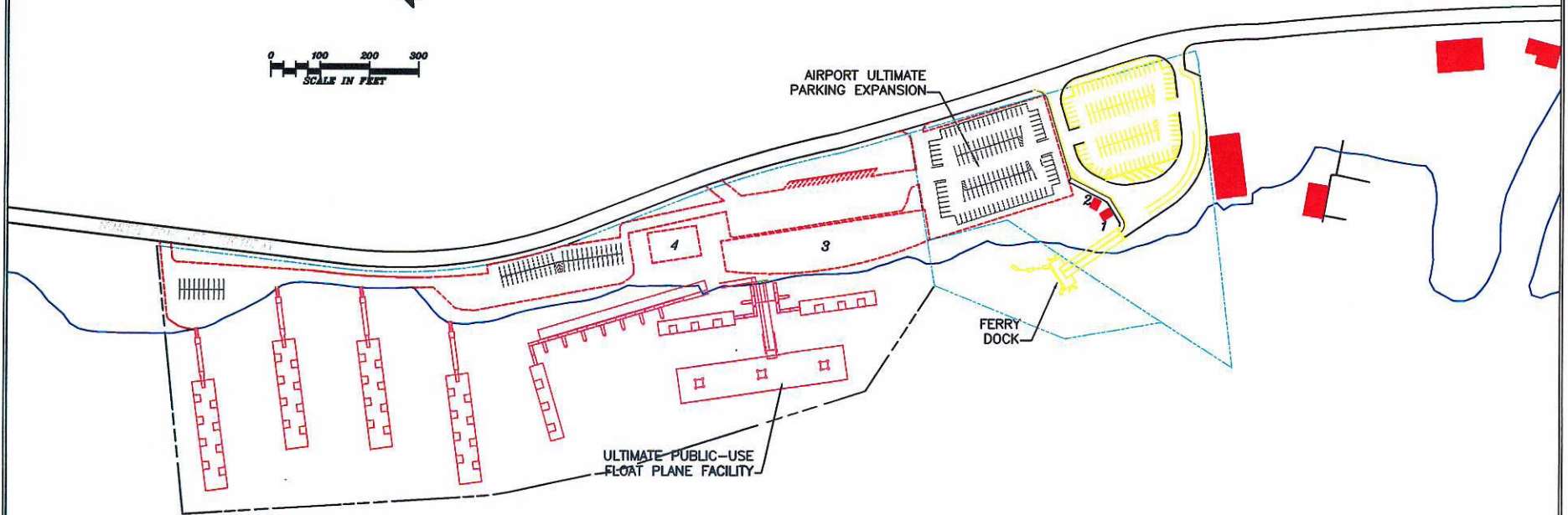
Ketchikan International Airport  
Master Plan

Exhibit 9  
Recommended Peninsula Point  
Improvements

BUILDINGS/FACILITIES		
EXISTING	ULTIMATE	DESCRIPTION
1	1	PASSENGER SHELTER
2	2	STORAGE BUILDING
--	3	TERMINAL BUILDING
--	4	HANGAR



REVILLAGIGEDO ISLAND



TONGASS NARROWS

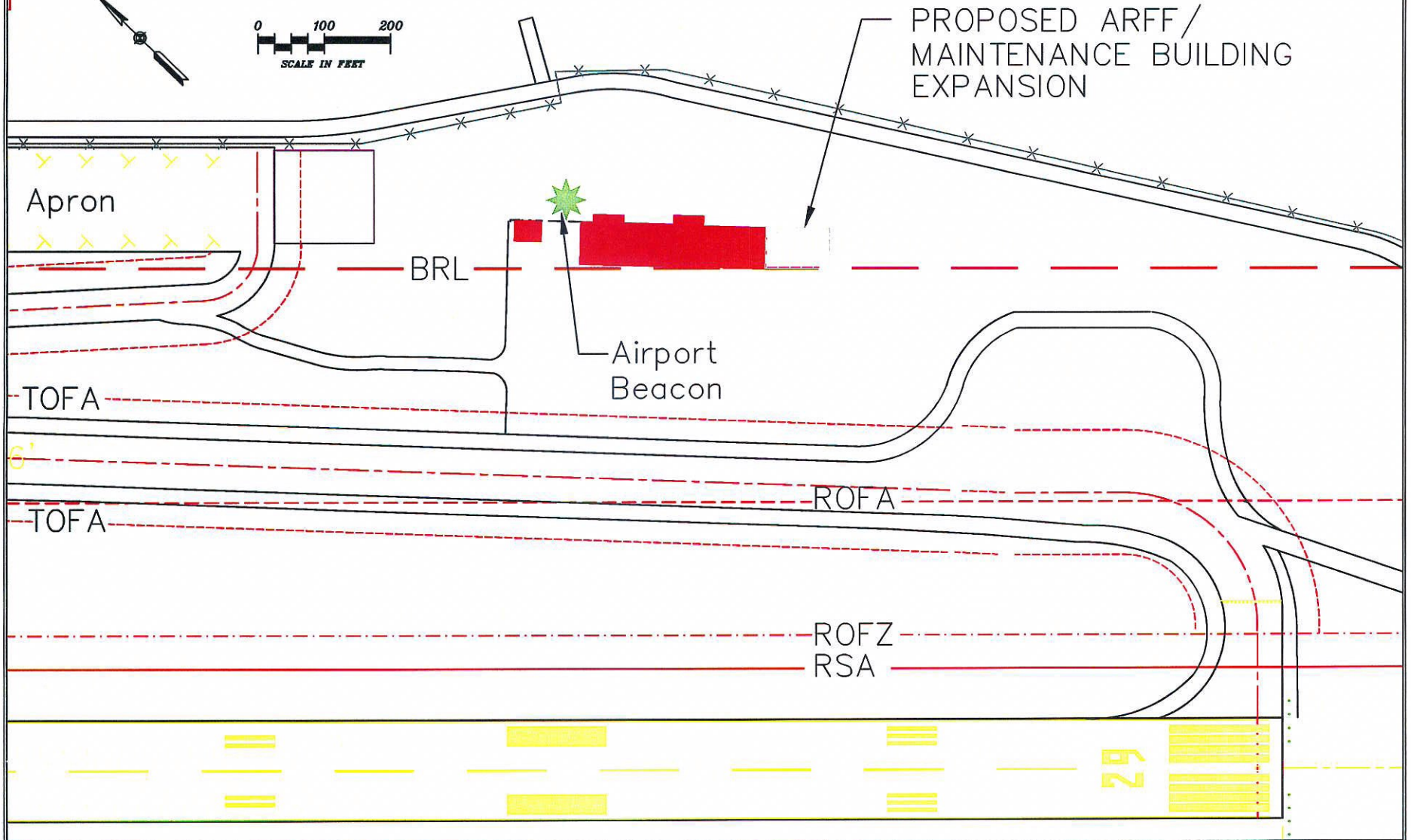
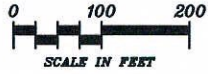


Ketchikan International Airport  
Master Plan

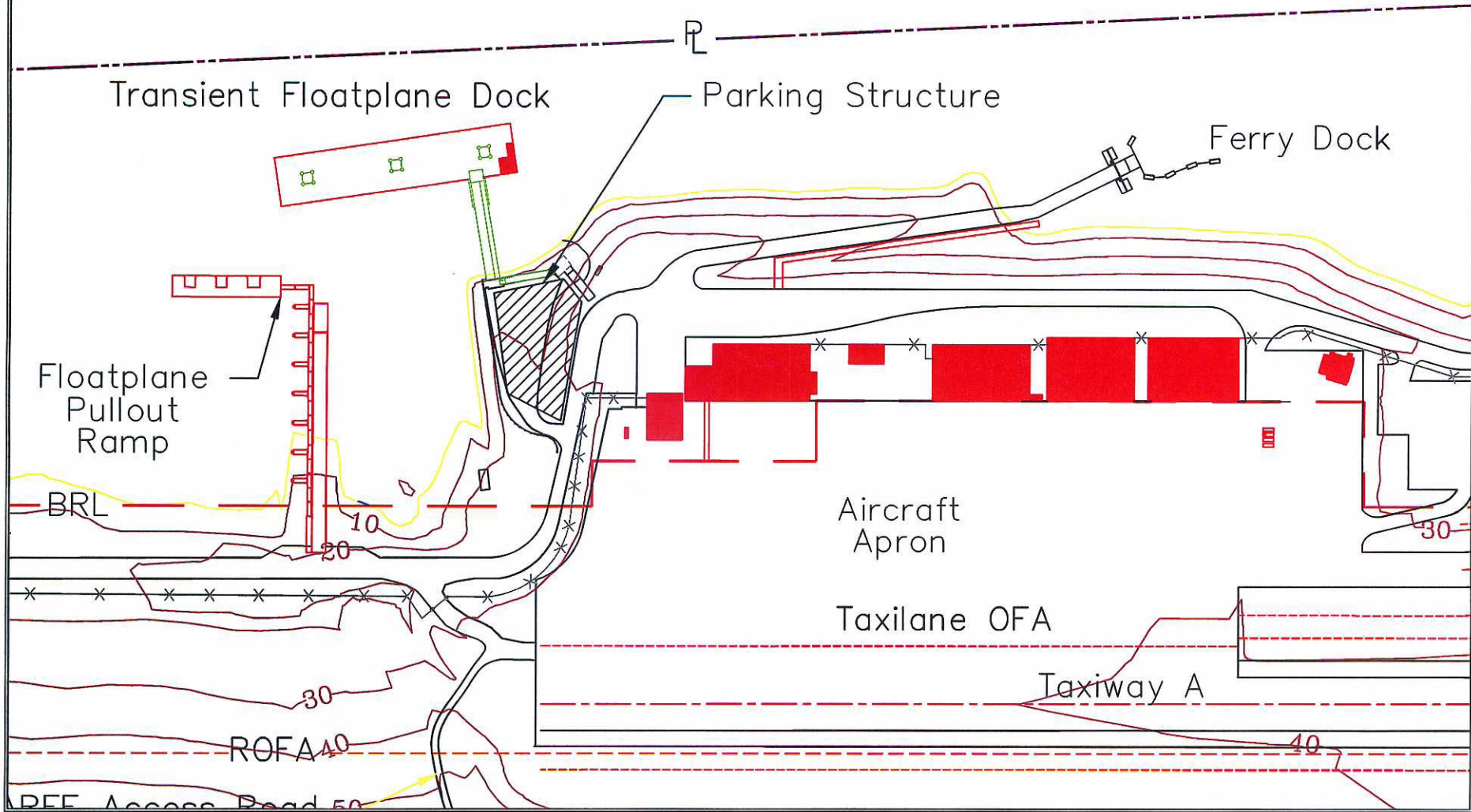
Exhibit 10

Proposed Ultimate Public-Use Float Plane/  
Terminal Facility Concept

TONGASS NARROWS



TONGASS NARROWS



Ketchikan International Airport  
Master Plan

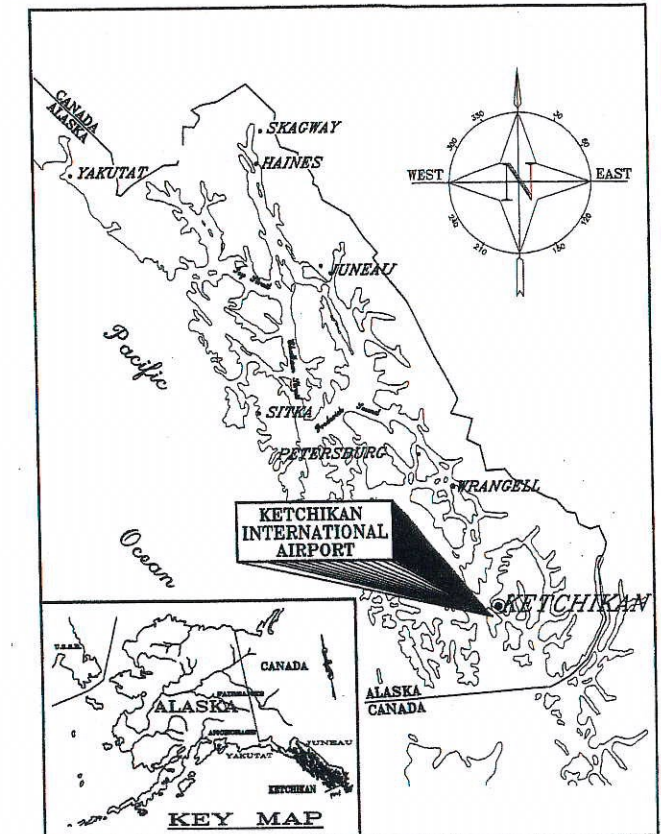
Exhibit 12  
Recommended KIA Parking Improvement

**Appendix A**  
**Airport Layout Plan Sheets**

# NARRATIVE REPORT: KETCHIKAN INTERNATIONAL AIRPORT MASTER PLAN REPORT, 2002

FORECASTS									
Year	RUNWAY 11/29 OPERATIONS					FLOAT PLANE OPERATIONS			Total Aircraft Operations
	Air Carrier	Air Taxi	GA	Military	Total Runway 11/29 Ops	Air Taxi	GA	Total Float Plane Ops	
2003	6,650	2,974	8,832	250	18,705	20,014	208	20,221	38,926
2008	7,378	3,618	9,282	250	20,528	21,349	229	21,578	42,106
2018	8,066	4,862	10,253	250	23,431	24,292	279	24,572	48,003

Year	2003	2008	2018
Critical Aircraft	Boeing 737-400	Boeing 737-400	Boeing 737-400
Approach Speed	139 Knots	139 Knots	139 Knots
Wing Span	94.8 feet	94.8 feet	94.8 feet
Weight: Max. Takeoff	150,000 Lbs.	150,000 Lbs.	150,000 Lbs.
Airport Reference Code	C-III	C-III	C-III
Number of Based Aircraft	24	27	32
Annual Operations of Current Critical Aircraft	4,189	4,722	5,243
Total Enplanements	162,526	185,003	232,503



## RATIONALE FOR PROPOSED IMPROVEMENTS

### CURRENT PRIORITIES

#### Runway Safety Area (RSA) Improvements \$20,200,000

Shift Runway 11/29 750 feet southeast along the centerline and construct the RSA to meet FAA standards.

Rationale - The construction is required to bring the airport into compliance with FAA standards. In addition, KIA is a primary air transportation hub in southern Southeast Alaska. The airport is located in mountainous terrain and experiences marginal weather conditions, making flights into and out of KIA challenging. Residents and businesses depend on the airport for goods and services. For all these reasons, meeting the standard is a necessary and prudent action for the safe operation of the airport.

#### Exit Taxiway \$14,000,000

Construction of an exit taxiway beginning at the new threshold, and leading to the terminal apron area.

Rationale - Significant safety and operational benefits for the airfield at KIA.

#### ARFF Building and Maintenance/SRE Building Expansion \$1,100,000

Addition of approximately 4,000-square feet to the Snow Removal Equipment (SRE) building, and approximately 2000-square foot addition to the Aircraft Rescue and Firefighting (ARFF) building and maintenance facility.

Rationale - Provide for needed equipment bays, and office and storage space.

#### General Aviation (GA) and Air Cargo Apron Expansion \$2,100,000

Construction of hangar space for a total of 23 based aircraft, tiedown space for nine based aircraft, and additional parking stalls for 16 automobiles to provide for future GA parking and storage space demands at the Airport.

Expansion of apron to include an additional 2,500 square yards to accommodate transient aircraft, plus additional 500 square yards of air cargo apron required to accommodate the needs of existing and projected air cargo users.

Rationale - A minimum of 11,500 square yards of apron are required to meet the needs of the existing and future transient aircraft fleet. Based on the existing amount of 8,944 square yards, additional apron area of at least 2,500 square yards is required to accommodate the needs of transient aircraft through 2018.

A total of 4,000 square yards of air cargo apron is required to accommodate the needs of the existing and projected air cargo users. Based on the existing amount of approximately 3,500 square yards, an additional 500 square yards is required.

#### New Public Float Plane/Terminal Facility \$20,000,000

Purchase property adjacent to the airport ferry parking area on Revillagigedo Island, for construction of a float plane/terminal facility. The facility would include a terminal building to provide space for remote air carrier functions, commercial float plane and fixed base operator operations. The facility would also include a float plane passenger dock, a float plane freight/storage space, aircraft storage hangars, auto parking and curbside area for buses and taxis.

Rationale - The purpose of this project is to provide a consolidated facility to serve the needs of private and commercial float plane operators, and to provide for a remote terminal facility.

#### Seaplane Pullout Ramp \$1,600,000

Replace KIA float plane pullout ramp, and realign ramp northwest-southeast to reduce adverse wind and tidal current effects.

Rationale - The float plane launch ramp at the KIA float plane facility is currently aligned cross-wind and crosscurrent (northeast-southwest). Due to its orientation, aircraft entry and exit from the waterway is often dangerous and difficult. Additionally, the ramp's concrete planks are deteriorated and unusable at low tide.

### ULTIMATE PRIORITIES

#### Airport Parking and Circulation \$1,080,000

Construction of a multi-level parking structure with a 5,500 square foot footprint over the existing transient floatplane parking area and access road.

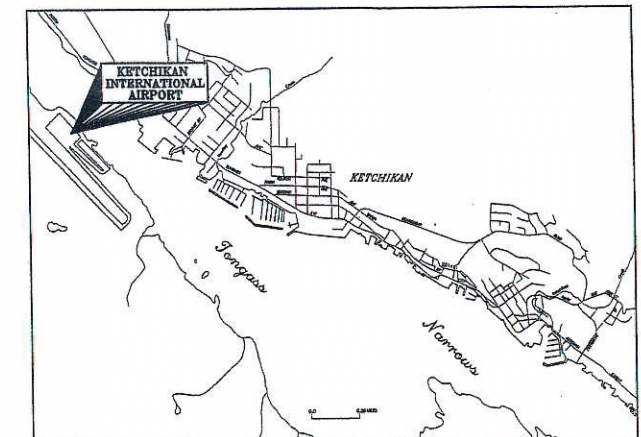
Rationale - Provided that access between Gravina and Revillagigedo Islands are improved, a large amount of parking will be required. Construction of a multi-level parking structure would minimize the area needed for parking.

#### KIA Fuel Storage \$100,000

Addition of a fuel farm at KIA with a storage capacity of 100,000 gallons.

Rationale - The Airport serves as a fueling facility for air carrier, air taxi and GA aircraft operators; however, there is limited existing capacity for storing aviation fuels at the Airport. Aircraft operators currently purchase aviation fuels from bulk suppliers in Ketchikan. A fuel farm would allow direct deliveries, better quality control, and more efficient filtering of fuel.

**LOCATION MAP**  
SCALE 1:2,000,000



**VICINITY MAP**

**USKH** Architecture • Engineering  
Land Surveying • Planning



STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT  
**NARRATIVE REPORT**  
KETCHIKAN, ALASKA

PLANNED BY: D.L.M.      DETAILED BY: D.R.J.      CHECKED BY: D.L.M.

DATE: OCTOBER 2002      SHEET 1 OF 22

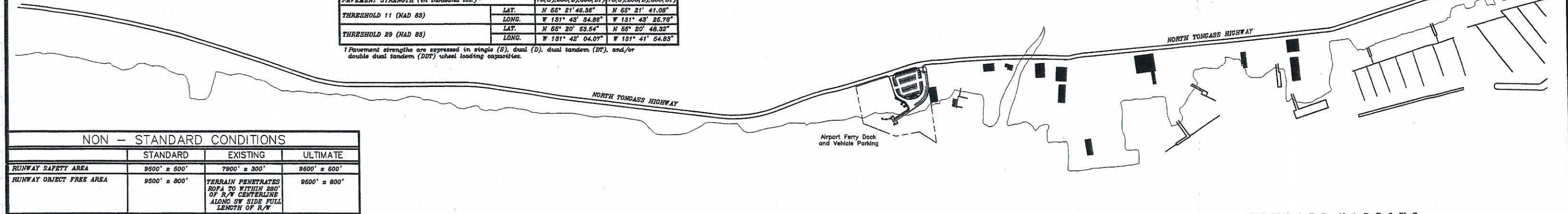
FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
SUBJECT TO FAA APPROVAL LETTER  
FAA APPROVAL/LETTER DATE 11/12/02  
BY: *Pek Loni*  
FAA AIRPORT DIVISION  
ALASKAN REGION, AAL-800  
PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

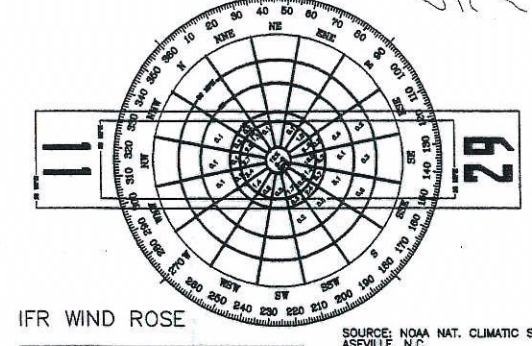
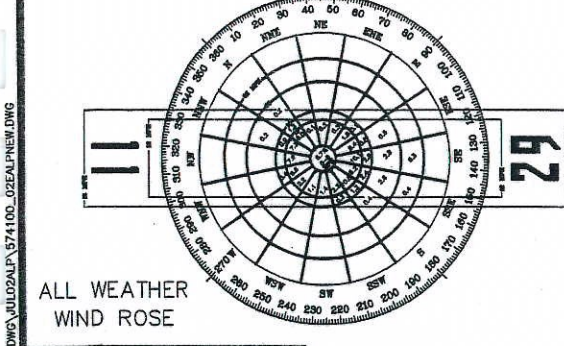
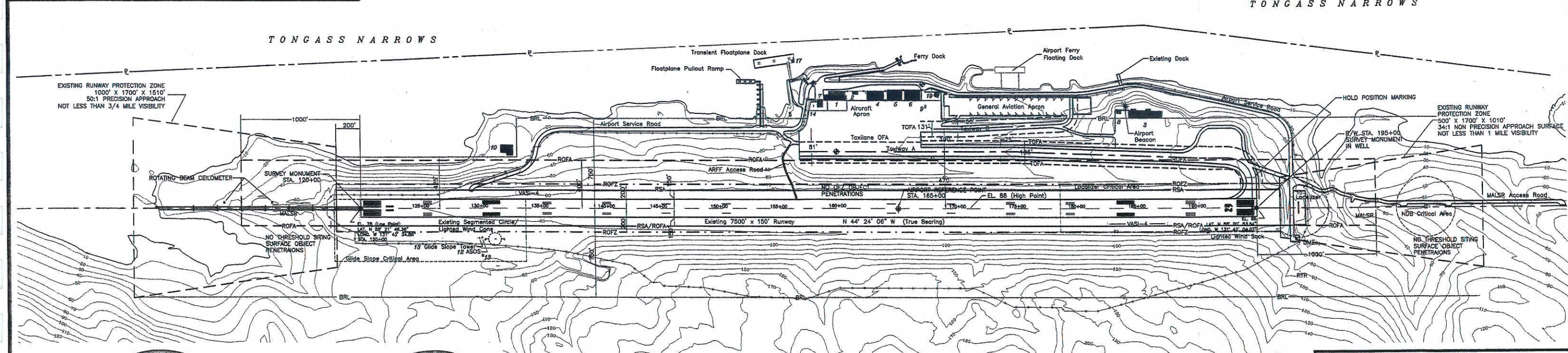
APPROVED BY: \_\_\_\_\_ Date \_\_\_\_\_  
Verne Skagerberg, Transportation Planner  
for Andy Hughes, Chief of Planning

AIRPORT DATA	EXISTING		ULTIMATE		RUNWAY DATA		RUNWAY 11-29		BUILDINGS/FACILITIES		LEGEND	
	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE
AIRPORT TYPE	Primary	Primary	AIRPORT REFERENCE CODE (APPROACH CAT.-DESIGN GR.)		C-III	C-III	1	1	1	1	TERMINAL BUILDING	---
AIRPORT REFERENCE CODE	C-III	C-III	RUNWAY DIMENSIONS		7500' ± 150'	7500' ± 150'	2	2	2	2	FISH COOLER	---
AIRPORT ELEVATION	88' MSL	88' MSL	RUNWAY BEARING		N 44° 24' 06" W	N 44° 24' 06" W	3	3	3	3	AIRPORT RESCUE & FIREFIGHTING (ARFF) EQUIP. BLDG.	---
MEAN MAXIMUM TEMPERATURE OF HOTTEST MONTH	64° F	64° F	RUNWAY INSTRUMENTATION		Precision	Precision	4	4	4	4	TAQUAN AIR	---
AIRPORT REFERENCE POINT (ARP) COORDINATES - NAD '83	Latitude N 55° 21' 19.95"	N 55° 21' 14.52"	RUNWAY SAFETY AREA		7900' ± 300'	9500' ± 500'	5	5	5	5	TAQUAN AIR	---
AIRPORT and TERMINAL NAVIGATIONAL AIDS	Longitude W 131° 42' 49.45"	W 131° 42' 40.64"	RUNWAY OBSTACLE FREE ZONE		7900' ± 400'	7900' ± 400'	6	6	6	6	TAQUAN AIR	---
NAVIGATIONAL AIDS (RUNWAY 11)	DME	DME	RUNWAY OBJECT FREE AREA DIMENSIONS		9500' X 800'	8600' X 800'	7	7	7	7	ALASKA AIRLINES EQUIPMENT BUILDING	---
NAVIGATIONAL AIDS (RUNWAY 29)	NDB, DME	NDB, DME	RUNWAY PERCENTAGE WIND COVERAGE		98.4%	98.4%	8	8	8	8	REGULATOR BUILDING	---
	ILS/CPS	ILS/CPS	RUNWAY APPROACH SURFACES 11 & 29, RESPECTIVELY		60:1, 34:1	60:1, 34:1	9	9	9	9	UNDERGROUND FUEL TANKS (TO BE REMOVED)	---
	MALSR	MALSR	APPROACH VISIBILITY MINIMUMS 11 & 29, RESPECTIVELY		3/4 MILE, 1 MILE	3/4 MILE, 1 MILE	10	10	10	10	STORAGE BUILDING (TO BE REMOVED)	---
	VASI-4	VASI-4	RUNWAY LIGHTING		HIRL	HIRL	11	11	11	11	EXECUTIVE HANDS	---
	NDB, DME	NDB, DME	RUNWAY MARKING		Precision	Precision	12	12	12	12	AUTOMATED SURFACE OBSERVATION SYSTEM (ASOS)	---
	ILS-Cat I	ILS-Cat I	TAXIWAY LIGHTING		MTL	MTL	13	13	13	13	GLIDE SLOPE TOWER	---
	MALSR	MALSR	TAXIWAY MARKING		Centerline	Centerline	14	14	14	14	FUEL FACILITY	---
	VASI-4	VASI-4	TAXIWAY A SAFETY AREA WIDTH		118'	118'	15	15	15	15	T-HANGER AND COVERED TIE DOWNS	---
	NDB, DME	NDB, DME	TAXIWAY B SAFETY AREA WIDTH		79'	79'	16	16	16	16	FLOAT PLANE FACILITY	---
	ILS-Cat I	ILS-Cat I	TAXIWAY A OBJECT FREE AREA WIDTH		186'	186'	17	17	17	17	PASSENGER SHELTER, SEAPLANE FLOAT	---
	MALSR	MALSR	TAXIWAY B OBJECT FREE AREA WIDTH		131'	131'	18	18	18	18	ULTIMATE SEAPLANE PULLOUT RAMP	---
	VASI-4	VASI-4	EFFECTIVE RUNWAY GRADIENT (%)		0.1442	0.1442	19	19	19	19	PETRO ALASKA INC.	---
	NDB, DME	NDB, DME	PAVEMENT MATERIAL		Asphalt (Grooved)	Asphalt (Grooved)	20	20	20	20	FUEL FARM	---
	GPS	GPS	PAVEMENT STRENGTH (in thousand lbs.) <sup>1</sup>		76(S), 200(D), 300(DT)	76(S), 200(D), 300(DT)						
	MALSR	MALSR	THRESHOLD 11 (NAD 88)		LAT. N 55° 21' 46.36"	N 55° 21' 41.08"						
	VASI-4	VASI-4	THRESHOLD 29 (NAD 88)		LONG. W 131° 43' 34.86"	W 131° 43' 26.76"						
	NDB, DME	NDB, DME			LAT. N 55° 20' 53.54"	N 55° 20' 48.32"						
	GPS	GPS			LONG. W 131° 42' 04.07"	W 131° 41' 54.83"						
	MALSR	MALSR										
	VASI-4	VASI-4										

- GENERAL NOTES:**
1. Details concerning airport improvements are depicted on the TERMINAL AREA PLAN.
  2. Recommended land uses within the airport environs are depicted on the AIRPORT LAND USE PLAN.
  3. Contours are based on Mean Lower Low Water (MLLW), MeanTide Level (MTL), approximates Level (MSL) and is 8.00' above Mean Lower Low Water (MLLW).
  4. Runway elevations are Mean Sea Level.
  5. Latitude and Longitude are in accordance with North American Datum 1983 (NAD'83).



NON - STANDARD CONDITIONS			
	STANDARD	EXISTING	ULTIMATE
RUNWAY SAFETY AREA	9500' ± 500'	7900' ± 300'	9500' ± 500'
RUNWAY OBJECT FREE AREA	9500' ± 800'	TERRAIN PENETRATES ROFA TO WITHIN 250' OF R/W CENTERLINE ALONG SW SIDE FULL LENGTH OF R/W	9500' ± 800'



WIND DATA	
Runway 11-29	12 MPH 15 MPH 98.4% 99.3%

WIND DATA	
Runway 11-29	12 MPH 15 MPH 97.6% 99.3%

SOURCE: NOAA NAT. CLIMATIC SERVICE  
 ASHEVILLE, N.C.  
 KETCHIKAN FLIGHT SERVICE  
 KETCHIKAN, ALASKA  
 JAN-DEC 1979  
 9117 OBSERVATIONS

MAGNETIC VARIANCE 25° 30' East (1991)

SCALE IN FEET

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/26/02  
 BY: P. K. Olin  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-600  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature] 7/2/02  
 Verne Blomberg, Transportation Planner Date for Andy Hughes, Chief of Planning

**USKH** Architecture • Engineering  
 Land Surveying • Planning

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

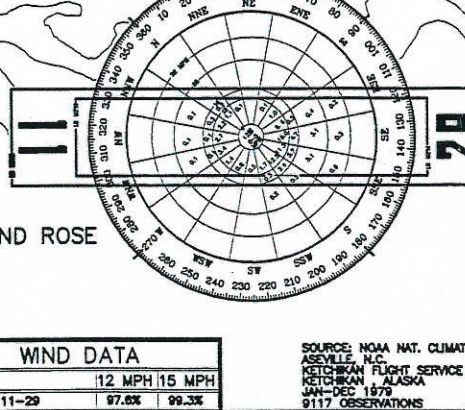
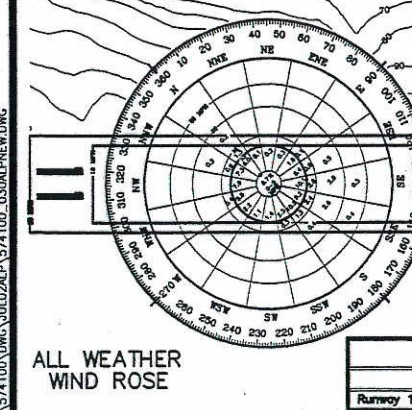
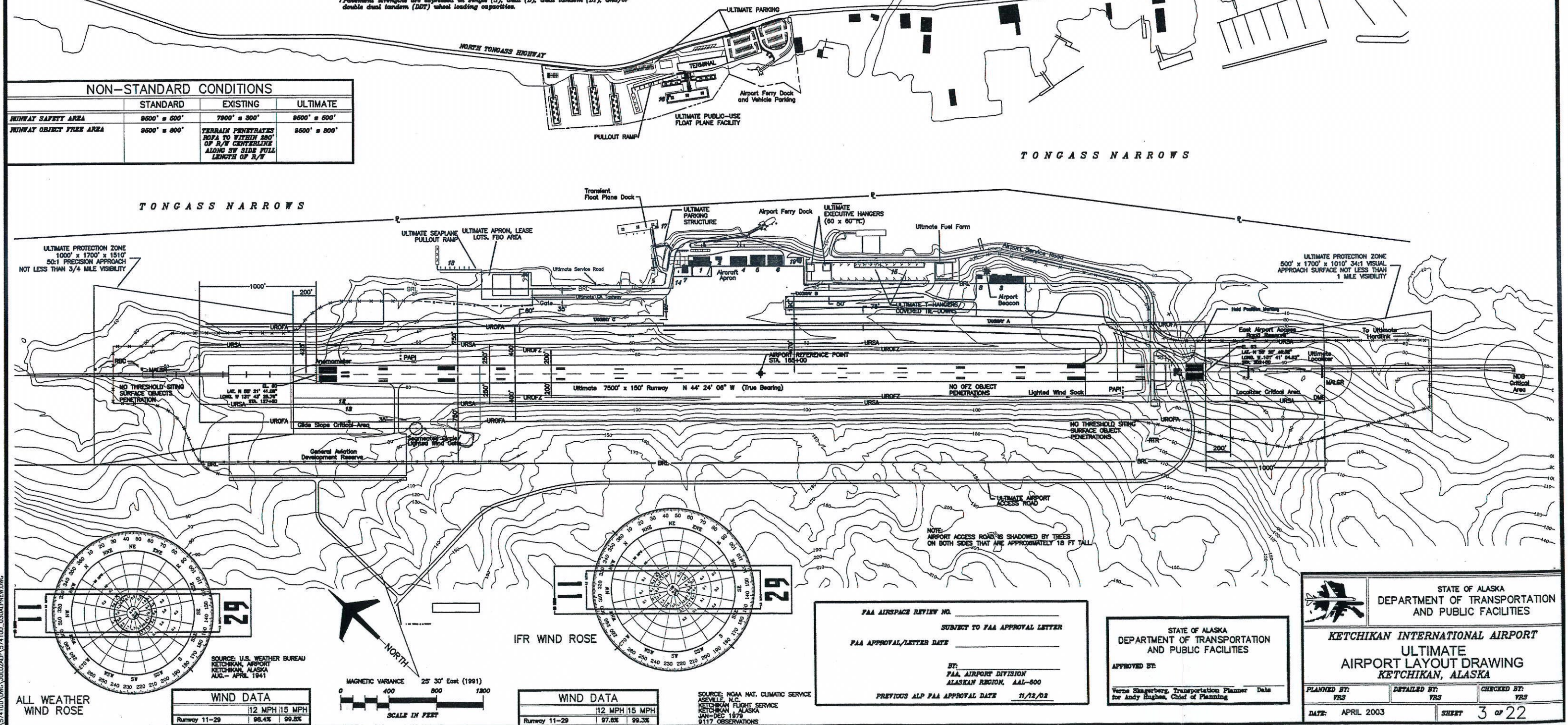
**KETCHIKAN INTERNATIONAL AIRPORT**  
**EXISTING**  
**AIRPORT LAYOUT DRAWING**  
**KETCHIKAN, ALASKA**

PLANNED BY: K.L.L.      DETAILED BY: C.M.B.      CHECKED BY: D.L.M.  
 DATE: JULY 2002      SHEET 2 OF 22

AIRPORT DATA	EXISTING		ULTIMATE		RUNWAY DATA		RUNWAY 11-29		BUILDINGS/FACILITIES		LEGEND	
	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE
AIRPORT TYPE	Primary	Primary	AIRPORT REFERENCE CODE (APPROACH CAT.-DESIGN GR.)		C-III	C-III	1	1	1	1	TERMINAL BUILDING	
AIRPORT REFERENCE CODE	C-III	C-III	AIRPORT REFERENCE POINT (ARP)		7500' ± 150'	7500' ± 150'	2	2	2	2	FISH COOLER	
AIRPORT ELEVATION	88' MSL	88' MSL	RUNWAY DIMENSIONS		N 44° 24' 06" W	N 44° 24' 06" W	3	3	3	3	AIRPORT RESCUE & FIRE FIGHTING (ARFF) & EQUIP. BLDG.	
MEAN MAXIMUM TEMPERATURE OF HOTTEST MONTH	64° F	64° F	RUNWAY BEARING		Precision	Precision	4	4	4	4	TAQIAN AIR	
AIRPORT REFERENCE POINT (ARP) COORDINATES - NAD '83	Latitude N 55° 21' 19.96"	N 55° 21' 14.62"	RUNWAY INSTRUMENTATION		7900' ± 300'	9500' ± 500'	5	5	5	5	TAQIAN AIR	
AIRPORT and TERMINAL NAVIGATIONAL AIDS	DME	DME	RUNWAY SAFETY AREA		7900' ± 400'	7900' ± 400'	6	6	6	6	TAQIAN AIR	
NAVIGATIONAL AIDS (RUNWAY 11)	NDB, DME	NDB, DME	RUNWAY OBSTACLE FREE ZONE		9500' x 500'	9500' x 500'	7	7	7	7	ALASKA AIRLINES EQUIPMENT BUILDING	
NAVIGATIONAL AIDS (RUNWAY 29)	NDB, DME	NDB, DME	RUNWAY PERCENTAGE WIND COVERAGE		98.4%	98.4%	8	8	8	8	REGULATOR BUILDING	
	ILS-Cat I	ILS-Cat I	RUNWAY APPROACH SURFACES 11 & 29, RESPECTIVELY		50:1, 34:1	50:1, 34:1	9	9	9	9	UNDERGROUND FUEL TANKS (TO BE REMOVED)	
	MALSR	MALSR	APPROACH VISIBILITY MINIMUMS 11 & 29, RESPECTIVELY		3/4 MILE, 1 MILE	3/4 MILE, 1 MILE	10	10	10	10	STORAGE BUILDING (TO BE REMOVED)	
	VASI-4	VASI-4	RUNWAY LIGHTING		HIRL	HIRL	11	11	11	11	EXECUTIVE HANGARS	
			RUNWAY MARKING		Precision	Precision	12	12	12	12	AUTOMATED SURFACE OBSERVATION SYSTEM (ASOS)	
			TAXIWAY LIGHTING		MTL	MTL	13	13	13	13	GLIDE SLOPE TOWER	
			TAXIWAY MARKING		Centerline	Centerline	14	14	14	14	FUEL FACILITY	
			TAXIWAY A SAFETY AREA WIDTH		119'	119'	15	15	15	15	T-HANGER AND COVERED TIE DOWNS	
			TAXIWAY B SAFETY AREA WIDTH		79'	79'	16	16	16	16	FLOAT PLANE FACILITY	
			TAXIWAY A OBJECT FREE AREA WIDTH		198'	198'	17	17	17	17	PASSENGER SHELTER, SEAPLANE FLOAT	
			TAXIWAY B OBJECT FREE AREA WIDTH		191'	191'	18	18	18	18	ULTIMATE SEAPLANE PULLOUT RAMP	
			EFFECTIVE RUNWAY GRADIENT (in %)		0.1448	0.1448	19	19	19	19	PIETRO ALASKA INC.	
			PAYMENT MATERIAL		Asphalt (Grooved)	Asphalt (Grooved)	20	20	20	20	FUEL FARM	
			PAYMENT STRENGTH (in thousand lbs.) <sup>1</sup>		76(S),800(D),300(DT)	76(S),800(D),300(DT)						
			THRESHOLD 11 (NAD 83)		LAT. N 55° 21' 48.36"	N 55° 21' 41.06"						
			THRESHOLD 29 (NAD 83)		LONG. W 131° 45' 34.86"	W 131° 45' 25.76"						
					LAT. N 55° 20' 53.64"	N 55° 20' 48.33"						
					LONG. W 131° 45' 04.07"	W 131° 41' 54.83"						

- GENERAL NOTES:**
1. Details concerning airport improvements are depicted on the TERMINAL AREA DRAWING.
  2. Recommended land uses within the airport environs are depicted on the AIRPORT LAND USE DRAWINGS.
  3. Contours are based on Mean Lower Low Water (MLLW), Mean Tide Level (MTL), approximately Mean Sea Level (MSL) and is 2.00' above Mean Lower Low Water (MLLW). Runway elevations are Mean Sea Level.
  4. Latitude and Longitude are in accordance with North American Datum 1983 (NAD '83).

NON-STANDARD CONDITIONS			
	STANDARD	EXISTING	ULTIMATE
RUNWAY SAFETY AREA	9500' ± 500'	7900' ± 300'	9500' ± 500'
RUNWAY OBJECT FREE AREA	9500' ± 500'	TERRAIN PENETRATES ROPA TO WITHIN 200' OF R/W CENTERLINE ALONG SW SIDE FULL LENGTH OF R/W	9500' ± 500'



FAA AIRSPACE REVIEW NO. \_\_\_\_\_

SUBJECT TO FAA APPROVAL LETTER

FAA APPROVAL/LETTER DATE \_\_\_\_\_

BY: \_\_\_\_\_

FAA AIRPORT DIVISION  
ALASKAN REGION, AAL-800

PREVIOUS ALP FAA APPROVAL DATE 11/12/02

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

APPROVED BY: \_\_\_\_\_

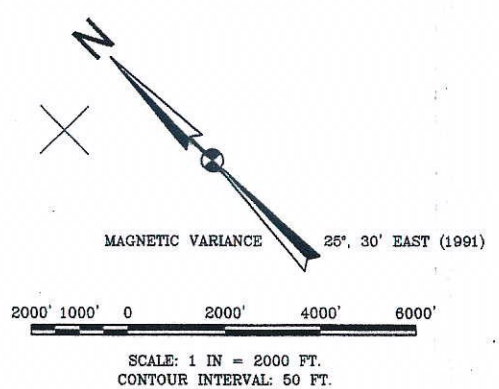
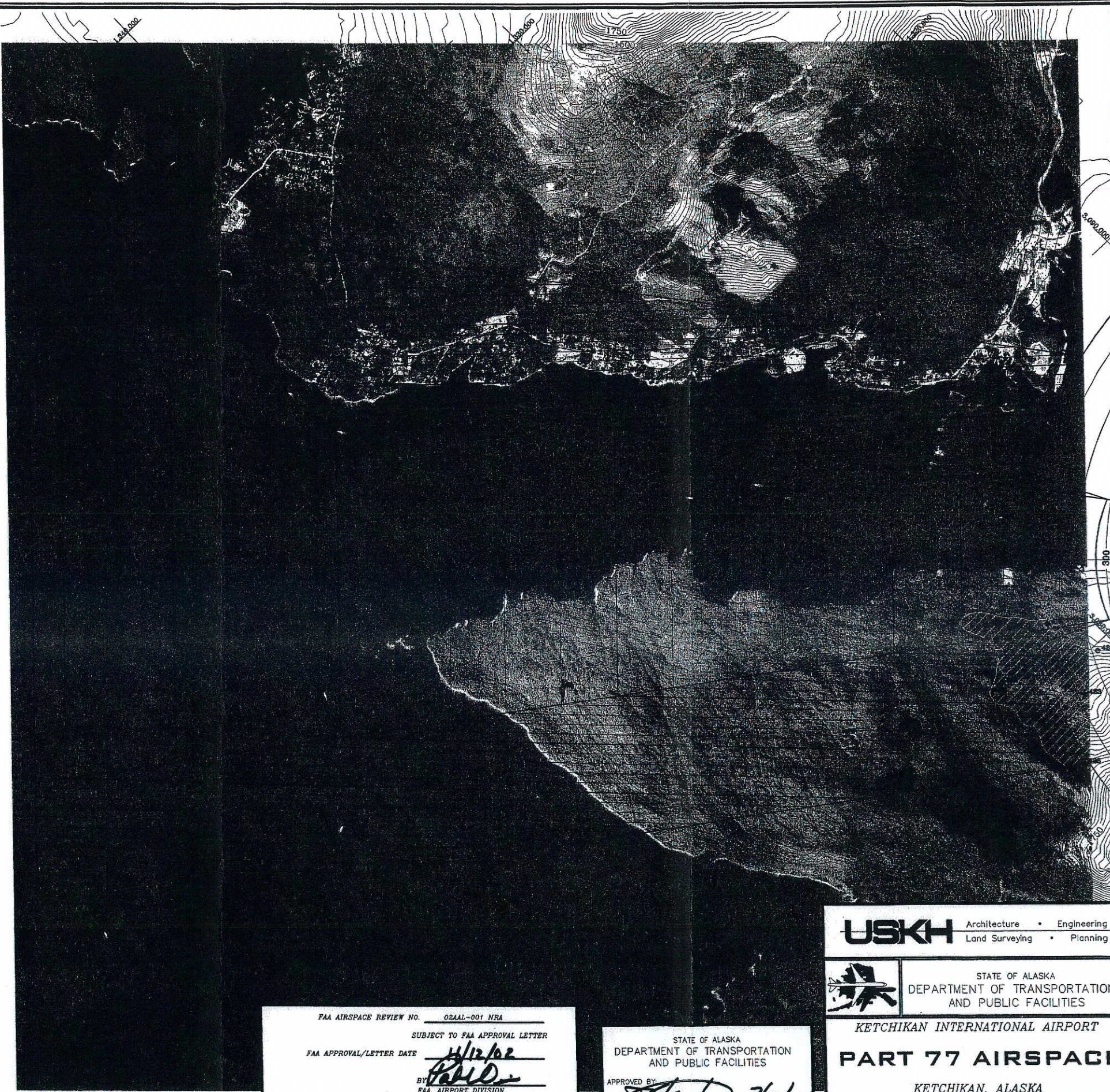
Verne Skagberg, Transportation Planner  
for Andy Hughes, Chief of Planning

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

**KETCHIKAN INTERNATIONAL AIRPORT**  
ULTIMATE  
AIRPORT LAYOUT DRAWING  
KETCHIKAN, ALASKA

PLANNED BY: VRS	DETAILED BY: VRS	CHECKED BY: VRS
DATE: APRIL 2003		SHEET 3 of 22

1574100.DWG, JLG02AP1574100\_03JANREV.DWG



SHEET INDEX

4	5
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Notes:

The 1"=2000' digital orthophoto was created from the USGS DEM. Areas denoting vegetation cover on the ground should be considered less accurate. This map is not reliable for engineering purposes until field checked in accordance with ASPRS Standards.

This map projection is based upon Alaska State Plane Coordinate System, of 1983 Zone 1, as expressed in U.S. Survey Feet.

Vertical data is referenced to Mean Sea Level.

This map is based on photography acquired 7-2-1999 at a nominal scale of 1"=1200'.

PREPARED BY: AEROMAP U.S. I.F.C.

E:\574\00\DWG\MUL02APL\574100\_04P77NEW.DWG

FAA AIRSPACE REVIEW NO. 02AAL-001 NEA

SUBJECT TO FAA APPROVAL LETTER

FAA APPROVAL/LETTER DATE 4/12/02

BY: [Signature]

FAA, AIRPORT DIVISION  
ALASKAN REGION, AAL-600

PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

APPROVED BY: [Signature] 7/1/02

Vern [Signature] Transportation Planner Date  
for Andy Hughes, Chief of Planning

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Land Surveying • Planning

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

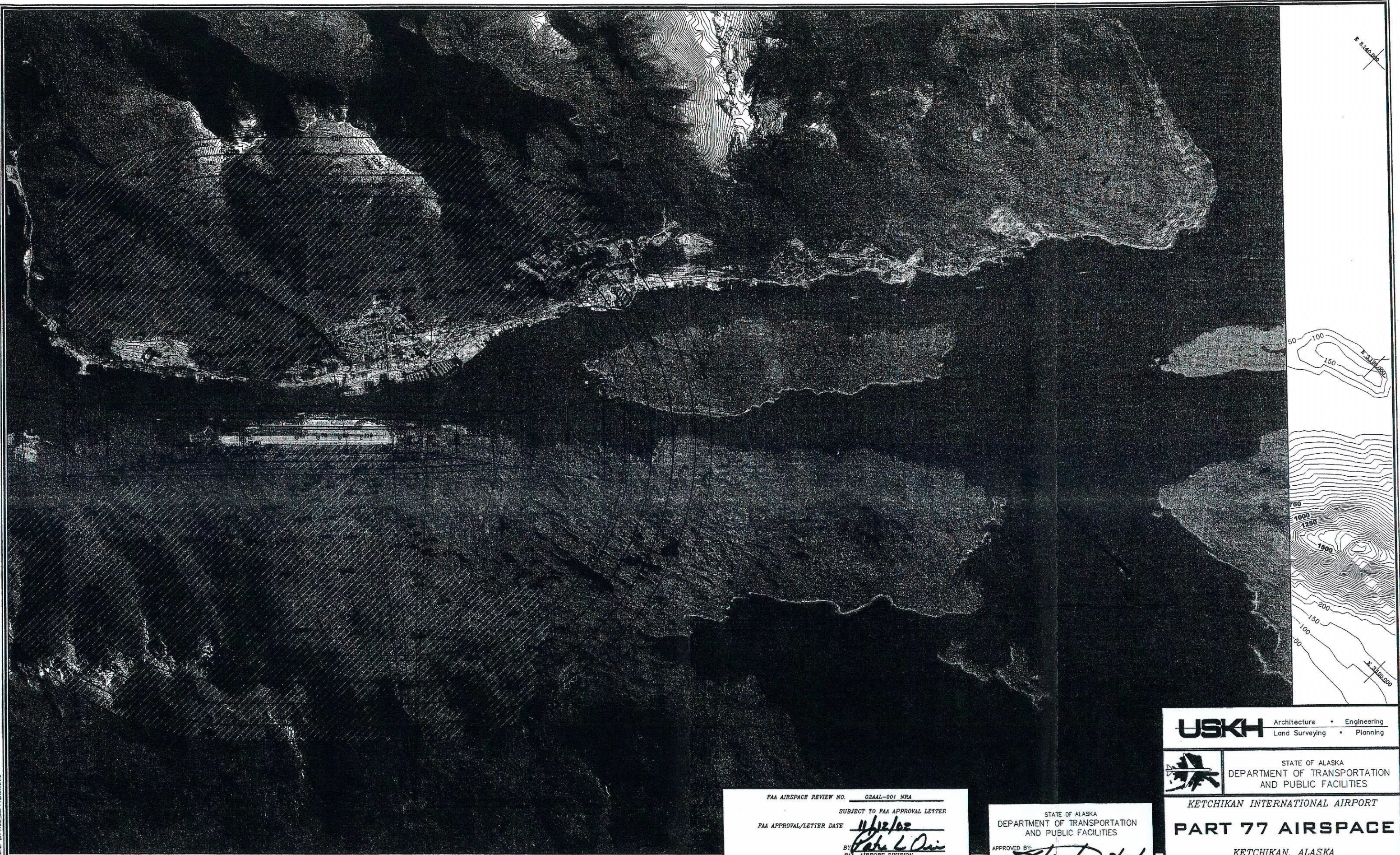
KETCHIKAN INTERNATIONAL AIRPORT  
**PART 77 AIRSPACE**  
KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002		SHEET 4 of 22

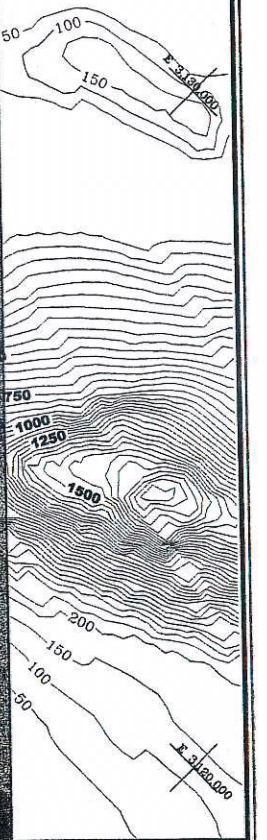
MATCH TO SHEET 6

MATCH TO SHEET 4

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E 2150,000



FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/12/02  
 BY Bob L. Davis  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-600  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature] 7/12/02  
 Verne Skagerberg, Transportation Planner  
 for Andy Hughes, Chief of Planning Date

**USKH** Architecture • Engineering  
 Land Surveying • Planning



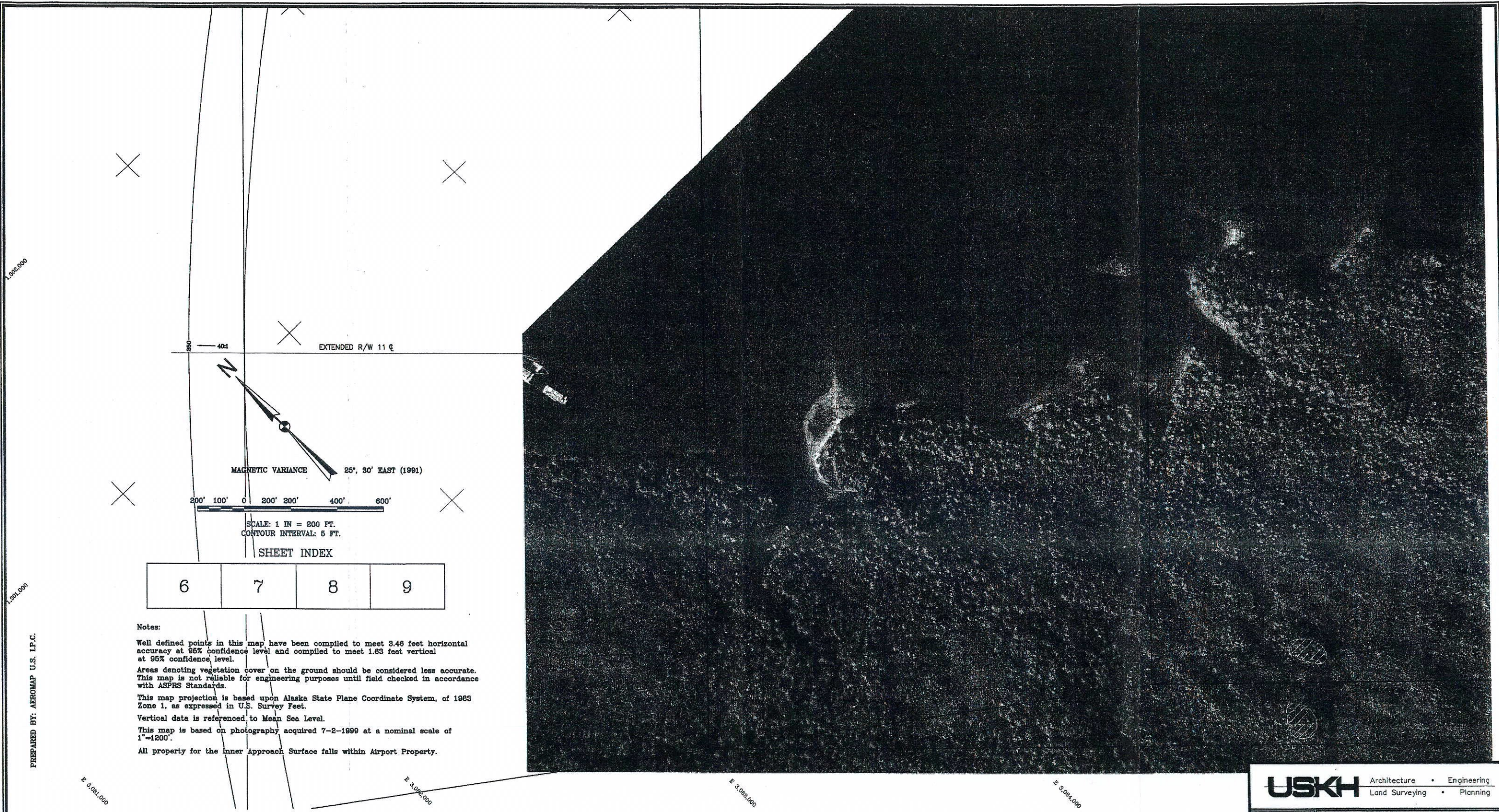
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

**KETCHIKAN INTERNATIONAL AIRPORT**  
**PART 77 AIRSPACE**

KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
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DATE: JULY 2002 SHEET 5 OF 22



SHEET INDEX

6	7	8	9
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Notes:

Well defined points in this map have been compiled to meet 3.46 feet horizontal accuracy at 95% confidence level and compiled to meet 1.63 feet vertical at 95% confidence level.

Areas denoting vegetation cover on the ground should be considered less accurate. This map is not reliable for engineering purposes until field checked in accordance with ASPRS Standards.

This map projection is based upon Alaska State Plane Coordinate System, of 1983 Zone 1, as expressed in U.S. Survey Feet.

Vertical data is referenced to Mean Sea Level.

This map is based on photography acquired 7-2-1999 at a nominal scale of 1"=1200'.

All property for the Inner Approach Surface falls within Airport Property.

PREPARED BY: AEROMAP U.S. L.P.C.

**USKH** Architecture • Engineering  
Land Surveying • Planning

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT  
**INNER PORTION OF  
APPROACH SURFACE**  
KETCHIKAN, ALASKA

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
SUBJECT TO FAA APPROVAL LETTER  
FAA APPROVAL/LETTER DATE 11/12/02  
BY: *[Signature]*  
FAA AIRPORT DIVISION  
ALASKAN REGION, AAL-600  
PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
APPROVED BY: *[Signature]* 7/2/02  
Date  
Verne Stegmann, Chief of Planning

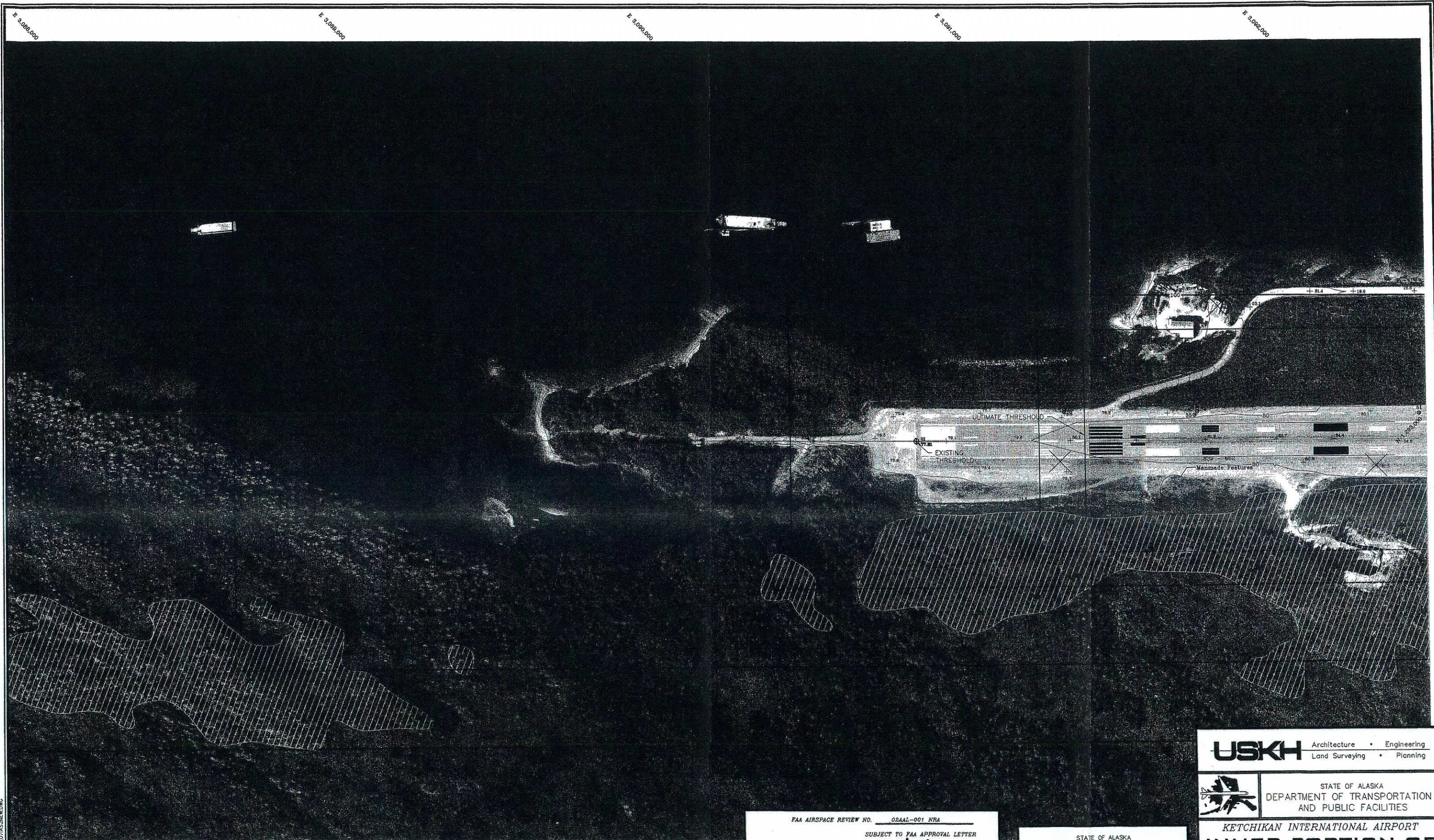
PLANNED BY: K.L.L.    DETAILED BY: C.M.B.    CHECKED BY: D.L.M.

DATE: JULY 2002    SHEET 6 OF 22

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MATCH TO SHEET 6

E:\574100\DWG\110241.PLT\57100\_071AS2NEW.DWG



E 2,088,000      E 3,088,000      E 3,090,000      E 3,091,000      E 3,092,000

E 3,088,000      E 3,089,000

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/12/02  
 BY: [Signature]  
 FAA, AIRPORT DIVISION  
 ALASKAN REGION, AAL-600  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature] 7/2/02  
 Verne Simons, Chief of Planning  
 Date

**USKH** Architecture • Engineering  
 Land Surveying • Planning

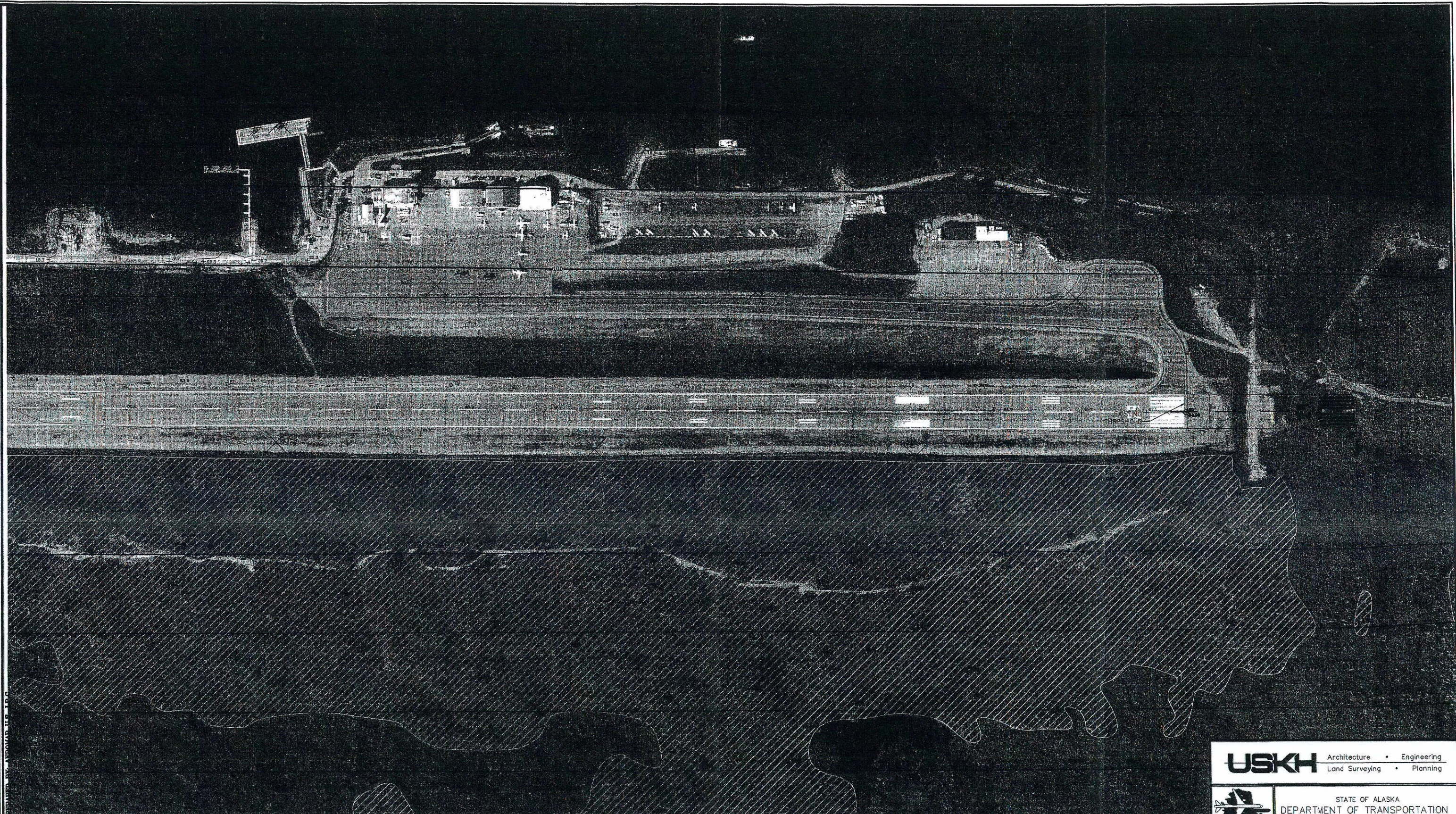
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

**KETCHIKAN INTERNATIONAL AIRPORT**  
**INNER PORTION OF**  
**APPROACH SURFACE**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002		SHEET 7 of 22

MATCH TO SHEET 7

MATCH TO SHEET 9



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FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/12/02  
 BY: [Signature]  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-600  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature] [Signature]  
 Director, Transportation  
 for Andy Hughes, Chief of Planning

**USKH** Architecture • Engineering  
 Land Surveying • Planning

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

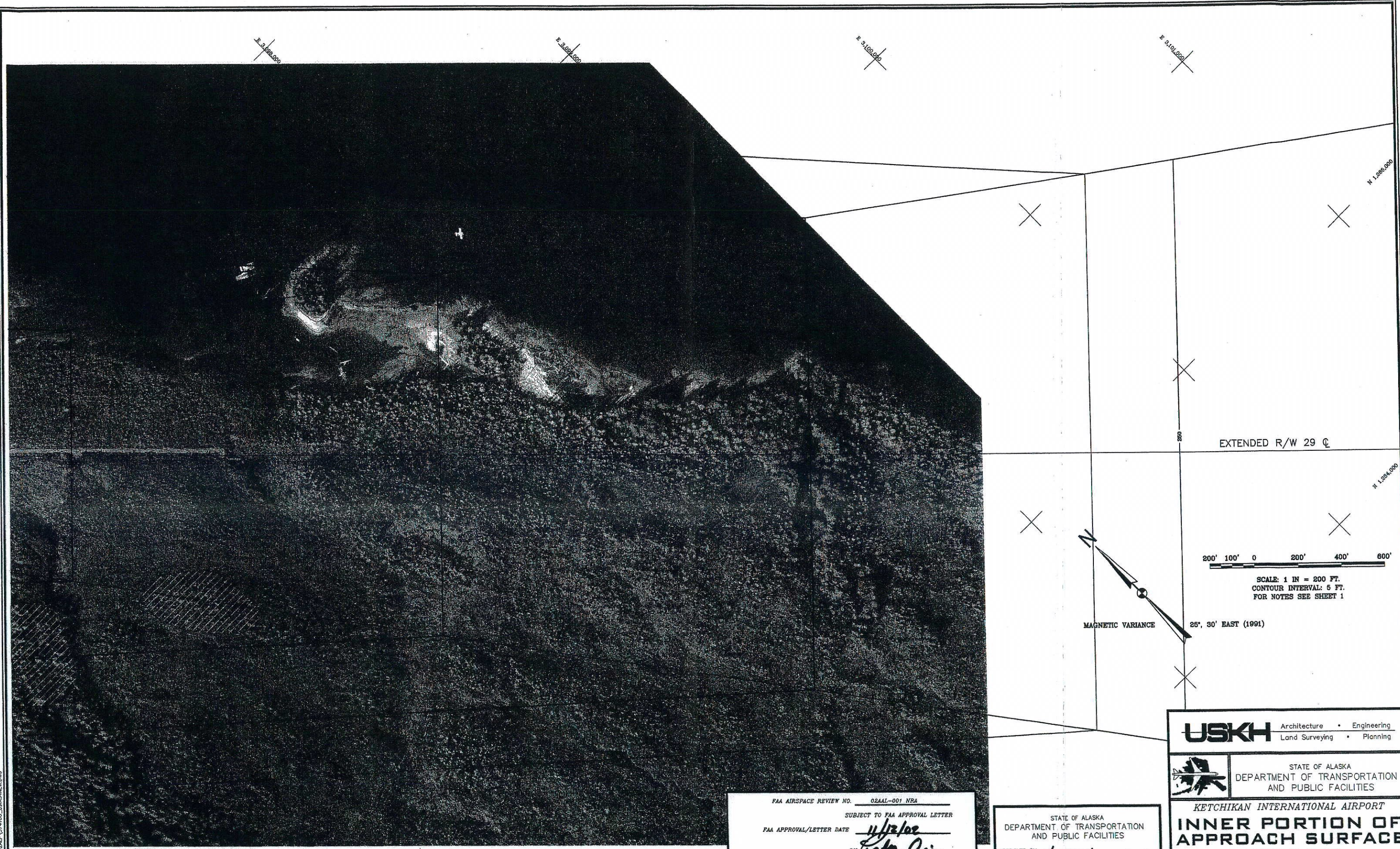
KETCHIKAN INTERNATIONAL AIRPORT  
**INNER PORTION OF  
 APPROACH SURFACE**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
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DATE: JULY 2002 SHEET 8 OF 22

MATCH TO SHEET 8

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EXTENDED R/W 29 C

200' 100' 0 200' 400' 600'

SCALE: 1 IN = 200 FT.  
 CONTOUR INTERVAL: 5 FT.  
 FOR NOTES SEE SHEET 1

MAGNETIC VARIANCE  
 25°, 30' EAST (1991)

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA

SUBJECT TO FAA APPROVAL LETTER

FAA APPROVAL/LETTER DATE 11/2/02

BY: [Signature]  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-600

PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

APPROVED BY: [Signature] 7/2/02  
 Verne Skogerberg, Transportation Planner  
 for Andy Hughes, Chief of Planning

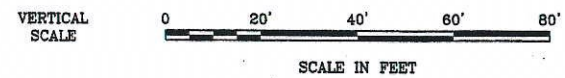
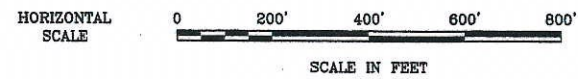
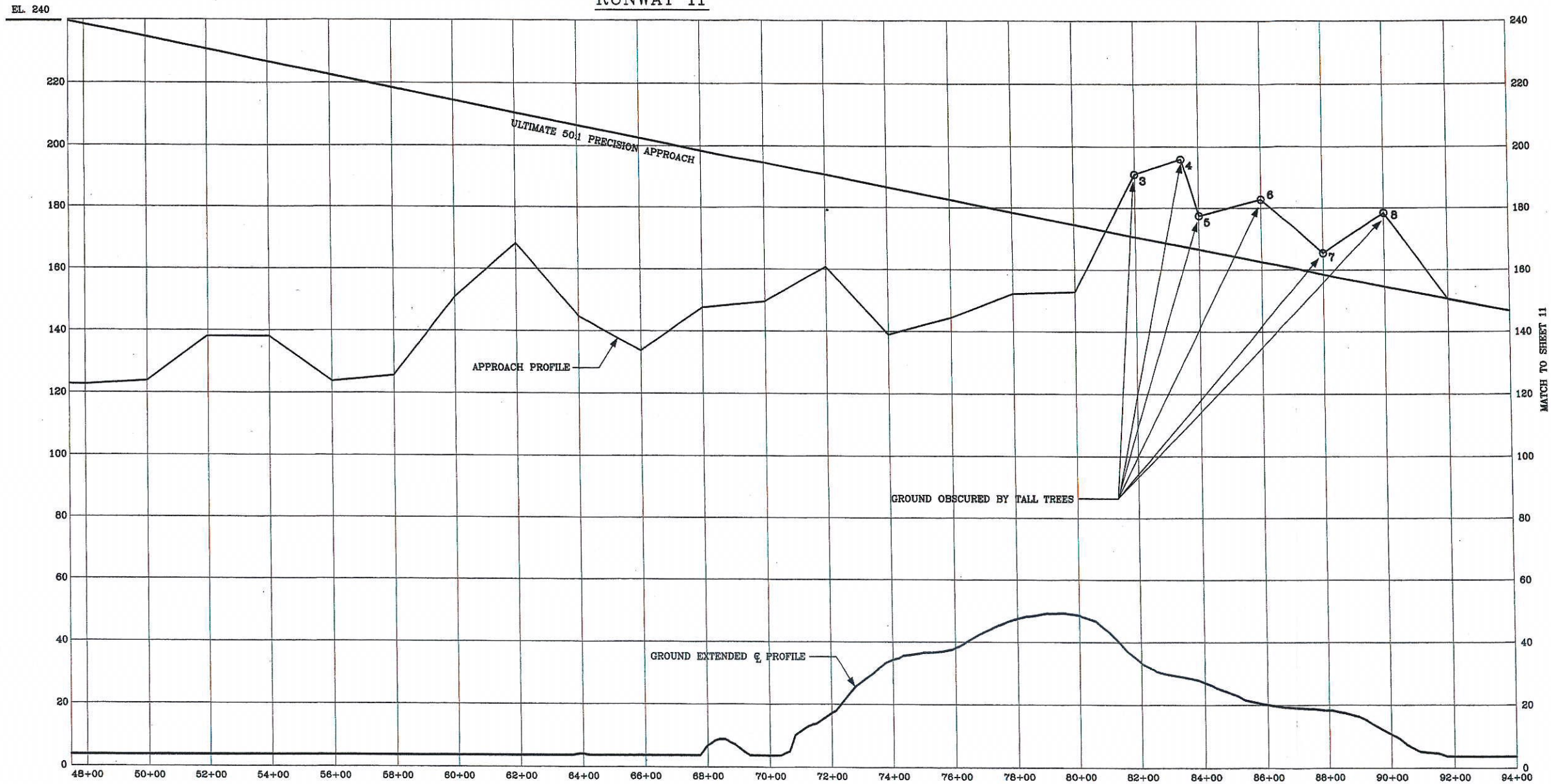
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KETCHIKAN INTERNATIONAL AIRPORT  
**INNER PORTION OF  
 APPROACH SURFACE**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002		SHEET 9 of 22

# RUNWAY 11



OBSTRUCTION TABLE			
Description	Elevation (MSL)	Obstruction	Recommendation
3. TREE	EL. 191	20' obstruction to 50:1 Precision Approach	Remove
4. TREE	EL. 196	28' obstruction to 50:1 Precision Approach	Remove
5. TREE	EL. 178	11' obstruction to 50:1 Precision Approach	Remove
6. TREE	EL. 183	20' obstruction to 50:1 Precision Approach	Remove
7. TREE	EL. 165	7' obstruction to 50:1 Precision Approach	Remove
8. TREE	EL. 178	24' obstruction to 50:1 Precision Approach	Remove

Notes:  
 APPROACH PROFILE IS A COMPOSITE PROFILE OF HIGHEST TERRAIN & VEGETATION ALONG APPROACH SURFACE.  
 PROFILE DATA COMPILED USING PHOTOGRAMMETRIC PROCEDURES USING PHOTOGRAPHY DATED JULY 2, 1999.

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/12/02  
 BY: [Signature]  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-600  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature]  
 Verne Sogorua, Transportation Planner  
 for Andy Hughes, Chief of Planning

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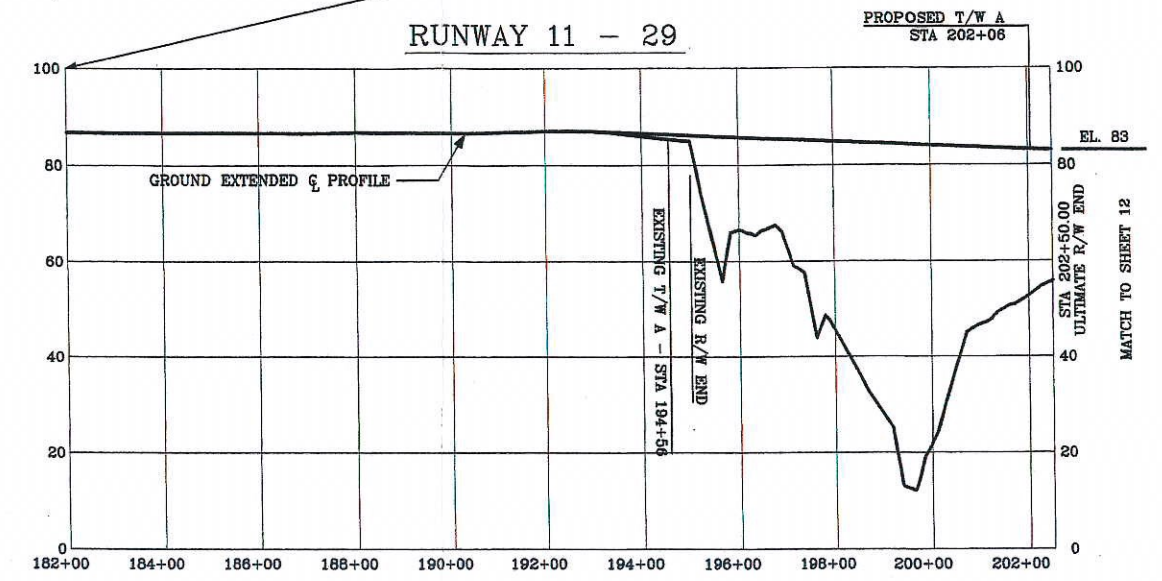
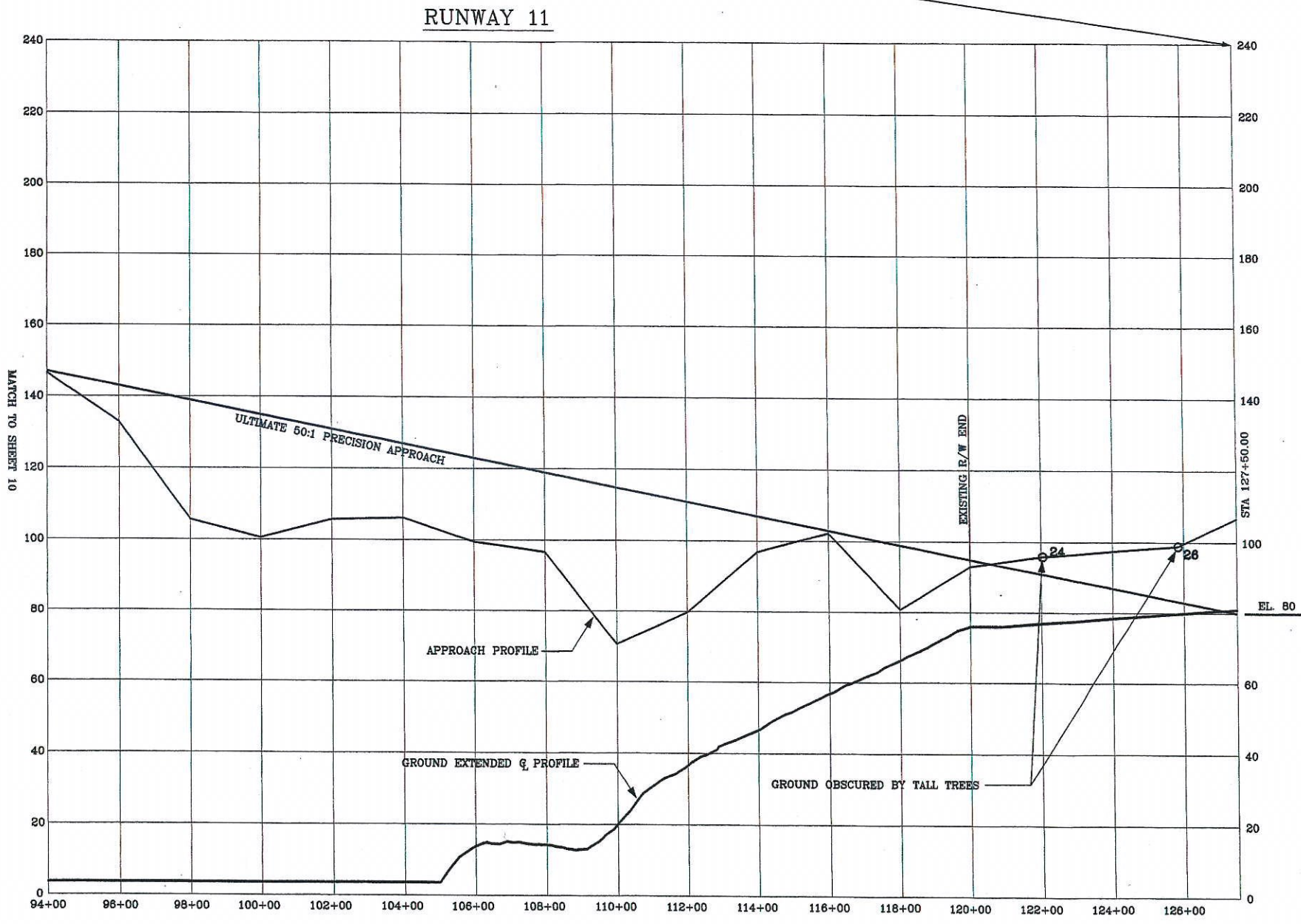
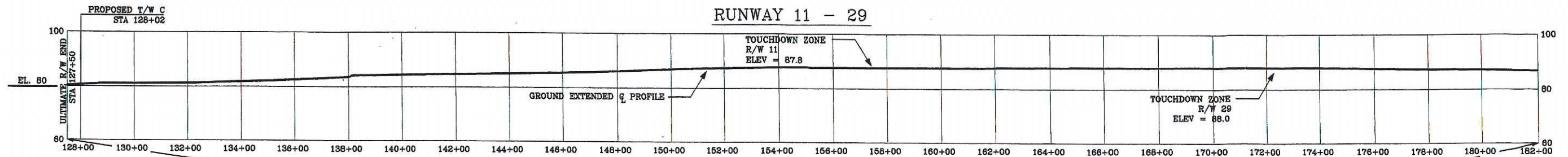
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

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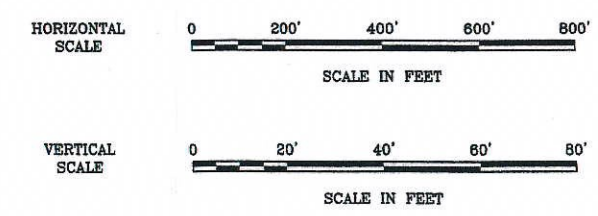
**KETCHIKAN INTERNATIONAL AIRPORT**  
**APPROACH SURFACE &  
 RUNWAY SURFACE PROFILES**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002		SHEET 10 OF 22

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Notes:  
 APPROACH PROFILE IS A COMPOSITE PROFILE OF HIGHEST TERRAIN & VEGETATION ALONG APPROACH SURFACE.  
 PROFILE DATA COMPILED USING PHOTOGRAMMETRIC PROCEDURES USING PHOTOGRAPHY DATED JULY 2, 1999.



OBSTRUCTION TABLE			
Description	Elevation (MSL)	Obstruction	Recommendation
24. TREE	EL. 197	5' obstruction to 50:1 Precision Approach	Remove
26. TREE	EL. 199	16' obstruction to 50:1 Precision Approach	Remove

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/2/02  
 BY: [Signature]  
 FAA, AIRPORT DIVISION  
 ALASKAN REGION, AAL-600  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature] 7/2/02  
 Verified by: Transportation Planner for Andy Hughes, Chief of Planning

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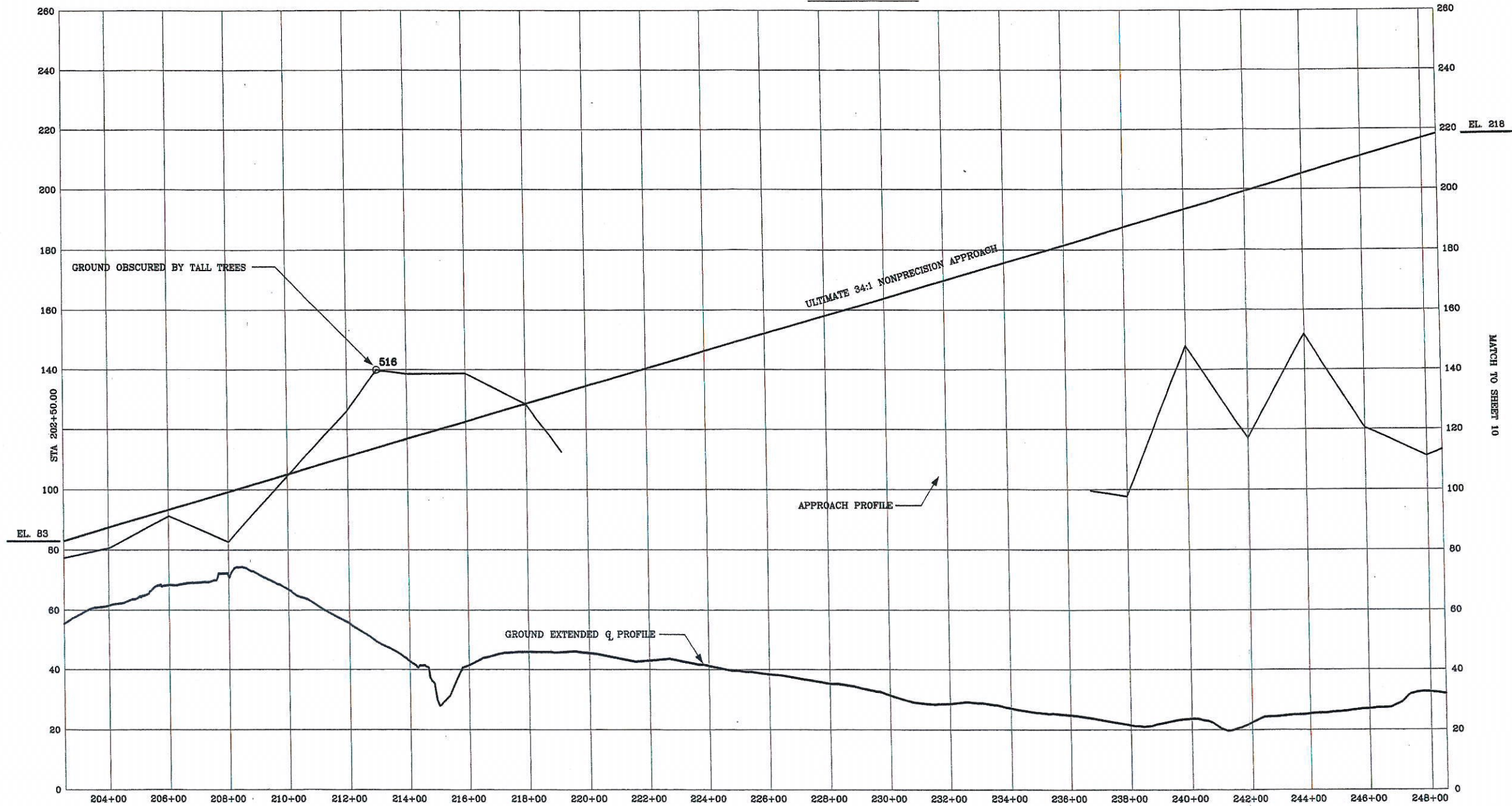
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

**KETCHIKAN INTERNATIONAL AIRPORT**  
**APPROACH SURFACE & RUNWAY SURFACE PROFILES**  
 KETCHIKAN, ALASKA

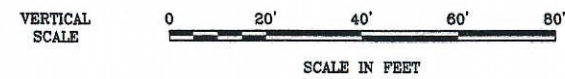
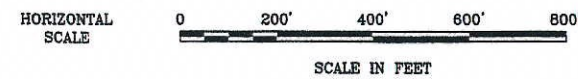
PLANNED BY: K.L.L.    DETAILED BY: C.M.B.    CHECKED BY: D.L.M.  
 DATE: JULY 2002    SHEET 11 OF 22

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# RUNWAY 29



**Notes:**  
 APPROACH PROFILE IS A COMPOSITE PROFILE OF HIGHEST TERRAIN & VEGETATION ALONG APPROACH SURFACE.  
 PROFILE DATA COMPILED USING PHOTOGRAMMETRIC PROCEDURES USING PHOTOGRAPHY DATED JULY 2, 1999.



OBSTRUCTION TABLE			
Description	Elevation (MSL)	Obstruction	Recommendation
516. TREE	EL. 140	28' obstruction to 34:1 Nonprecision Approach	Remove

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/12/02  
 BY [Signature]  
 FAA, AIRPORT DIVISION  
 ALASKAN REGION, AAL-600  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY [Signature] 7/12/02  
 Vern [Name], Transportation Planner  
 for Andy Hughes, Chief of Planning

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**KETCHIKAN INTERNATIONAL AIRPORT**  
**APPROACH SURFACE &  
 RUNWAY SURFACE PROFILES**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002		SHEET 12 OF 22

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FEATURE & OBSTRUCTION TABLE					
Description	Elevation (MSL)	Obstruction	Obstruction	Sheet No: 200'/2000'	Recommendation
1. TREE	EL 193	Yes	7' obstruction to 50:1 Transitional Approach	Sheet 8 5	To Remain
2. TREE	EL 246	Yes	21' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
3. TREE	EL 191	Yes	20' obstruction to 50:1 Precision Approach	Sheet 7 5	Remove
4. TREE	EL 196	Yes	28' obstruction to 50:1 Precision Approach	Sheet 7 5	Remove
5. TREE	EL 178	Yes	11' obstruction to 50:1 Precision Approach	Sheet 7 5	Remove
6. TREE	EL 183	Yes	20' obstruction to 50:1 Precision Approach	Sheet 7 5	Remove
7. TREE	EL 165	Yes	7' obstruction to 50:1 Precision Approach	Sheet 7 5	Remove
8. TREE	EL 178	Yes	24' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
9. TREE	EL 214	Yes	21' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
10. TREE	EL 238	Yes	80' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
11. TREE	EL 150	No		Sheet 7 5	To Remain
12. TREE	EL 160	Yes	13' obstruction to 50:1 Precision Approach	Sheet 7 5	To Remain
13. TREE	EL 147	Yes	18' obstruction to 50:1 Precision Approach	Sheet 7 5	To Remain
14. TREE	EL 133	No		Sheet 7 5	To Remain
15. TREE	EL 229	Yes	45' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
16. TREE	EL 152	Yes	8' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
17. TREE	EL 190	Yes	7' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
18. TREE	EL 97	No		Sheet 7 5	To Remain
19. TREE	EL 103	No		Sheet 7 5	To Remain
20. TREE	EL 102	Yes	1' obstruction to 50:1 Precision Approach	Sheet 7 5	To Remain
21. TREE	EL 122	Yes	20' obstruction to 50:1 Precision Approach	Sheet 7 5	To Remain
22. TREE	EL 82	No		Sheet 7 5	To Remain
23. TREE	EL 93	No		Sheet 7 5	To Remain
24. TREE	EL 97	Yes	5' obstruction to the 50:1 Precision Approach	Sheet 7 5	Remove
25. TREE	EL 132	Yes	13' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
26. TREE	EL 99	Yes	16' obstruction to the 50:1 Precision Approach	Sheet 7 5	Remove
27. TREE	EL 129	Yes	20' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
28. TREE	EL 112	Yes	34' obstruction to the Primary Surface	Sheet 7 5	To Remain
29. TREE	EL 127	Yes	32' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
30. VASI	EL 81	Yes	3' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
31. VASI	EL 81	Yes	3' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
32. MISC. OBJECT	EL 89	Yes	10' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
33. VASI	EL 84	Yes	5' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
34. VASI	EL 82	Yes	3' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
35. MISC. OBJECT	EL 82	Yes	3' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
36. ANTENNA	EL 98	Yes	19' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
37. BUILDING	EL 83	Yes	4' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
38. UTILITY POLE	EL 94	Yes	15' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
39. ASOS	EL 84	Yes	5' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
40. WINDSOCK	EL 98	Yes	19' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
41. TREE	EL 119	Yes	39' obstruction to the Primary Surface	Sheet 7 5	To Remain
42. TREE	EL 110	Yes	31' obstruction to the Primary Surface	Sheet 7 5	To Remain
43. TREE	EL 123	Yes	31' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
44. TREE	EL 112	Yes	33' obstruction to the Primary Surface	Sheet 7 5	To Remain
45. BUILDING	EL 89	Yes	8' obstruction to the Primary Surface	Sheet 7 5	To Remain
46. FENCE	EL 110	Yes	31' obstruction to the Primary Surface	Sheet 7 5	To Remain
47. TREE	EL 131	Yes	52' obstruction to the Primary Surface	Sheet 7 5	To Remain
48. TREE	EL 138	Yes	46' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
49. TREE	EL 132	Yes	52' obstruction to the Primary Surface	Sheet 7 5	To Remain
50. FENCE	EL 125	Yes	45' obstruction to the Primary Surface	Sheet 7 5	To Remain
51. MISC. OBJECT	EL 84	Yes	4' obstruction to the Primary Surface	Sheet 7 5	To Remain
52. TREE	EL 148	Yes	59' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
53. FENCE	EL 137	Yes	44' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
54. TREE	EL 154	Yes	32' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
55. TREE	EL 168	Yes	9' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
56. TREE	EL 173	Yes	21' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
57. TREE	EL 167	Yes	31' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
58. FENCE	EL 153	Yes	53' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
59. TREE	EL 159	Yes	76' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
60. TREE	EL 173	Yes	65' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
61. MISC. OBJECT	EL 88	Yes	7' obstruction to the Primary Surface	Sheet 8 5	To Remain
62. TREE	EL 175	Yes	77' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
63. TREE	EL 185	Yes	89' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
64. TREE	EL 178	Yes	57' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
65. TREE	EL 174	Yes	15' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
66. FENCE	EL 176	Yes	73' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
67. TREE	EL 184	Yes	17' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
68. TREE	EL 176	Yes	72' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
69. TREE	EL 180	Yes	75' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
70. FENCE	EL 153	Yes	43' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
71. FENCE	EL 153	Yes	52' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
72. TREE	EL 167	Yes	82' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
73. TREE	EL 188	Yes	82' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
74. TREE	EL 194	Yes	67' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
75. TREE	EL 194	Yes	32' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
76. TREE	EL 257	Yes	19' obstruction to the Horizontal Surface	Sheet 8 5	To Remain
77. TREE	EL 227	Yes	24' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
78. FENCE	EL 151	Yes	53' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
79. MISC. OBJECT	EL 89	Yes	7' obstruction to the Primary Surface	Sheet 8 5	To Remain
80. TREE	EL 156	Yes	74' obstruction to the Primary Surface	Sheet 8 5	To Remain
81. TREE	EL 181	Yes	88' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
82. TREE	EL 183	Yes	78' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
83. TREE	EL 182	Yes	88' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
84. TREE	EL 184	Yes	75' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
85. TREE	EL 183	Yes	90' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
86. FENCE	EL 169	Yes	71' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
87. TREE	EL 178	Yes	59' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
88. TREE	EL 216	Yes	35' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
89. TREE	EL 218	Yes	15' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
90. TREE	EL 196	Yes	36' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
91. TREE	EL 164	Yes	80' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
92. MISC. OBJECT	EL 89	Yes	6' obstruction to the Primary Surface	Sheet 8 5	To Remain
93. TREE	EL 164	Yes	79' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
94. FENCE	EL 148	Yes	51' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
95. TREE	EL 170	Yes	75' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
96. TREE	EL 181	Yes	74' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
97. TREE	EL 188	Yes	66' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
98. TREE	EL 164	Yes	81' obstruction to the Primary Surface	Sheet 8 5	To Remain
99. TREE	EL 182	Yes	79' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
100. TREE	EL 193	Yes	84' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
101. FENCE	EL 173	Yes	54' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
102. TREE	EL 185	Yes	52' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
103. TREE	EL 218	Yes	25' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
104. TREE	EL 243	Yes	6' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
105. TREE	EL 254	Yes	16' obstruction to the Horizontal Surface	Sheet 8 5	To Remain

FEATURE & OBSTRUCTION TABLE					
Description	Elevation (MSL)	Obstruction	Obstruction	Sheet No: 200'/2000'	Recommendation
106. TREE	EL 229	Yes	41' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
107. TREE	EL 201	Yes	64' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
108. TREE	EL 197	Yes	91' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
109. FENCE	EL 197	Yes	77' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
110. FENCE	EL 197	Yes	73' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
111. TREE	EL 203	Yes	73' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
112. TREE	EL 215	Yes	50' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
113. TREE	EL 222	Yes	11' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
114. TREE	EL 239	Yes	5' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
115. TREE	EL 236	Yes	39' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
116. TREE	EL 216	Yes	52' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
117. TREE	EL 197	Yes	68' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
118. TREE	EL 198	Yes	92' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
119. MISC. OBJECT	EL 87	Yes	3' obstruction to the Primary Surface	Sheet 8 5	To Remain
120. VASI	EL 86	Yes	2' obstruction to the Primary Surface	Sheet 8 5	Fixed by Function
121. VASI	EL 86	Yes	2' obstruction to the Primary Surface	Sheet 8 5	Fixed by Function
122. UTILITY	EL 86	Yes	2' obstruction to the Primary Surface	Sheet 8 5	To Remain
123. TREE	EL 175	Yes	86' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
124. FENCE	EL 186	Yes	63' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
125. TREE	EL 193	Yes	74' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
126. TREE	EL 190	Yes	65' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
127. TREE	EL 206	Yes	57' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
128. TREE	EL 224	Yes	48' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
129. TREE	EL 223	Yes	30' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
130. TREE	EL 250	Yes	12' obstruction to the Horizontal Surface	Sheet 8 5	To Remain
131. TREE	EL 224	Yes	21' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
132. FENCE	EL 165	Yes	55' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
133. TREE	EL 187	Yes	84' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
134. TREE	EL 195	Yes	84' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
135. VASI	EL 88	Yes	4' obstruction to the Primary Surface	Sheet 8 5	Fixed by Function
136. VASI	EL 88	Yes	4' obstruction to the Primary Surface	Sheet 8 5	Fixed by Function
137. TREE	EL 166	Yes	74' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
138. MISC. OBJECT	EL 119	Yes	34' obstruction to the Primary Surface	Sheet 8 5	To Remain
139. FENCE	EL 146	Yes	57' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
140. TREE	EL 232	Yes	16' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
141. TREE	EL 180	Yes	77' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
142. FENCE	EL 116	Yes	31' obstruction to the Primary Surface	Sheet 8 5	To Remain
143. TREE	EL 133	Yes	48' obstruction to the Primary Surface	Sheet 8 5	To Remain
144. ANTENNA	EL 144	Yes	54' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
145. TREE	EL 119	Yes	34' obstruction to the Primary Surface	Sheet 8 5	To Remain
146. ANTENNA	EL 144	Yes	56' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
147. TREE	EL 121	Yes	32' obstruction to the Primary Surface	Sheet 8 5	To Remain
148. BUILDING	EL 92	Yes	3' obstruction to the Primary Surface	Sheet 8 5	To Remain
149. TREE	EL 191	Yes	44' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
150. TREE	EL 166	Yes	12' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
151. TREE	EL 163	Yes	13' obstruction to the 7:1 Transitional Surface	Sheet 9 5	To Remain
152. TREE	EL 794	Yes	361' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
153. TREE	EL 412	Yes	142' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
154. TREE	EL 926	Yes	626' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
155. TREE	EL 1304	Yes	963' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
156. TREE	EL 906	Yes	518' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
157. TREE	EL 932	Yes	694' obstruction to the Horizontal Surface	Sheet 5	To Remain
158. TREE	EL 363	Yes	125' obstruction to the Horizontal Surface	Sheet 5	To Remain
159. TREE	EL 1657	Yes	1400' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
160. TREE	EL 1979	Yes	1556' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
161. TREE	EL 2096	Yes	1721' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
162. TREE	EL 2660	Yes	2259' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
163. TREE	EL 1471	Yes	1144' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
164. TREE	EL 1165	Yes	888' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
165. TREE	EL 1305	Yes	1060' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
166. TREE	EL 2069	Yes	1784' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
167. TREE	EL 1243	Yes	1005' obstruction to the Horizontal Surface	Sheet 5	To Remain
168. TREE	EL 1359	Yes	1121' obstruction to the Horizontal Surface	Sheet 5	To Remain
169. TREE	EL 827	Yes	589' obstruction to the Horizontal Surface	Sheet 5	To Remain
170. TREE	EL 1205	Yes	967' obstruction to the Horizontal Surface	Sheet 5	To Remain
171. TREE	EL 360	Yes	122' obstruction to the Horizontal Surface	Sheet 5	To Remain
172. TREE	EL 354	Yes	116' obstruction to the Horizontal Surface	Sheet 5	To Remain
173. TREE	EL 517	Yes	279' obstruction to the Horizontal Surface	Sheet 5	To Remain
174. TREE	EL 696	Yes	458' obstruction to the Horizontal Surface	Sheet 5	To Remain
175. TREE	EL 317	Yes	79' obstruction to the Horizontal Surface	Sheet 5	To Remain
176. TREE	EL 374	Yes	136' obstruction to the Horizontal Surface	Sheet 5	To Remain
177. TREE	EL 340	Yes	102' obstruction to the Horizontal Surface	Sheet 5	To Remain
178. TREE	EL 702	Yes	464' obstruction to the Horizontal Surface	Sheet 5	To Remain
179. TREE	EL 998	Yes	761' obstruction to the Horizontal Surface	Sheet 5	To Remain
180. TREE	EL 660	Yes	422' obstruction to the Horizontal Surface	Sheet 5	To Remain
181. TREE	EL 549	Yes	311' obstruction to the Horizontal Surface	Sheet 5	To Remain
182. TREE	EL 953	Yes	715' obstruction to the Horizontal Surface	Sheet 5	To Remain
183. TREE	EL 1596	Yes	1358' obstruction to the Horizontal Surface	Sheet 5	To Remain
184. TREE	EL 723	Yes	485' obstruction to the Horizontal Surface	Sheet 5	To Remain
185. TREE	EL 1076	Yes	801' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
186. TREE	EL 1403	Yes	1072' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
187. TREE	EL 2536	Yes	2102' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
188. TREE	EL 1814	Yes	1415' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
189. TREE	EL 1579	Yes	1212' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
190. TREE	EL 871	Yes	563' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
191. TREE	EL 1492	Yes	1207' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
192. TREE	EL 2199	Yes	1875' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
193. TREE	EL 1816	Yes	1537' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
194. TREE	EL 1589	Yes	1351' obstruction to the Horizontal Surface	Sheet 5	To Remain
195. TREE	EL 1028	Yes	790' obstruction to the Horizontal Surface	Sheet 5	To Remain
196. TREE	EL 951	Yes	713' obstruction to the Horizontal Surface	Sheet 5	To Remain
197. TREE	EL 987	Yes	749' obstruction to the Horizontal Surface	Sheet	



FEATURE & OBSTRUCTION TABLE					
Description	Elevation (MSL)	Obstruction	Obstruction	Sheet No: 200'/2000'	Recommendation
397. UTILITY POLE	EL. 357	Yes	79' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
398. BUILDING	EL. 343	Yes	63' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
399. TREE	EL. 351	Yes	67' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
400. TREE	EL. 340	Yes	48' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
401. BUILDING	EL. 336	Yes	37' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
402. TREE	EL. 434	No		Sheet 4	To Remain
403. TREE	EL. 476	Yes	48' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
404. TREE	EL. 487	Yes	64' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
405. TREE	EL. 476	Yes	58' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
406. TREE	EL. 474	Yes	57' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
407. TREE	EL. 531	Yes	124' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
408. TREE	EL. 570	Yes	167' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
409. TREE	EL. 438	Yes	14' obstruction to 7:1 Transitional Surface	Sheet 4	To Remain
410. TREE	EL. 608	Yes	210' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
411. TREE	EL. 618	Yes	221' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
412. TREE	EL. 617	Yes	230' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
413. TREE	EL. 622	Yes	229' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
414. TREE	EL. 634	Yes	257' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
415. TREE	EL. 615	Yes	238' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
416. TREE	EL. 574	Yes	206' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
417. TREE	EL. 500	Yes	132' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
418. TREE	EL. 410	Yes	48' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
419. TREE	EL. 583	Yes	73' obstruction to 7:1 Transitional Surface	Sheet 4	To Remain
420. TREE	EL. 828	Yes	189' obstruction to 7:1 Transitional Surface	Sheet 4	To Remain
421. TREE	EL. 845	Yes	166' obstruction to 7:1 Transitional Surface	Sheet 4	To Remain
422. TREE	EL. 1096	Yes	276' obstruction to 7:1 Transitional Surface	Sheet 4	To Remain
423. TREE	EL. 722	Yes	332' obstruction to 20:1 Conical Surface	Sheet 4	To Remain
424. TREE	EL. 413	Yes	75' obstruction to 20:1 Conical Surface	Sheet 4	To Remain
425. TREE	EL. 267	Yes	9' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
426. TREE	EL. 278	Yes	40' obstruction to the Horizontal Surface	Sheet 5	To Remain
427. TREE	EL. 1011	Yes	762' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
428. TREE	EL. 1549	Yes	502' obstruction to 7:1 Transitional Surface	Sheet 4	To Remain
429. TREE	EL. 2102	Yes	1697' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
430. TREE	EL. 1635	Yes	1306' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
431. TREE	EL. 294	Yes	56' obstruction to the Horizontal Surface	Sheet 5	To Remain
432. TREE	EL. 526	Yes	288' obstruction to the Horizontal Surface	Sheet 5	To Remain
433. TREE	EL. 337	Yes	99' obstruction to the Horizontal Surface	Sheet 5	To Remain
434. TREE	EL. 546	Yes	308' obstruction to the Horizontal Surface	Sheet 5	To Remain
435. TREE	EL. 458	Yes	220' obstruction to the Horizontal Surface	Sheet 5	To Remain
436. TREE	EL. 726	Yes	488' obstruction to the Horizontal Surface	Sheet 5	To Remain
437. TREE	EL. 1858	Yes	1526' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
438. GROUND	EL. 2325	Yes	1922' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
439. TREE	EL. 2087	Yes	1665' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
440. GROUND	EL. 2256	Yes	1921' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
441. GROUND	EL. 1902	Yes	1664' obstruction to the Horizontal Surface	Sheet 5	To Remain
442. TREE	EL. 1592	Yes	1354' obstruction to the Horizontal Surface	Sheet 5	To Remain
443. TREE	EL. 737	Yes	499' obstruction to the Horizontal Surface	Sheet 5	To Remain
444. TREE	EL. 992	Yes	754' obstruction to the Horizontal Surface	Sheet 5	To Remain
445. TREE	EL. 468	Yes	230' obstruction to the Horizontal Surface	Sheet 5	To Remain
446. TREE	EL. 247	Yes	9' obstruction to the Horizontal Surface	Sheet 5	To Remain
447. TREE	EL. 405	Yes	187' obstruction to the Horizontal Surface	Sheet 5	To Remain
448. TREE	EL. 682	Yes	444' obstruction to the Horizontal Surface	Sheet 5	To Remain
449. TREE	EL. 1428	Yes	1190' obstruction to the Horizontal Surface	Sheet 5	To Remain
450. TREE	EL. 1900	Yes	1662' obstruction to the Horizontal Surface	Sheet 5	To Remain
451. GROUND	EL. 2275	Yes	2009' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
452. TREE	EL. 1303	Yes	918' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
453. GROUND	EL. 1204	Yes	781' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
454. TREE	EL. 1454	Yes	1021' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
455. GROUND	EL. 2056	Yes	1632' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
456. GROUND	EL. 1914	Yes	1603' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
457. TREE	EL. 630	Yes	392' obstruction to the Horizontal Surface	Sheet 5	To Remain
458. TREE	EL. 674	Yes	436' obstruction to the Horizontal Surface	Sheet 5	To Remain
459. TREE	EL. 430	Yes	192' obstruction to the Horizontal Surface	Sheet 5	To Remain
460. TREE	EL. 265	Yes	27' obstruction to the Horizontal Surface	Sheet 5	To Remain
461. TREE	EL. 282	Yes	44' obstruction to the Horizontal Surface	Sheet 5	To Remain
462. TREE	EL. 258	Yes	20' obstruction to the Horizontal Surface	Sheet 5	To Remain
463. TREE	EL. 257	Yes	19' obstruction to the Horizontal Surface	Sheet 5	To Remain
464. TREE	EL. 275	Yes	37' obstruction to the Horizontal Surface	Sheet 5	To Remain
465. TREE	EL. 271	Yes	33' obstruction to the Horizontal Surface	Sheet 5	To Remain
466. TREE	EL. 367	Yes	129' obstruction to the Horizontal Surface	Sheet 5	To Remain
467. TREE	EL. 373	Yes	139' obstruction to the Horizontal Surface	Sheet 5	To Remain
468. TREE	EL. 397	Yes	155' obstruction to the Horizontal Surface	Sheet 5	To Remain
469. TREE	EL. 487	Yes	249' obstruction to the Horizontal Surface	Sheet 5	To Remain
470. TREE	EL. 494	Yes	256' obstruction to the Horizontal Surface	Sheet 5	To Remain
471. TREE	EL. 956	Yes	718' obstruction to the Horizontal Surface	Sheet 5	To Remain
472. TREE	EL. 540	Yes	186' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
473. TREE	EL. 705	Yes	390' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
474. TREE	EL. 1456	Yes	1024' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
475. TREE	EL. 1675	Yes	1305' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
476. TREE	EL. 613	Yes	375' obstruction to the Horizontal Surface	Sheet 5	To Remain
477. TREE	EL. 494	Yes	286' obstruction to the Horizontal Surface	Sheet 5	To Remain
478. TREE	EL. 500	Yes	262' obstruction to the Horizontal Surface	Sheet 5	To Remain
479. TREE	EL. 299	Yes	61' obstruction to the Horizontal Surface	Sheet 5	To Remain
480. TREE	EL. 291	Yes	53' obstruction to the Horizontal Surface	Sheet 5	To Remain
481. TREE	EL. 253	Yes	15' obstruction to the Horizontal Surface	Sheet 5	To Remain
482. TREE	EL. 269	Yes	31' obstruction to the Horizontal Surface	Sheet 5	To Remain
483. TREE	EL. 254	Yes	16' obstruction to the Horizontal Surface	Sheet 5	To Remain
484. TREE	EL. 266	Yes	28' obstruction to the Horizontal Surface	Sheet 5	To Remain
485. TREE	EL. 280	Yes	42' obstruction to the Horizontal Surface	Sheet 5	To Remain
486. TREE	EL. 265	Yes	27' obstruction to the Horizontal Surface	Sheet 5	To Remain
487. TREE	EL. 261	Yes	23' obstruction to the Horizontal Surface	Sheet 5	To Remain
488. TREE	EL. 253	Yes	15' obstruction to the Horizontal Surface	Sheet 5	To Remain
489. TREE	EL. 252	Yes	14' obstruction to the Horizontal Surface	Sheet 5	To Remain
490. TREE	EL. 252	Yes	14' obstruction to the Horizontal Surface	Sheet 5	To Remain
491. TREE	EL. 257	Yes	19' obstruction to the Horizontal Surface	Sheet 5	To Remain
492. TREE	EL. 259	Yes	21' obstruction to the Horizontal Surface	Sheet 5	To Remain
493. TREE	EL. 259	Yes	21' obstruction to the Horizontal Surface	Sheet 5	To Remain
494. TREE	EL. 266	Yes	28' obstruction to the Horizontal Surface	Sheet 5	To Remain
495. TREE	EL. 272	Yes	34' obstruction to the Horizontal Surface	Sheet 5	To Remain
496. TREE	EL. 248	Yes	10' obstruction to the Horizontal Surface	Sheet 5	To Remain
497. TREE	EL. 258	Yes	20' obstruction to the Horizontal Surface	Sheet 5	To Remain
498. TREE	EL. 251	Yes	13' obstruction to the Horizontal Surface	Sheet 5	To Remain
499. TREE	EL. 255	Yes	17' obstruction to the Horizontal Surface	Sheet 5	To Remain
500. TREE	EL. 256	Yes	18' obstruction to the Horizontal Surface	Sheet 5	To Remain

FEATURE & OBSTRUCTION TABLE					
Description	Elevation (MSL)	Obstruction	Obstruction	Sheet No: 200'/2000'	Recommendation
501. TREE	EL. 242	Yes	4' obstruction to the Horizontal Surface	Sheet 5	To Remain
502. TREE	EL. 252	Yes	14' obstruction to the Horizontal Surface	Sheet 5	To Remain
503. TREE	EL. 277	Yes	39' obstruction to the Horizontal Surface	Sheet 5	To Remain
504. TREE	EL. 265	Yes	27' obstruction to the Horizontal Surface	Sheet 5	To Remain
505. TREE	EL. 261	Yes	23' obstruction to the Horizontal Surface	Sheet 5	To Remain
506. TREE	EL. 301	Yes	63' obstruction to the Horizontal Surface	Sheet 5	To Remain
507. TREE	EL. 373	Yes	135' obstruction to the Horizontal Surface	Sheet 5	To Remain
508. TREE	EL. 897	Yes	628' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
509. TREE	EL. 684	Yes	315' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
510. TREE	EL. 388	Yes	100' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
511. TREE	EL. 326	Yes	30' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
512. TREE	EL. 352	Yes	69' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
513. TREE	EL. 508	Yes	118' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
514. TREE	EL. 481	Yes	92' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
515. TREE	EL. 406	Yes	26' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
516. TREE	EL. 140	Yes	26' obstruction to 34:1 Nonprecision Approach	Sheet 9	Remove
600. BUILDING	EL. 30	No		Sheet 7	To Remain
601. UTILITY POLE	EL. 68	No		Sheet 7	To Remain
602. UTILITY POLE	EL. 30	No		Sheet 7	To Remain
603. UTILITY POLE	EL. 69	No		Sheet 7	To Remain
604. UTILITY POLE	EL. 71	No		Sheet 7	To Remain
605. UTILITY POLE	EL. 71	No		Sheet 7	To Remain
606. UTILITY POLE	EL. 72	No		Sheet 7	To Remain
607. BUILDING	EL. 46	No		Sheet 7	To Remain
608. BUILDING	EL. 48	No		Sheet 7	To Remain
609. UTILITY POLE	EL. 72	No		Sheet 7	To Remain
610. MISC. OBJECT	EL. 53	No		Sheet 7	To Remain
611. UTILITY POLE	EL. 75	No		Sheet 7	To Remain
612. FENCE	EL. 58	No		Sheet 7	To Remain
613. FENCE	EL. 67	No		Sheet 7	To Remain
614. FENCE	EL. 70	No		Sheet 7	To Remain
615. FENCE	EL. 56	No		Sheet 7	To Remain
616. UTILITY POLE	EL. 78	No		Sheet 7	To Remain
617. FENCE	EL. 66	No		Sheet 7	To Remain
618. FENCE	EL. 66	No		Sheet 7	To Remain
619. FENCE	EL. 67	No		Sheet 7	To Remain
620. FENCE	EL. 69	No		Sheet 7	To Remain
621. FENCE	EL. 57	No		Sheet 7	To Remain
622. FENCE	EL. 68	No		Sheet 7	To Remain
623. FENCE	EL. 71	No		Sheet 7	To Remain
624. FENCE	EL. 71	No		Sheet 7	To Remain
625. TANK	EL. 27	No		Sheet 7	To Remain
626. TANK	EL. 31	No		Sheet 7	To Remain
627. BUILDING	EL. 31	No		Sheet 7	To Remain
628. BUILDING	EL. 32	No		Sheet 7	To Remain
629. BUILDING	EL. 35	No		Sheet 7	To Remain
630. BUILDING	EL. 38	No		Sheet 7	To Remain
631. BUILDING	EL. 51	No		Sheet 7	To Remain
632. BUILDING	EL. 34	No		Sheet 7	To Remain
633. FENCE	EL. 48	No		Sheet 7	To Remain
634. FENCE	EL. 32	No		Sheet 7	To Remain
635. FENCE	EL. 32	No		Sheet 7	To Remain
636. FENCE	EL. 25	No		Sheet 7	To Remain
637. FENCE	EL. 69	No		Sheet 7	To Remain
638. MISC. OBJECT	EL. 79	No		Sheet 7	To Remain
639. POST	EL. 79	No		Sheet 7	To Remain
640. POST	EL. 79	No		Sheet 7	To Remain
641. POST	EL. 79	No		Sheet 7	To Remain
642. POST	EL. 78	No		Sheet 7	To Remain
643. POST	EL. 79	No		Sheet 7	To Remain
644. POST	EL. 79	No		Sheet 7	To Remain
645. POST	EL. 79	No		Sheet 7	To Remain
646. POST	EL. 79	No		Sheet 7	To Remain
647. POST	EL. 79	No		Sheet 7	To Remain
648. POST	EL. 79	No		Sheet 7	To Remain
649. POST	EL. 79	No		Sheet 7	To Remain
650. POST	EL. 79	No		Sheet 7	To Remain
651. POST	EL. 78	No		Sheet 7	To Remain
652. POST	EL. 78	No		Sheet 7	To Remain
653. POST	EL. 78	No		Sheet 7	To Remain
654. POST	EL. 79	No		Sheet 7	To Remain
655. POST	EL. 79	No		Sheet 7	To Remain
656. POST	EL. 78	No		Sheet 7	To Remain
657. POST	EL. 78	No		Sheet 7	To Remain
658. POST	EL. 79	No		Sheet 7	To Remain
659. POST	EL. 79	No		Sheet 7	To Remain
660. POST	EL. 80	No		Sheet 7	To Remain
661. POST	EL. 80	No		Sheet 7	To Remain
662. POST	EL. 80	No		Sheet 7	To Remain
663. FENCE	EL. 79	No		Sheet 7	To Remain
664. FENCE	EL. 23	No		Sheet 7	To Remain
665. FENCE	EL. 15	No		Sheet 7	To Remain
666. BUILDING	EL. 24	No		Sheet 8	To Remain
667. BUILDING	EL. 28	No		Sheet 8	To Remain
668. BUILDING	EL. 30	No		Sheet 8	To Remain
669. BUILDING	EL. 31	No		Sheet 8	To Remain
670. BUILDING	EL. 30	No		Sheet 8	To Remain
671. BUILDING	EL. 30	No		Sheet 8	To Remain
672. BUILDING	EL. 30	No		Sheet 8	To Remain
673. BUILDING	EL. 30	No		Sheet 8	To Remain
674. FENCE	EL. 22	No		Sheet 8	To Remain
675. LIGHT	EL. 18	No		Sheet 8	To Remain
676. LIGHT	EL. 18	No		Sheet 8	To Remain
677. LIGHT	EL. 21	No		Sheet 8	To Remain

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/12/02  
 BY P. L. O'Neil  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-600  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature]  
 Verne [Signature] Chief of Planning  
 Date

**USKH** Architecture • Engineering  
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

**KETCHIKAN INTERNATIONAL AIRPORT**  
**FEATURE & OBSTRUCTION**  
**TABLES**  
**KETCHIKAN, ALASKA**

PLANNED BY: K.L.L. DETAILED BY: C.M.B. CHECKED BY: D.L.M.

DATE: JULY 2002 SHEET 15 OF 22

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FEATURE & OBSTRUCTION TABLE					
Description	Elevation (MSL)	Obstruction	Obstruction	Sheet No: 200'/2000'	Recommendation
678. LIGHT	EL 26	No		Sheet 8 5	To Remain
679. LIGHT	EL 33	No		Sheet 8 5	To Remain
680. FENCE	EL 26	No		Sheet 8 5	To Remain
681. FENCE	EL 32	No		Sheet 8 5	To Remain
682. FENCE	EL 29	No		Sheet 8 5	To Remain
683. FENCE	EL 20	No		Sheet 8 5	To Remain
684. FENCE	EL 20	No		Sheet 8 5	To Remain
685. FENCE	EL 26	No		Sheet 8 5	To Remain
686. BUILDING	EL 29	No		Sheet 8 5	To Remain
687. FENCE	EL 29	No		Sheet 8 5	To Remain
688. SIGN	EL 33	No		Sheet 8 5	To Remain
689. FENCE	EL 28	No		Sheet 8 5	To Remain
690. FENCE	EL 34	No		Sheet 8 5	To Remain
691. BUILDING	EL 46	No		Sheet 8 5	To Remain
692. FENCE	EL 38	No		Sheet 8 5	To Remain
693. LIGHT	EL 60	No		Sheet 8 5	To Remain
694. LIGHT	EL 58	No		Sheet 8 5	To Remain
695. LIGHT	EL 54	No		Sheet 8 5	To Remain
696. LIGHT	EL 68	No		Sheet 8 5	To Remain
697. FENCE	EL 41	No		Sheet 8 5	To Remain
698. MISC. OBJECT	EL 40	No		Sheet 8 5	To Remain
699. LIGHT	EL 59	No		Sheet 8 5	To Remain
700. LIGHT	EL 53	No		Sheet 8 5	To Remain
701. BUILDING	EL 48	No		Sheet 8 5	To Remain
702. LIGHT	EL 62	No		Sheet 8 5	To Remain
703. FENCE	EL 40	No		Sheet 8 5	To Remain
704. BUILDING	EL 102	No		Sheet 8 5	To Remain
705. BUILDING	EL 56	No		Sheet 8 5	To Remain
706. LIGHT	EL 46	No		Sheet 8 5	To Remain
707. LIGHT	EL 39	No		Sheet 8 5	To Remain
708. FENCE	EL 22	No		Sheet 8 5	To Remain
709. LIGHT	EL 45	No		Sheet 8 5	To Remain
710. FENCE	EL 45	No		Sheet 8 5	To Remain
711. SIGN	EL 41	No		Sheet 8 5	To Remain
712. BUILDING	EL 68	No		Sheet 8 5	To Remain
713. BUILDING	EL 53	No		Sheet 8 5	To Remain
714. BUILDING	EL 74	No		Sheet 8 5	To Remain
715. LIGHT	EL 61	No		Sheet 8 5	To Remain
716. BUILDING	EL 83	No		Sheet 8 5	To Remain
717. LIGHT	EL 64	No		Sheet 8 5	To Remain
718. FENCE	EL 39	No		Sheet 8 5	To Remain
719. FENCE	EL 46	No		Sheet 8 5	To Remain
720. TANK	EL 48	No		Sheet 8 5	To Remain
721. BUILDING	EL 49	No		Sheet 8 5	To Remain
722. BUILDING	EL 47	No		Sheet 8 5	To Remain
723. BUILDING	EL 55	No		Sheet 8 5	To Remain
724. FENCE	EL 39	No		Sheet 8 5	To Remain
725. BUILDING	EL 31	No		Sheet 8 5	To Remain
726. MISC. OBJECT	EL 49	No		Sheet 8 5	To Remain
727. MISC. OBJECT	EL 47	No		Sheet 8 5	To Remain
728. UTILITY	EL 41	No		Sheet 8 5	To Remain
729. MISC. OBJECT	EL 41	No		Sheet 8 5	To Remain
730. UTILITY	EL 42	No		Sheet 8 5	To Remain
731. LIGHT	EL 41	No		Sheet 8 5	To Remain
732. FENCE	EL 27	No		Sheet 8 5	To Remain
733. LIGHT	EL 42	No		Sheet 8 5	To Remain
734. FENCE	EL 18	No		Sheet 8 5	To Remain
735. LIGHT	EL 24	No		Sheet 8 5	To Remain
736. LIGHT	EL 24	No		Sheet 8 5	To Remain
737. FENCE	EL 27	No		Sheet 8 5	To Remain
738. FENCE	EL 25	No		Sheet 8 5	To Remain
739. MISC. OBJECT	EL 24	No		Sheet 8 5	To Remain
740. FENCE	EL 20	No		Sheet 8 5	To Remain
741. BUILDING	EL 29	No		Sheet 8 5	To Remain
742. BUILDING	EL 28	No		Sheet 8 5	To Remain
743. DECK	EL 22	No		Sheet 8 5	To Remain
744. FENCE	EL 28	No		Sheet 8 5	To Remain
745. ANTENNA	EL 117	No		Sheet 8 5	To Remain
746. BUILDING	EL 73	No		Sheet 8 5	To Remain
747. BUILDING	EL 73	No		Sheet 8 5	To Remain
748. ANTENNA	EL 81	No		Sheet 8 5	To Remain
749. BUILDING	EL 73	No		Sheet 8 5	To Remain
750. BUILDING	EL 88	No		Sheet 8 5	To Remain
751. BUILDING	EL 74	No		Sheet 8 5	To Remain
752. MISC. OBJECT	EL 77	No		Sheet 8 5	To Remain
753. FENCE	EL 30	No		Sheet 8 5	To Remain
754. FENCE	EL 29	No		Sheet 8 5	To Remain
755. UTILITY	EL 82	No		Sheet 8 5	To Remain
756. MISC. OBJECT	EL 86	No		Sheet 8 5	To Remain
757. FENCE	EL 50	No		Sheet 8 5	To Remain
758. FENCE	EL 43	No		Sheet 8 5	To Remain
759. MISC. OBJECT	EL 87	No		Sheet 8 5	To Remain
760. UTILITY	EL 91	No		Sheet 8 5	To Remain
761. FENCE	EL 58	No		Sheet 8 5	To Remain
762. MISC. OBJECT	EL 81	No		Sheet 8 5	To Remain
763. FENCE	EL 81	No		Sheet 8 5	To Remain
764. MISC. OBJECT	EL 21	No		Sheet 8 5	To Remain
765. ANTENNA	EL 64	No		Sheet 8 5	To Remain
766. MISC. OBJECT	EL 27	No		Sheet 8 5	To Remain
767. UTILITY POLE	EL 78	No		Sheet 8 5	To Remain
768. UTILITY POLE	EL 78	No		Sheet 8 5	To Remain
769. UTILITY POLE	EL 80	No		Sheet 8 5	To Remain
770. UTILITY POLE	EL 80	No		Sheet 8 5	To Remain
771. UTILITY POLE	EL 81	No		Sheet 9 5	To Remain
772. ANTENNA	EL 81	No		Sheet 9 5	To Remain
773. UTILITY POLE	EL 81	No		Sheet 9 5	To Remain
774. UTILITY	EL 78	No		Sheet 9 5	To Remain
775. FENCE	EL 76	No		Sheet 9 5	To Remain
776. ANTENNA	EL 94	No		Sheet 9 5	To Remain

FEATURE & OBSTRUCTION TABLE					
Description	Elevation (MSL)	Obstruction	Obstruction	Sheet No: 200'/2000'	Recommendation
777. MISC. OBJECT	EL 66	No		Sheet 4 2	
778. ANTENNA	EL 72	No		Sheet 4 2	
779. MISC. OBJECT	EL 42	No		Sheet 4 2	
780. MISC. OBJECT	EL 57	No		Sheet 4 2	
781. BUILDING	EL 237	No		Sheet 2	

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
SUBJECT TO FAA APPROVAL LETTER  
FAA APPROVAL/LETTER DATE 11/2/02  
BY: *Paul W. Coe*  
FAA AIRPORT DIVISION  
ALASKAN REGION, AAL-600  
PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
APPROVED BY: *[Signature]* 7/2/02  
Verne S. Sagerberg, Transportation Planner  
for Andy Hughes, Chief of Planning

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STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

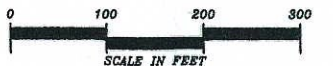
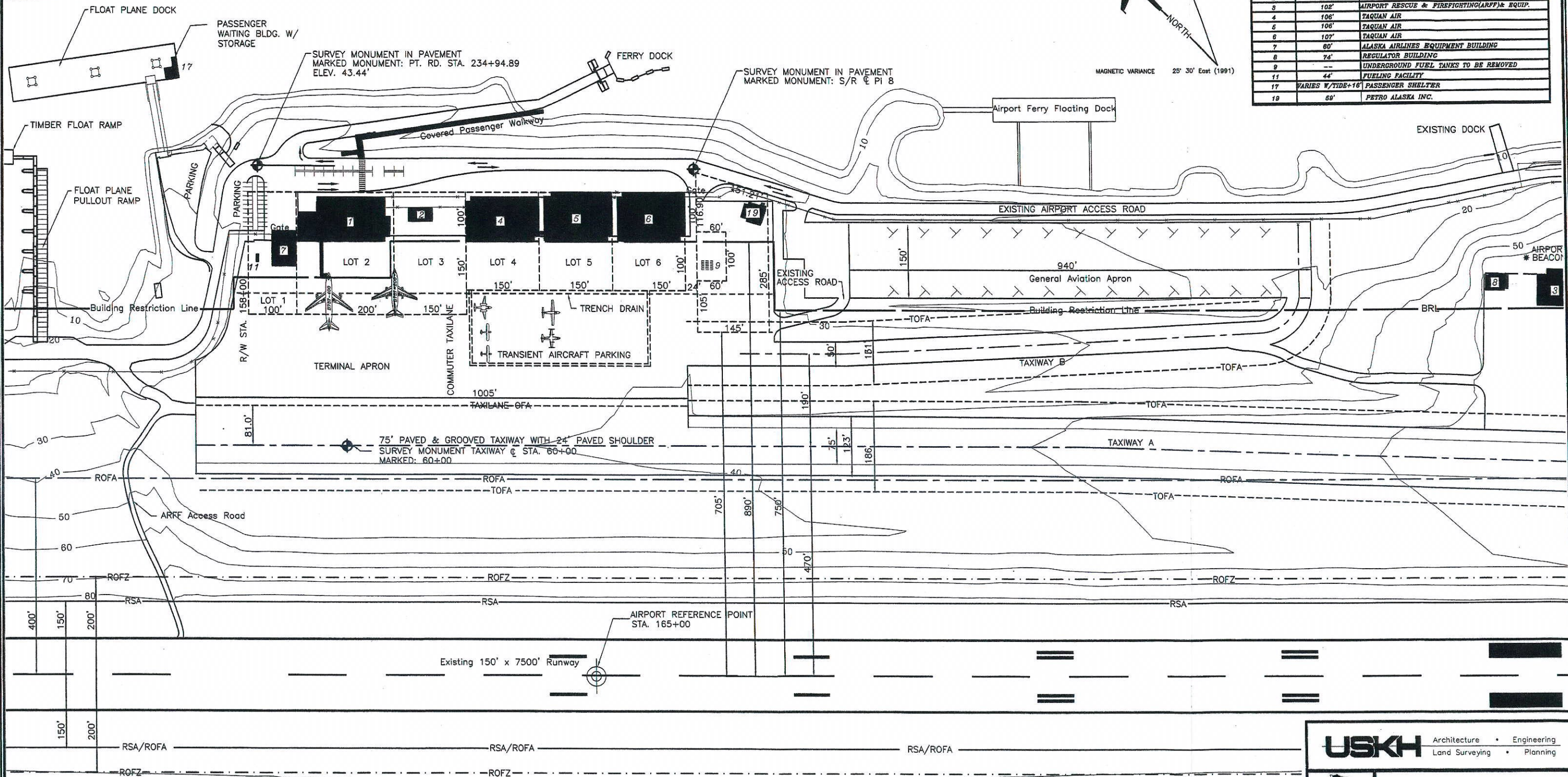
**KETCHIKAN INTERNATIONAL AIRPORT  
FEATURE & OBSTRUCTION  
TABLES**  
KETCHIKAN, ALASKA

PLANNED BY: K.L.L.    DETAILED BY: C.M.B.    CHECKED BY: D.L.M.  
DATE: JULY 2002    SHEET 16 OF 22

TONGASS NARROWS

PROPERTY LINE

BUILDINGS/FACILITIES		
EXISTING	ELEV.(MSL)	DESCRIPTION
1	138'	TERMINAL BUILDING
2	71'	FISH COOLER
3	102'	AIRPORT RESCUE & FIREFIGHTING(ARFF) EQUIP.
4	106'	TAQUAN AIR
5	106'	TAQUAN AIR
6	107'	TAQUAN AIR
7	80'	ALASKA AIRLINES EQUIPMENT BUILDING
8	74'	REGULATOR BUILDING
9	--	UNDERGROUND FUEL TANKS TO BE REMOVED
11	44'	FUELING FACILITY
17	VARIES W/TIDE+18'	PASSENGER SHELTER
19	68'	PETRO ALASKA INC.



FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
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 FAA APPROVAL/LETTER DATE 11/12/02  
 BY: *[Signature]*  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-800  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: *[Signature]* 7/12/02  
 Verne Skagerberg, Transportation Planner Date  
 for Andy Hughes, Chief of Planning

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 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT  
**EXISTING  
 TERMINAL AREA DRAWING**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.      DETAILED BY: C.M.B.      CHECKED BY: D.L.M.  
 DATE: JULY 2002      SHEET 17 OF 22

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TONGASS NARROWS

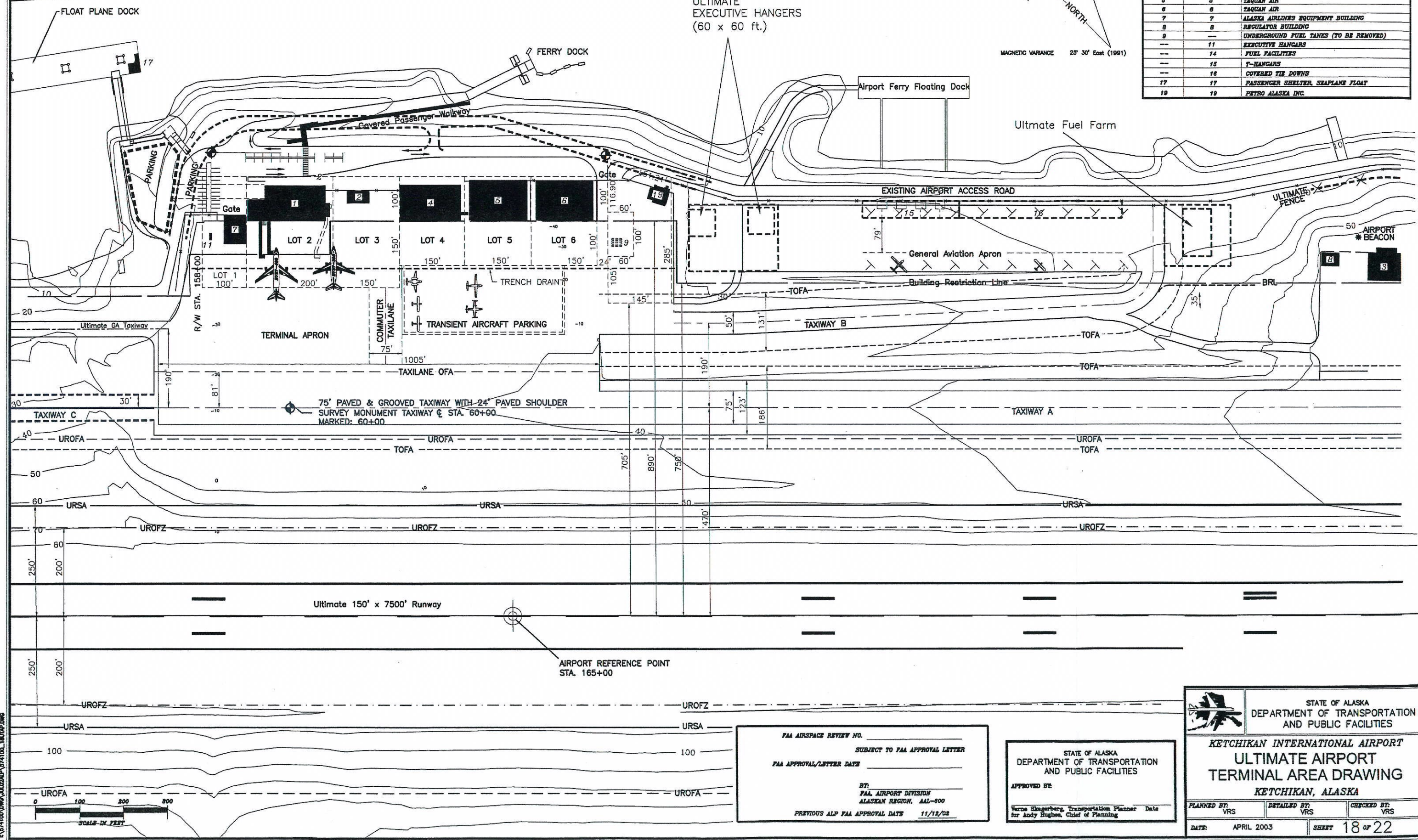
PROPERTY LINE

ULTIMATE EXECUTIVE HANGARS (60 x 60 ft.)

MAGNETIC VARIANCE 25° 30' East (1991)



BUILDINGS/FACILITIES		
EXISTING	ULTIMATE	DESCRIPTION
1	1	TERMINAL BUILDING
2	2	FISH COOLER
3	3	AIRPORT RESCUE & FIREFIGHTING (ARFF) EQUIP.
4	4	TAQUAN AIR
5	5	TAQUAN AIR
6	6	TAQUAN AIR
7	7	ALASKA AIRLINES EQUIPMENT BUILDING
8	8	REGULATOR BUILDING
9	9	UNDERGROUND FUEL TANKS (TO BE REMOVED)
11	11	EXECUTIVE HANGARS
14	14	FUEL FACILITIES
15	15	T-HANGARS
16	16	COVERED TIE DOWNS
17	17	PASSENGER SHELTER, SEAPLANE FLOAT
19	19	PETRO ALASKA INC.



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FAA AIRSPACE REVIEW NO. \_\_\_\_\_  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE \_\_\_\_\_  
 BY:  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-600  
 PREVIOUS ALP FAA APPROVAL DATE 11/12/02

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY:  
 Verne Skagerberg, Transportation Planner Date \_\_\_\_\_  
 for Andy Hughes, Chief of Planning

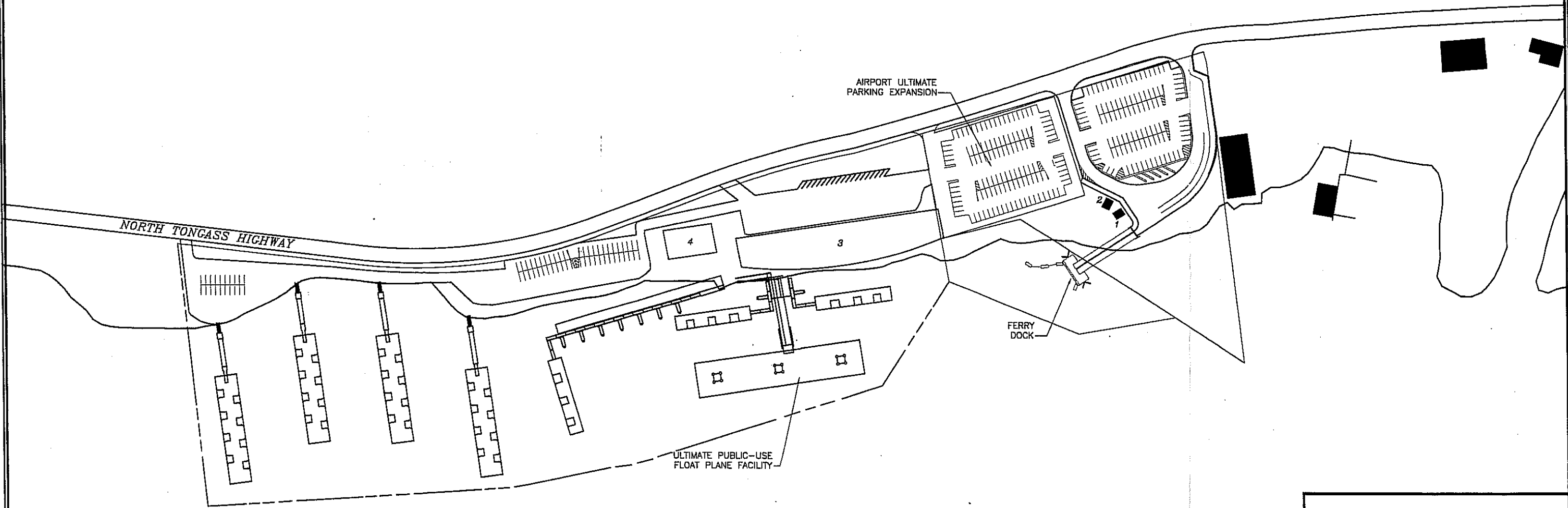
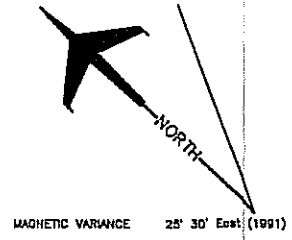
STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

**KETCHIKAN INTERNATIONAL AIRPORT  
ULTIMATE AIRPORT  
TERMINAL AREA DRAWING  
KETCHIKAN, ALASKA**

PLANNED BY: VRS	DETAILED BY: VRS	CHECKED BY: VRS
DATE: APRIL 2003		SHEET 18 OF 22



BUILDINGS/FACILITIES		
EXISTING	ULTIMATE	DESCRIPTION
-	1	PASSENGER SHELTER
-	2	STORAGE BUILDING
-	3	TERMINAL BUILDING
-	4	HANGAR



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**KETCHIKAN INTERNATIONAL AIRPORT**  
**ULTIMATE FLOAT PLANE**  
**TERMINAL AREA DRAWING**  
KETCHIKAN, ALASKA

PLANNED BY: K.L.L.    DETAILED BY: C.W.B.    CHECKED BY: D.L.M.

DATE: JULY 2002    SHEET 19 of 22

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
SUBJECT TO FAA APPROVAL LETTER  
FAA APPROVAL/LETTER DATE 11/12/02  
BY: [Signature]  
FAA AIRPORT DIVISION  
ALASKAN REGION, AAL-800  
PREVIOUS ALP FAA APPROVAL DATE 7/1/87

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
APPROVED BY: [Signature] 7/12/02  
Vernie [unclear], Transportation Planner Date  
for Andy Hughes, Chief of Planning

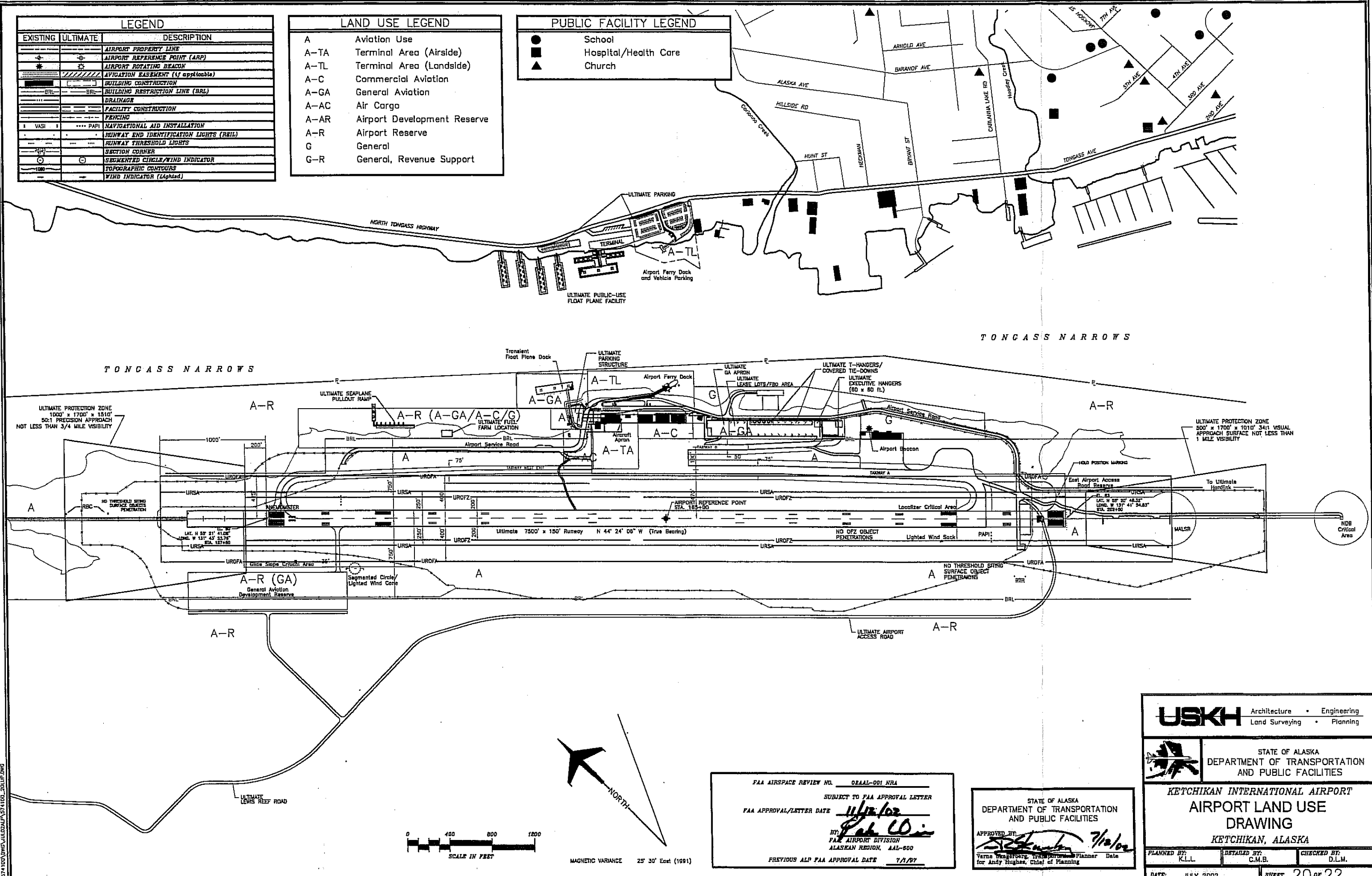


DRAWING NUMBER: 100-100-100-100

LEGEND		DESCRIPTION
EXISTING	ULTIMATE	
- - - - -	- - - - -	AIRPORT PROPERTY LINE
+	+	AIRPORT REFERENCE POINT (ARP)
*	*	AIRPORT ROTATING BEACON
		AVIGATION EASEMENT (if applicable)
▬	▬	BUILDING CONSTRUCTION
▬	▬	BUILDING RESTRICTION LINE (BRL)
▬	▬	DRAINAGE
▬	▬	FACILITY CONSTRUCTION
▬	▬	FENCING
▬	▬	NAVIGATIONAL AID INSTALLATION
▬	▬	RUNWAY END IDENTIFICATION LIGHTS (REIL)
▬	▬	RUNWAY THRESHOLD LIGHTS
▬	▬	SECTION CORNER
▬	▬	SEGMENTED CIRCLE/WIND INDICATOR
▬	▬	TOPOGRAPHIC CONTOURS
▬	▬	WIND INDICATOR (lighted)

LAND USE LEGEND	
A	Aviation Use
A-TA	Terminal Area (Airside)
A-TL	Terminal Area (Landside)
A-C	Commercial Aviation
A-GA	General Aviation
A-AC	Air Cargo
A-AR	Airport Development Reserve
A-R	Airport Reserve
G	General
G-R	General, Revenue Support

PUBLIC FACILITY LEGEND	
●	School
■	Hospital/Health Care
▲	Church



FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/2/02  
 BY: *Pat W...*  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-600  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: *[Signature]* 7/10/02  
 Verne Haggberg, Transportation Planner  
 Date for Andy Hughes, Chief of Planning

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**KETCHIKAN INTERNATIONAL AIRPORT**  
**AIRPORT LAND USE**  
**DRAWING**  
**KETCHIKAN, ALASKA**

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002		SHEET 20 OF 22

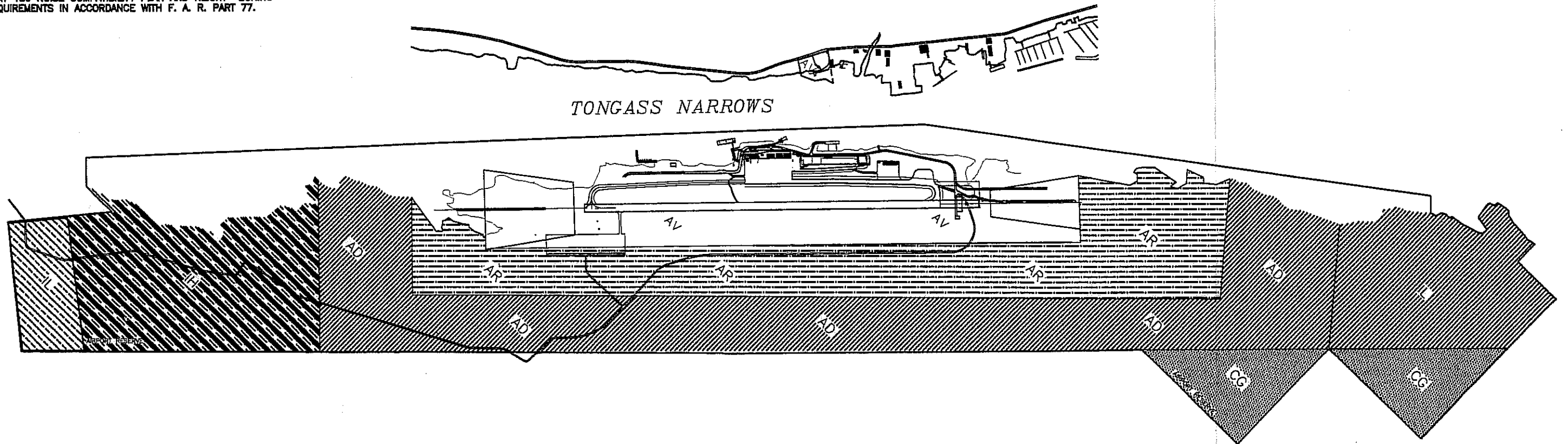
1:374 100 DIMS W/ 0.500" = 1" 100 250 LUP.DWG

LAND USE LEGEND

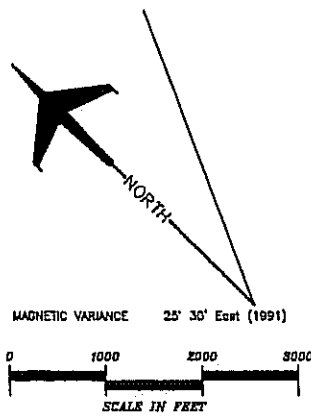
-  AVIATION
-  AIRPORT RESERVE
-  AIRPORT DEVELOPMENT
-  HEAVY INDUSTRIAL
-  LIGHT INDUSTRIAL
-  GENERAL COMMERCIAL

GENERAL NOTES:

1. ALL PROPERTY WITHIN THE AIRPORT RESERVE SHOULD BE ZONED MBR (MOBILE HOME RESTRICTED).
2. ALL ZONING REQUESTS WITHIN THE AIRPORT RESERVE SHOULD COMPLY WITH THE KETCHIKAN INTERNATIONAL AIRPORT F. A. R. PART 150 NOISE COMPATIBILITY PLAN AND HEIGHT ZONING REQUIREMENTS IN ACCORDANCE WITH F. A. R. PART 77.



TONGASS NARROWS



FAA AIRSPACE REVIEW NO. 08AAL-001 HRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/10/02  
 BY: Pak L. Ovi  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-800  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/87

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature]  
 Verne Blomquist, Transportation Planner Date for Andy Hughes, Chief of Planning

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KETCHIKAN INTERNATIONAL AIRPORT  
**AIRPORT RESERVE  
 LAND USE DRAWING**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002		SHEET 21 of 22

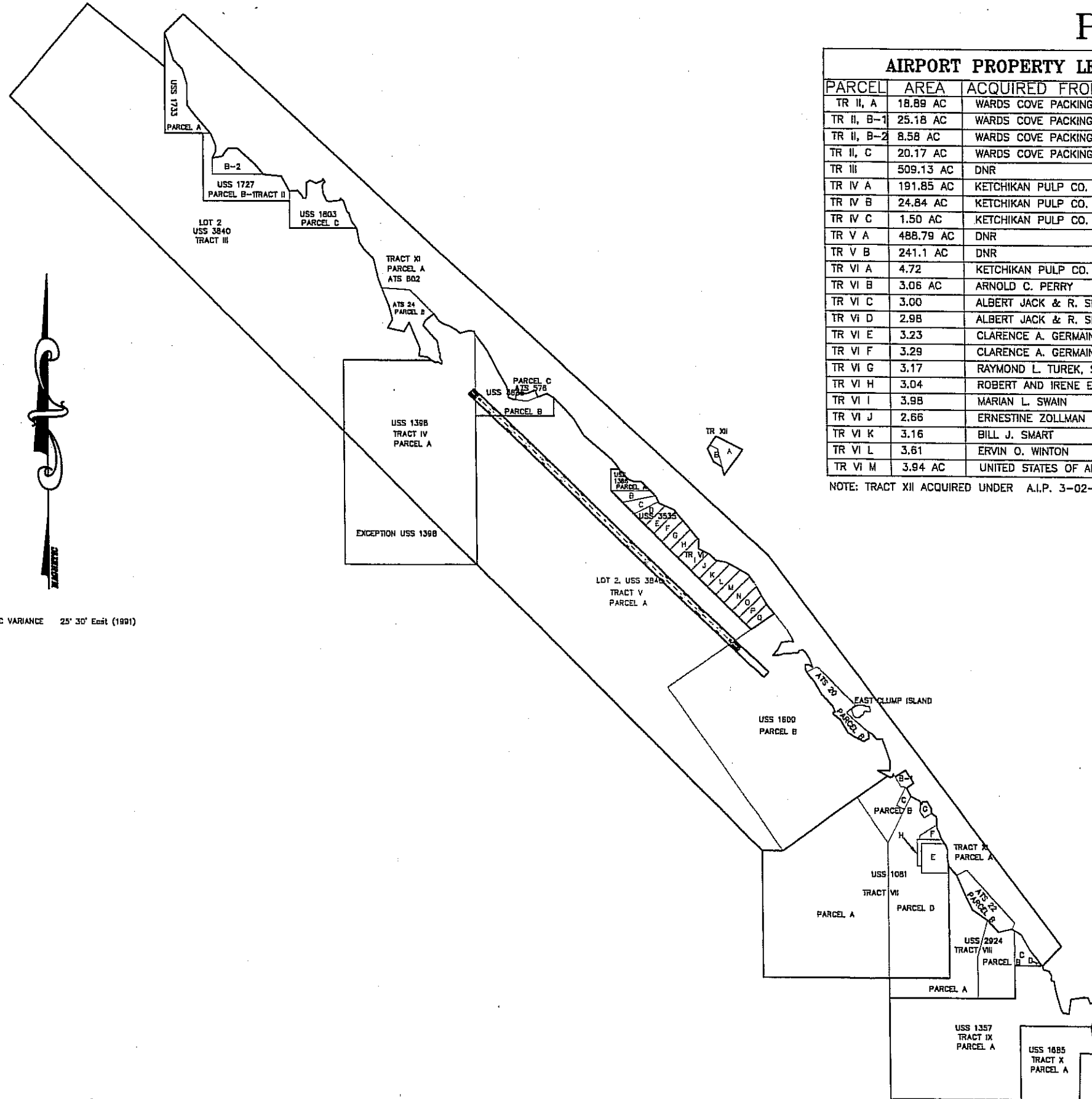
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# PROPERTY STATUS

AIRPORT PROPERTY LEGEND			
PARCEL	AREA	ACQUIRED FROM	DATE
TR II, A	18.89 AC	WARDS COVE PACKING CO.	1/7/70
TR II, B-1	25.18 AC	WARDS COVE PACKING CO.	1/7/70
TR II, B-2	8.58 AC	WARDS COVE PACKING CO.	1/7/70
TR II, C	20.17 AC	WARDS COVE PACKING CO.	1/7/70
TR III	509.13 AC	DNR	7/19/68
TR IV A	191.85 AC	KETCHIKAN PULP CO.	5/18/69
TR IV B	24.84 AC	KETCHIKAN PULP CO.	5/18/69
TR IV C	1.50 AC	KETCHIKAN PULP CO.	5/18/69
TR V A	488.79 AC	DNR	7/19/68
TR V B	241.1 AC	DNR	7/19/68
TR VI A	4.72 AC	KETCHIKAN PULP CO.	5/18/69
TR VI B	3.06 AC	ARNOLD C. PERRY	2/7/69
TR VI C	3.00 AC	ALBERT JACK & R. SPROMBERG	10/24/68
TR VI D	2.98 AC	ALBERT JACK & R. SPROMBERG	10/24/68
TR VI E	3.23 AC	CLARENCE A. GERMAIN	10/30/68
TR VI F	3.29 AC	CLARENCE A. GERMAIN	10/30/68
TR VI G	3.17 AC	RAYMOND L. TUREK, SR.	2/17/69
TR VI H	3.04 AC	ROBERT AND IRENE E. DOTSON	10/28/68
TR VI I	3.98 AC	MARIAN L. SWAIN	10/27/68
TR VI J	2.66 AC	ERNESTINE ZOLLMAN	10/29/68
TR VI K	3.16 AC	BILL J. SMART	2/17/69
TR VI L	3.61 AC	ERVIN O. WINTON	11/4/68
TR VI M	3.94 AC	UNITED STATES OF AMERICA	4/23/69

AIRPORT PROPERTY LEGEND			
PARCEL	AREA	ACQUIRED FROM	DATE
TR VI N	3.84	PAUL J. AND FLOY E. WINGREN	10/25/68
TR VI O	3.02	ERVIN O. WINTON	11/4/68
TR VI P	2.77	NORMAN P. AND ELLEN OLSEN	11/11/68
TR VI Q	2.60	LEONARD O. AND OSIE OLSEN	11/20/68
TR VII A	180.66	CLARENCE M. KRUEGER	6/9/72
TR VII B	16.12	DAVID B. PERRY	6/12/74
TR VII B-1	1.73	DAVID B. PERRY	6/12/74
TR VII C	1.49	JESSE GALLOWAY & D. GALLOWAY	2/10/71
TR VII D	79.22	VINCENT BOUCHER & H. BOUCHER	1/6/72
TR VII E	7.34	RONALD FULLER & A. FULLER	7/6/71
TR VII F	1.74	LEONA I. STENSLAND	5/26/72
TR VII G	1.27	GILBERT MCLEOD & C. MCLEOD	3/15/72
TR VII H	1.82	JAMES M. HARRIS	6/6/72
TR VIII A	42.69	HARRIET POND & H. STENSLAND	1/8/71
TR VIII B	23.36	HARRIET POND & H. STENSLAND	1/8/71
TR VIII C	4.66	HARRIET POND & H. STENSLAND	1/8/71
TR VIII D	0.09	HARRIET POND	5/27/70
TR IX	153.52 AC	J. SEABOLT, E. & H. FURUSETH	1/8/71
TR X	42.49 AC	ILMT / STATE OF ALASKA DNR	7/19/68
TR XI A	518 AC	ILMT / STATE OF ALASKA DNR	8/4/70
TR XI B	20.3 AC	ILMT / STATE OF ALASKA DNR	8/4/70
TR XII A	5.14	WAYNE CONSTRUCTION INC.	8/30/90
TR XII B	1.33	ILMT / STATE OF ALASKA DNR	1/15/93

NOTE: TRACT XII ACQUIRED UNDER A.I.P. 3-02-0114-0286.



MAGNETIC VARIANCE 25' 30" East (1991)



FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/12/02  
 BY *Paul L. Di...*  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-800  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/87

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: *[Signature]*  
 Verne B. Bergberg, Transportation Planner  
 for Andy Hughes, Chief of Planning

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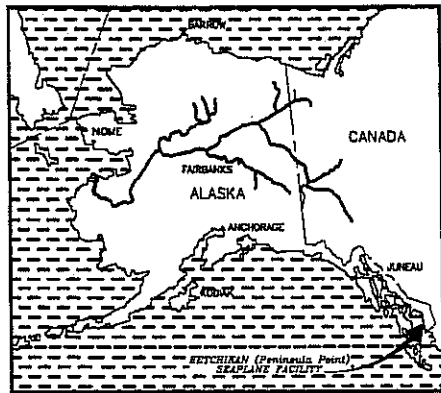
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

**KETCHIKAN INTERNATIONAL AIRPORT**

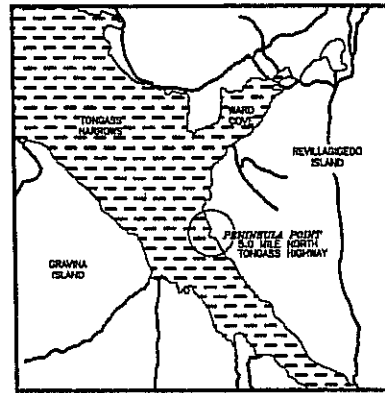
**PROPERTY MAP**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.    DETAILED BY: C.M.B.    CHECKED BY: D.L.M.  
 DATE: JULY 2002    SHEET 22 OF 22

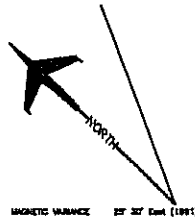
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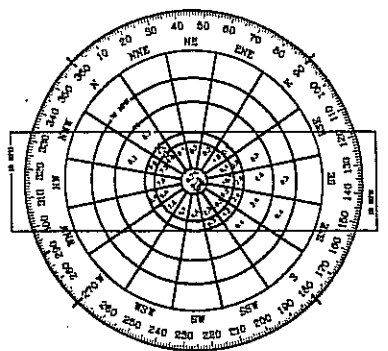
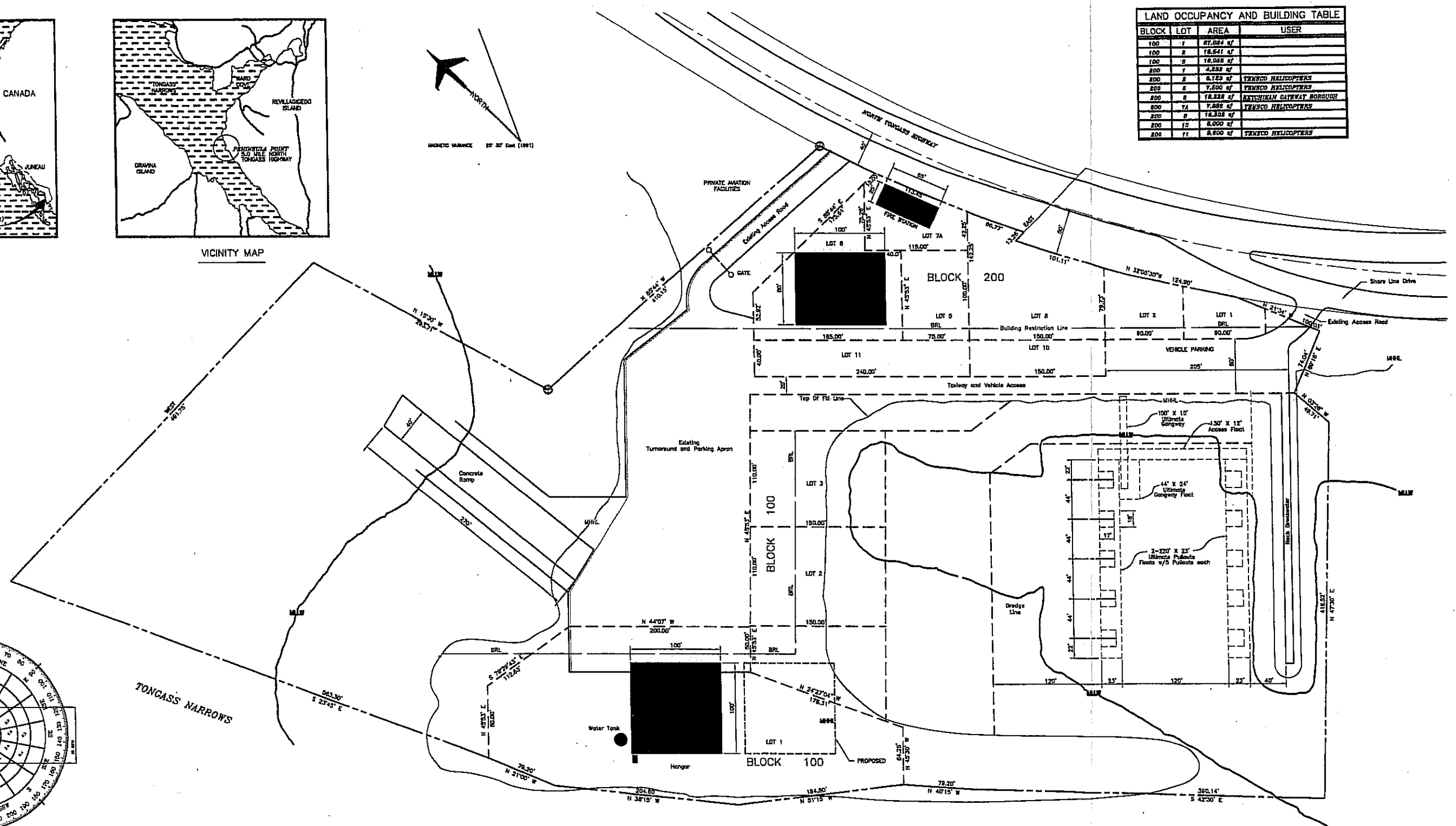
LOCATION MAP



VICINITY MAP



BLOCK	LOT	AREA	USER
100	1	87,084 sq'	
100	2	18,641 sq'	
100	3	18,058 sq'	
200	1	4,288 sq'	
200	2	6,123 sq'	VERICO HELICOPTERS
200	3	7,500 sq'	VERICO HELICOPTERS
200	4	18,288 sq'	KETCHIKAN AIRWAY BOROUGH
200	5A	7,888 sq'	VERICO HELICOPTERS
200	6	18,308 sq'	
200	7	8,000 sq'	VERICO HELICOPTERS



ALL WEATHER WIND ROSE

WIND DATA	
WIND SPEED	116 MPH
NW-SE Waterline	69.52%

SOURCE: U.S. WEATHER BUREAU  
KETCHIKAN INTERNATIONAL AIRPORT  
KETCHIKAN, ALASKA  
AUGUST - APRIL 1941

AIRPORT DATA	EXISTING	ULTIMATE
	GENERAL UTILITY	GENERAL UTILITY
AIRPORT TYPE	B-1	B-1
AIRPORT REFERENCE CODE	B-1	B-1
MAXIMUM WING SPAN	75'	75'
AIRPORT ELEVATION	SEA LEVEL	SEA LEVEL
MEAN MAXIMUM TEMPERATURE OF WARMEST MONTH	64° F	64° F
SURFACE	WATERLAND	WATERLAND
AIRPORT OWNERS TERMINAL NAVIGATIONAL AIDS	Channel Light On Production	
FULL-UP RAMP WIDTH	45'	45'
FULL-UP RAMP GRADIENT	1%	1%
FULL-UP RAMP GRADIENT	N/A	N/A
FULL DIMENSIONS	N/A	N/A
CANAL WIDTHS	N/A	N/A
GRADIENT AT MIT	N/A	N/A
GRADIENT AT MIT	N/A	N/A
UTILITIES AVAILABLE	LIGHTS	LIGHTS

LEGEND		
EXISTING	ULTIMATE	DESCRIPTION
[Symbol]	[Symbol]	AIRPORT PROPERTY LINE
[Symbol]	[Symbol]	BUILDING CONSTRUCTION
[Symbol]	[Symbol]	BUILDING RESTRICTION LINE (BRL)
[Symbol]	[Symbol]	DREDGE
[Symbol]	[Symbol]	TOPOGRAPHIC CONTOURS
[Symbol]	[Symbol]	TRIALS CIP SURVEY MONUMENT

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
SUBJECT TO FAA APPROVAL LETTER  
FAA APPROVAL/LETTER DATE 11/12/02  
BY: [Signature]  
FAA AIRPORT DIVISION  
ALASKAN REGION, AAL-800  
PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
APPROVED BY: [Signature]  
Verne [Signature], [Title] Planner  
for Andy Hughes, Chief of Planning



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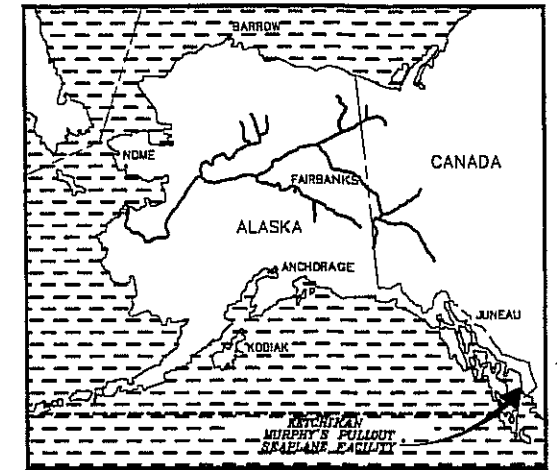
STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT  
PENINSULA POINT  
SEAPLANE FACILITY  
AIRPORT LAYOUT PLAN  
KETCHIKAN, ALASKA

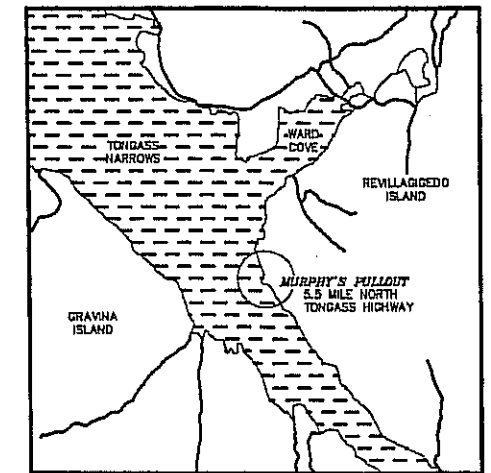
PLANNED BY: K.L.L.    DETAILED BY: C.D.P.    CHECKED BY: D.L.M.  
DATE: JULY 2002    SHEET 1 OF 1

AIRPORT DATA	WATERLANE	
	EXISTING	ULTIMATE
AIRPORT TYPE	GENERAL UTILITY	GENERAL UTILITY
AIRPORT REFERENCE CODE	B-II	B-II
AIRPORT ELEVATION	SEA LEVEL	SEA LEVEL
MEAN MAXIMUM TEMPERATURE OF HOTTEST MONTH	64° F	64° F
FLOAT ELEVATION	Varies W/Tide	Varies W/Tide
SURFACE	10,000' ± 1500' ±	10,000' ± 1500' ±
AIRPORT and TERMINAL NAVIGATIONAL AIDS	NONE	NONE
FLOAT DIMENSIONS	220' ± 45'	220' ± 45'
PULL-UP RAMP WIDTH	15'	15'
MAXIMUM WING SPAN	40'	40'
GANGWAY WIDTH	8'	VARIES
GRADIENT AT MLT	0.418%	0.418%
GRADIENT AT NET	0.186%	0.186%
UTILITIES AVAILABLE	LIGHTS	LIGHTS

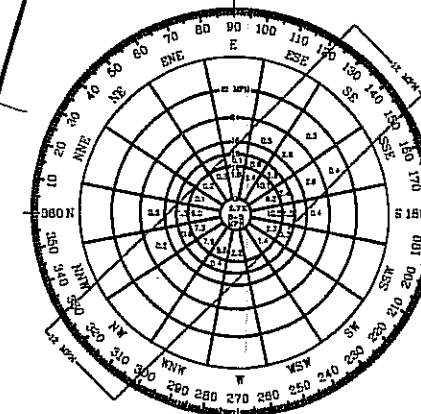
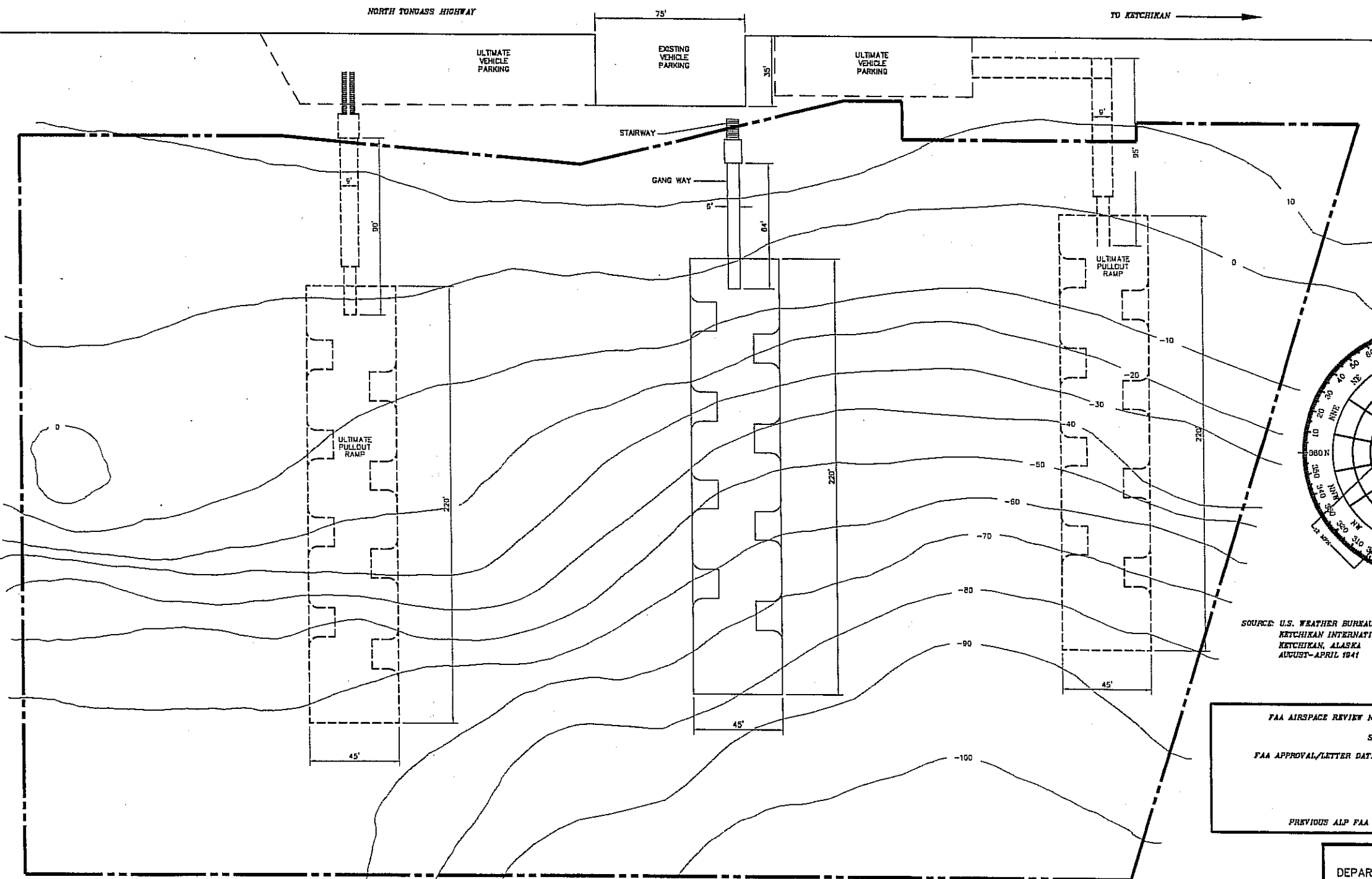
LEGEND		
EXISTING	ULTIMATE	DESCRIPTION
---	---	AIRPORT PROPERTY LINE
---	---	BUILDING CONSTRUCTION
---	---	TOPOGRAPHIC CONTOURS



LOCATION MAP



VICINITY MAP



ALL WEATHER WIND ROSE

SOURCE: U.S. WEATHER BUREAU  
KETCHIKAN INTERNATIONAL AIRPORT  
KETCHIKAN, ALASKA  
AUGUST-APRIL 1941

WIND DATA	
	15 MPH
NW-SE Waterlane	99.52%

FAA AIRSPACE REVIEW NO. 02AAL-001 HRA  
SUBJECT TO FAA APPROVAL LETTER  
FAA APPROVAL/LETTER DATE 11/12/02  
BY *[Signature]*  
FAA AIRPORT DIVISION  
ALASKAN REGION, AAL-600  
PREVIOUS AIP FAA APPROVAL DATE 7/1/87

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
APPROVED BY *[Signature]*  
Vernie [Signature] Planner Date  
for Andy Huggins, Chief of Planning

**USKH** Architecture • Engineering  
Land Surveying • Planning



STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT  
MURPHY'S PULLOUT  
SEAPLANE FACILITY  
AIRPORT LAYOUT PLAN  
KETCHIKAN, ALASKA

PLANNED BY: K.L.L.    DETAILED BY: C.M.B.    CHECKED BY: D.L.M.

DATE: JULY 2002    SHEET 1 OF 1

TONGASS NARROWS

## Appendix B

### Environmental Appendix

The Environmental Appendix, published under separate cover in February 2002, addresses all development projects anticipated for the airport at a Tier I level of detail. Issues associated with proposed actions for Tier I projects are identified, but the document does not describe levels of impact, resolve issues, or involve obtaining permits for those projects. Initial coordination with resource and regulating agencies has been incorporated into the document.

Development of individual projects will involve environmental documentation in accordance with FAA Order 5050.4A Airport Environmental Handbook. Tier II documentation for individual projects will include all required permits, authorizations, and clearances.

Interested persons may contact DOT&PF to obtain a copy of the Environmental Appendix at the following address:

DOT&PF Southeast Region  
6860 Glacier Highway  
Juneau, Alaska 99801-7999  
ATTN: Verne Skagerberg, Transportation Planner  
verne\_skagerberg@dot.state.ak.us  
907/465-4477

# **Ketchikan International Airport Master Plan**

---

*Prepared for:  
State of Alaska Department of Transportation  
& Public Facilities*

*Prepared by:  
USKH, Inc.*

*June 2003*

KETCHIKAN GATEWAY BOROUGH

RESOLUTION NO. 1732

A RESOLUTION OF THE ASSEMBLY OF THE KETCHIKAN GATEWAY BOROUGH, ALASKA, ACCEPTING THE KETCHIKAN INTERNATIONAL AIRPORT MASTER PLAN FINAL DRAFT AND PROVIDING FOR AN EFFECTIVE DATE.

RECITALS

A. The Ketchikan International Airport Master Plan is in its final draft.

B. The previous draft was presented to the Airport Affairs Committee and at public meetings held by the State of Alaska, Department of Transportation in December, 2002. Persons who had submitted comments on locations of airport services and uplands use have reviewed the resulting layout and found the solutions presented in the draft plan acceptable.

C. There have been a number of changes in the airport situation since this Master Plan Update process began. There are a number of known issues that will require re-evaluation of some portions of this plan in the future, including security demands and the Gravina Access Project completion, however much of the development of described in this update can be started now and this Plan can serve as a point of departure for further planning efforts or updates to the Plan.

D. By accepting this final draft, scores by the Aviation Project Evaluation Board will improve for projects that are imminent and the DOT will be able to bring them to completion sooner.

**NOW, THEREFORE, IN CONSIDERATION OF THE ABOVE FACTS, IT IS RESOLVED BY THE ASSEMBLY OF THE KETCHIKAN GATEWAY BOROUGH, ALASKA as follows:**

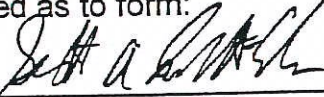
Section 1. The Ketchikan Gateway Borough accepts the final draft of the Ketchikan International Airport Master Plan.

Section 2. This resolution is effective immediately upon being signed.

ADOPTED this 5th day of May, 2003.

  
BOROUGH MAYOR

ATTEST:  
  
BOROUGH CLERK

Approved as to form:  
  
BOROUGH ATTORNEY

EFFECTIVE DATE: May 5, 2003			
ROLL CALL	YES	NO	ABSENT
BERGERON	✓		
BURTON	✓		
COOSE	✓		
LANDIS	✓		
SARBER			✓
SHAY	✓		
TIPTON	✓		
MAYOR (Tie Votes Only)			
4 AFFIRMATIVE VOTES REQUIRED FOR PASSAGE			

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- 12 - Recommended KIA Parking Improvements

\*Following report.

ACRONYMS

AASP	Alaska Aviation System Plan
ALP	Airport Layout Plan
ARFF	Aircraft Rescue and Fire Fighting
DOT&PF	State of Alaska Department of Transportation and Public Facilities
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FBO	Fixed-Base Operator
FY	Fiscal Year
GA	General Aviation
ILS	Instrument Landing System
KGB	Ketchikan Gateway Borough
KIA	Ketchikan International Airport
KW	kilowatt
lf	linear feet
NAVAIDs	Navigational Aids
RPZ	Runway Protection Zone
RSA	Runway Safety Area
sf	square feet
SRE	Snow Removal Equipment
sy	square yards

## INTRODUCTION

The Federal Aviation Administration (FAA) developed the airport master planning process to assist the nation's airports in developing expansion plans to meet future aviation demand. The Master Plan for Ketchikan International Airport (KIA) located in Ketchikan, Alaska, serves as a development guide for the Airport's short-term (5- to 10-year) needs and also addresses the needs of the airport through the long term (20 years). The Master Plan uses 1998 for a baseline year, with a planning horizon extending through to the year 2018. The Master Plan also addresses those issues for key floatplane facilities located in the Ketchikan area. This Master Plan report is organized into the following sections:

- Airport Goals and Objectives
- Existing Airport Data
- Forecasts of Aviation Demand
- Summary of Airport Improvement Needs
- Recommended Airport Improvements
- Airport Layout Plans

This Master Plan includes information within a specific study area as a basis for research, data collection, and forecasts. The study area for this Master Plan encompasses KIA and the major floatplane facilities in the area: Murphy's Pullout, Peninsula Point, and the Tongass Avenue Floatplane Docks (see **Exhibit 1**).

## 1 AIRPORT GOALS AND OBJECTIVES

The goal of the airport master plan is to provide guidelines for future airport development which will satisfy aviation demand in a financially feasible manner, while at the same time resolving aviation, environmental, and socioeconomic issues associated with planned airport improvements. Specific objectives are:

- Map the airport property identifying contours, elevations, streams, wetlands, and man-made facilities.
- Identify and describe all local aviation facilities; describe past and current air traffic and forecast future air traffic.
- Describe age and condition of existing aviation facilities, existing and future capacity constraints, and assess deficiencies; and determine improvements needed to adequately serve current and future air traffic demand.
- Identify airport development alternatives feasible to address local and area aviation needs.
- Evaluate and compare the social, economic, and environmental impacts of the various aviation development alternatives to identify and support a preferred alternative and Airport Layout Plan (ALP).
- Update the Airport Master Plan, ALP, and improvement priorities to address current and anticipated future aviation needs in a cost-effective manner.
- Describe a continuing planning process to maintain a current ALP.
- Plan for improvement of floatplane facilities.

Several documents were prepared during the course of developing this Airport Master Plan, including a “*Condition and Needs Assessment*” and a “*Project Scoping Report*.” These reports were presented to the public throughout the Master Plan process and were subsequently revised based on community and user input. The public involvement process is documented in an “*Environmental Appendix*” document (March 2002). This Master Plan report provides summary information from previous documents and presents the final plan.

## 2 EXISTING AIRPORT DATA

This section of the Master Plan provides background information on KIA and the local floatplane facilities, and is organized into the following subsections:

- Ketchikan International Airport
- Floatplane Facilities
- KIA Ownership/Management

### 2.1 Ketchikan International Airport

Ketchikan is near the southern edge of the Southeast Alaska panhandle, which extends along the Canadian border from Yakutat to Ketchikan and farther south. Southeast Alaska is part of the Inside Passage, famous for its rugged coastline of mountains and densely forested islands. Ketchikan was established in 1887 as a fishing town when a salmon cannery was built near the mouth of Ketchikan Creek. Today, Ketchikan is the primary air and marine transportation hub in southern Southeast Alaska, serving neighboring communities such as Metlakatla, Klawock, and Craig. It is situated on the shoreline of Revillagigedo Island, which is on Tongass Narrows, approximately 600 miles north of Seattle and 650 miles south of Anchorage in the Tongass National Forest. From Ketchikan, no road access to the mainland or to any other islands in the area exists. **Exhibit 2** depicts the existing facilities at KIA.

KIA occupies approximately 2,689 acres on Gravina Island, west of downtown Ketchikan. The airport is bounded by rising terrain to the south and Tongass Narrows to the north, separating the airport from the community. Airport-operated shuttle ferries provide vehicle and passenger access to the airport. The State of Alaska Department of Transportation and Public Facilities (DOT&PF) owns the airport, but the Ketchikan Gateway Borough (KGB) operates and maintains the airport through a long-term lease. The airport is classified as a Regional Center Airport in the Alaska Aviation System Plan (AASP) and serves air carrier, commercial, general aviation (GA), cargo, and military air traffic.

### 2.2 Floatplane Facilities

The floatplane facilities at the airport include a floatplane pullout, a floatplane dock, and a launch ramp for loading and unloading floatplanes. All are located adjacent to the terminal area. Access to the floatplane dock is available via a passenger boarding ramp and a vehicle ramp (20,000 pounds capacity).

Off-airport floatplane facilities in Ketchikan range from public docks and pullout ramps to private individual docks. This Master Plan addresses off-airport floatplane facilities at Peninsula Point, Murphy's Pullout, and the Tongass Avenue floatplane docks. Peninsula Point is a state-owned facility in good condition, located approximately 2 miles northwest of the airport. Several commercial air taxi operators maintain docks and passenger terminal buildings along Tongass and Water Streets on the town side of Tongass Narrows. Commercial floatplanes in Ketchikan have historically been accommodated at these docks.

The Tongass Avenue floatplane docks are located in Ketchikan on Revillagigedo Island. The docks are used for aircraft fueling, for picking up passengers, and for U.S. mail and cargo. Both Tongass Avenue floatplane docks are in good condition.

A floatplane dock is located at Murphy's Point, about 3 miles northwest of the airport. The KGB owns, operates, and maintains Murphy's Pullout. The float has pullouts for eight floatplanes. All available spaces are occupied and there's a waiting list of approximately 16 aircraft owners, maintained by KIA Management.

Fueling for floatplanes is generally provided at private docks in the area. There is dockside fueling available for floatplanes at the airport via the floatplane dock. At KIA, Aero Services currently provides aviation gasoline to the floatplane dock, transported by fuel truck.

## **2.3 KIA Airport Ownership/Management**

### ***2.3.1 Ownership/Management***

Airports in Alaska are typically owned by the State. In the case of KIA, the airport is owned by the State, but the KGB has the legal authority and responsibility to operate and maintain KIA through a lease agreement with the State of Alaska. The State, as owner and sponsor of capital improvement grants from the FAA, is accountable to the FAA for the continued operation and maintenance of the airport. The State is responsible for capital improvements to the airport, with the exception of Borough-owned facilities. In addition to their broad responsibilities of general government, their primary goal is to provide and maintain airport facilities that safely and efficiently serve the air transportation needs of the public. Peninsula Point and private floatplane docks and operating areas along the Ketchikan waterfront are not included in the airport's jurisdiction, but Murphy's Pullout is managed by the airport.

The KGB leases the KIA from the DOT&PF at a rate of \$1.00 per year under a 42-year lease agreement that expires on May 31, 2027. Under the terms of this lease, the Borough is required to operate the airport for the use and benefit of the public and to perform all maintenance and repairs to the landing field. The lease further provides that the cost of repairs to the State-owned facilities will be paid by the Borough if the cost does not exceed \$10,000, and that the State will pay for repair costs above that amount.

In addition, the lease requires the Borough to maintain an Airport Enterprise Fund and to account for all of the revenues, costs, and expenses of operating the airport in this fund.

### ***2.3.2 KIA Financial Data***

The airport's financial results are reported within the *Comprehensive Annual Financial Reports* of the KGB. The Borough operates the airport as part of an enterprise fund. Such a proprietary fund is used to account for operations financed and operated in a manner similar to private business enterprises. The intent is that the costs of providing these services on a continuing basis be financed or recovered primarily through user charges. Costs include an allocation for depreciation expense.

The KGB operates under a financial reporting system that is based on a July 1 to June 30 fiscal year (FY). Therefore, all information contained in this analysis is presented in terms of the airport's FY detail, as opposed to calendar year.

**Airport Revenues.** Table 1 depicts the Airport's historical revenues from FY 1991 through FY 1998 and budget years FY 1999 through FY 2000. According to the documentation provided by the KGB, total operating revenues are reported from FY 1991 through FY 1994, after which operating revenues are broken down by field revenue, terminal revenue, floatplane revenue, and revenue from other governments (which comprises primarily grants).

As shown in Table 1, the major source of operating revenues at the airport in the years FY 1996 through FY 1998 (as well as budget years FY 1999 and FY 2000) is field and terminal revenue. Total historical operating revenues at the airport range from a low of \$1,316,479 in FY 1997 to a high of \$2,189,070 in FY 1994. Airport operating revenues through FY 1994 included revenue from the ferry operation. After that time, revenues from the ferry operation were accounted for under a separate ferry enterprise fund.

Historical non-operating revenues at the airport range from a low of -\$43,548 in FY 1995 to a high of \$266,200 in FY 1994. In budget year FY 2000, \$2.5 million in bond proceeds were budgeted as part of the terminal building renovation project.

Total historical airport revenues, as presented in Table 1, range from a low of \$1,330,521 in FY 1995 to a high of \$2,354,691 in FY 1993. Recent trends in airport revenues show a decrease from \$1,480,841 in FY 1996 to \$1,341,592 in FY 1997, representing a 9.4 percent decrease. Airport revenues did increase, however, from \$1,341,592 in FY 1997 to \$1,537,203 in FY 1998. This represents a 14.6 percent increase.

**Airport Expenses.** Table 2 depicts the Airport's historical expenses from FY 1991 through FY 1998 and budget years FY 1999 through FY 2000. According to the documentation provided by the KGB, operating expenses are broken down by field, terminal, ferry (only through FY 1994), administration, Murphy's Landing, and depreciation. Airport operating expenses data provided for FY 1995, however, include only total airport operating expenses. As shown in Table 2, operating expenses through FY 1994 include expenses from the ferry operation; after which it is accounted for under a separate ferry enterprise fund.

Recent trends in airport operating expenses show an increase from \$1,387,131 in FY 1996 to \$1,610,658 in FY 1998, representing a 7.8 percent compounded annual increase. As shown for budget years FY 1999 and FY 2000, further increases in operating expenses are anticipated. Since FY 1995, field and terminal expenses combined to total approximately 70 percent of all operating expenses at the airport.

<b>Table 1</b>										
<b>Ketchikan International Airport</b>										
<b>Historical and Budgeted Airport Revenues (Fiscal Years)</b>										
	<b>Historical</b>								<b>Budgeted</b>	
	1991	1992	1993	1994	1995 <sup>1,2</sup>	1996 <sup>3</sup>	1997 <sup>3</sup>	1998 <sup>4</sup>	1999 <sup>3</sup>	2000 <sup>4</sup>
<b>Operating Revenues</b>										
Revenue from Other Governments						\$42,587	\$20,134	\$44,047	\$154,719	\$203,577
Field Revenue						\$782,986	\$678,879	\$757,619	\$886,000	\$809,500
Terminal Revenue						\$617,057	\$610,559	\$710,018	\$643,600	\$727,200
Seaplane Revenue						\$6,900	\$6,907	\$6,615	\$7,000	\$7,000
<b>Total Operating Revenues</b>	<b>\$1,946,832</b>	<b>\$2,188,484</b>	<b>\$2,088,491</b>	<b>\$2,189,070</b>	<b>\$1,374,069</b>	<b>\$1,449,530</b>	<b>\$1,316,479</b>	<b>\$1,518,299</b>	<b>\$1,691,319</b>	<b>\$1,747,277</b>
<b>Non-Operating Revenues</b>										
Bonds <sup>5</sup>	\$185,117	\$251,099	\$266,200	\$78,829	-\$43,548	\$31,311	\$25,113	\$18,904	\$10,000	\$13,500
<b>Total Non-Operating Revenues</b>	<b>\$185,117</b>	<b>\$251,099</b>	<b>\$266,200</b>	<b>\$78,829</b>	<b>-\$43,548</b>	<b>\$31,311</b>	<b>\$25,113</b>	<b>\$18,904</b>	<b>\$10,000</b>	<b>\$2,513,500</b>
<b>Total Revenues</b>	<b>\$2,131,949</b>	<b>\$2,439,583</b>	<b>\$2,354,691</b>	<b>\$2,267,899</b>	<b>\$1,330,521</b>	<b>\$1,480,841</b>	<b>\$1,341,592</b>	<b>\$1,537,203</b>	<b>\$1,701,319</b>	<b>\$4,260,777</b>

Source: Ketchikan Gateway Borough Alaska, Comprehensive Annual Financial Reports, various years.

NOTES:

<sup>1</sup>Ferry Enterprise fund established in Fiscal Year 1995.

<sup>2</sup>Detailed information not available for Fiscal Year 1995.

<sup>3</sup>Values taken from 1998/1999 Budget.

<sup>4</sup>Values taken from 1999/2000 Budget.

<sup>5</sup>Bond proceeds included in 1999/2000 budget.

Table 2										
Ketchikan International Airport										
Historical and Budgeted Airport Operating Expenses (Fiscal Years)										
	Historical								Budgeted	
	1991	1992	1993	1994	1995 <sup>2</sup>	1996 <sup>3</sup>	1997 <sup>3</sup>	1998 <sup>4</sup>	1999 <sup>3</sup>	2000 <sup>4</sup>
<b>Operating Expenses</b>					\$1,007,661					
Field	\$648,807	\$630,865	\$490,016	\$525,812		\$532,102	\$577,240	\$557,306	\$840,657	\$748,647
Terminal	\$375,436	\$468,945	\$406,773	\$387,181		\$430,528	\$437,329	\$463,129	\$586,118	\$824,697
Ferry <sup>1</sup>	\$769,806	\$988,694	\$798,791	\$920,243						
Administration	Detailed information not available		\$159,017	\$154,917		\$163,686	\$234,447	\$287,450	\$298,947	\$300,828
Murphy's Landing	Detailed information not available		\$7,727	\$1,166		\$3,194	\$1,730	\$1,505	\$1,882	\$1,912
Depreciation	\$255,232	\$284,008	\$327,093	\$319,030	\$252,451	\$257,621	\$269,127	\$301,268	\$0	\$325,000
<b>Total Operating Expenses</b>	<b>\$2,049,281</b>	<b>\$2,372,512</b>	<b>\$2,189,417</b>	<b>\$2,308,349</b>	<b>\$1,260,112</b>	<b>\$1,387,131</b>	<b>\$1,519,873</b>	<b>\$1,610,658</b>	<b>\$1,727,604</b>	<b>\$2,201,084</b>
Source: Ketchikan Gateway Borough Alaska, Comprehensive Annual Financial Reports, various years.										
Notes:										
<sup>1</sup> Ferry Enterprise fund established in Fiscal Year 1995.										
<sup>2</sup> Detailed information not available for Fiscal Year 1995.										
<sup>3</sup> Values taken from 1998/1999 Budget.										
<sup>4</sup> Values taken from 1999/2000 Budget.										

### 3 FORECASTS OF AVIATION DEMAND

This element of the KIA Master Plan provides estimates of future aviation demand at the airport and the floatplane facilities. Projections of short-, intermediate-, and long-term activity at the airport are based on 5-, 10-, and 20-year milestones (2003, 2008, and 2018), using 1998 as the base year of analysis. Projections of aviation demand are an important element of the master planning process as they provide the basis for several key analyses, including determining the role of the airport, with respect to the type of aircraft to be accommodated in the future, evaluating the capacity of existing airport facilities and their ability to accommodate projected aviation demand, and estimating the extent of airside and landside facilities required in future years.

This section of the report is organized into the following subsections:

- Overall Economic Outlook
- Effects of September 11, 2001
- Projections of Passenger Enplanements
- Aircraft Operations
- Aircraft Fleet Mix
- Air Cargo
- General Aviation Based Aircraft

#### 3.1 Overall Economic Outlook

The KGB economy historically has been based on the timber, fishing, mining, and tourism industries. Other strong economic forces include government, health care, and construction industries. Within the past few years, the three major natural resource industries: timber, fishing, and mining, have all experienced declines. The future of these natural resource industries in the KGB is generally uncertain.

Although the Ketchikan Pulp Mill closed in 1997, resulting in a major loss of jobs, sawmills continue to provide jobs in the Borough. The opening of a veneer plant at Ward Cove and the expanded Seley operations at the Lewis Reef site on Gravina Island (near the airport) gives one a sense of optimism with respect to the future potential of this industry. No mines in the Ketchikan Mining District are currently operational, but a significant potential for mining operations exists.

Despite the downward slide in the number of salmon permits fished by Ketchikan residents, there is guarded optimism for the success of alternative fisheries.

In contrast, tourism is very strong in the KGB. The number of cruise ship passengers has increased within the past 10 years. Government employment has experienced recent decreases and there may be some near-term declines based on a reduction in state revenue sharing.

The University of Alaska Southeast-Ketchikan Campus is historically included among the top 25 employers in Ketchikan. Health care jobs are also numerous; with Ketchikan General Hospital being the Borough's (current) largest private employer. Finally, construction jobs are positive in the near term because of several construction projects currently underway and potential large

projects in the future. The Alaska Department of Labor's population projections show the KGB population increasing somewhat. Unemployment rates have fluctuated, but in 1998 they were at a 10-year low.

Some of the recent declines in aviation activity may be the result of the slowdown in the natural resources industries in the KGB; however, the number of operations at the Tongass Avenue floatplane docks increased during that same time period. This may indicate a positive near-term outlook for the tourism industry in the Borough.

*Overall, the socioeconomic indicators for the Ketchikan area indicate that modest growth factors should be incorporated into projections of aviation demand. Baseline forecasts will generally apply modest growth rates to reflect this reality.*

### **3.2 Effects of September 11, 2001**

A significant event occurred in 2001 that is important to address. Through this discussion, we are attempting to put the event, as it relates to aviation demand, into an appropriate context.

On September 11, 2001, a group of terrorists hijacked four commercial airliners and caused the destruction of the World Trade Center buildings in New York City and a portion of the Pentagon in Washington, D.C. Following these events, all civilian airports in the U.S. were closed for several days and GA traffic was restricted for a longer time period.

Aviation activity following these events was reduced, at some locations by a significant margin. Based on this series of events, it is relevant to address their potential impacts on long-range planning. Overall, the demand for commercial airline service in the short term may not reach levels previously projected, even by the airlines. It is possible that increased use of private aircraft may result from these events. The bottom line is that it is too early to predict with confidence how quickly demand will return to "normal" levels. Many factors influence this, including a decrease in commercial airliner capacity. In the long term, however, it is believed that the U.S. aviation system and demand levels will reflect the strong growth we have seen over the past ten years.

Based on the many factors and uncertainties that lie ahead, which are a basic part of any forecasting effort, the facility planning efforts documented in subsequent elements of this Master Plan will utilize the long-range projections documented herein. Furthermore, implementation of the proposed improvements derived, in part, from the projections, can be adjusted as actual demand warrants.

### **3.3 Projections of Passenger Enplanements**

Tourism in Ketchikan was on the upswing for the latter few years of the 1990s, and projections of air carrier enplanements at KIA reflect this expectation. In addition, it is believed that the relatively positive outlook for industries such as alternative fisheries, construction, mining, and health care will increase the economic strength of the KGB region, making air travel to and from KIA more accessible. Projections of passenger demand are presented for KIA and the Tongass Avenue floatplane docks.

**KIA Passenger Enplanements.** Air carrier passenger enplanements at KIA are projected to increase from 100,538 in 1998 to 137,415 in 2018 under the medium-growth projection scenario, representing a compounded annual growth rate of 1.6 percent. **Table 3** presents the historical and projected air carrier passenger enplanements for the airport.

**Table 3**  
**Ketchikan International Airport**  
**Projected Air Carrier Enplanements (Medium-Growth Scenario)**

<i>Historical:</i>	
1998	100,538
<i>Projected:</i>	
2003	110,730
2008	120,764
2018	137,415

Sources: Historical - FAA Terminal Area Forecast, 1999.  
 Projected - Mead & Hunt, Inc., 1999.

Air taxi enplanements at KIA are projected to increase with the medium-growth scenario from 41,365 enplanements in 1998 to 95,088 in 2018, representing a compounded annual growth rate of 4.2 percent. **Table 4** presents the historical and projected air taxi passenger enplanements for the airport.

**Table 4**  
**Ketchikan International Airport**  
**Projected Air Taxi Enplanements (Medium-Growth Scenario)**

<i>Historical:</i>	
1998	41,365
<i>Projected:</i>	
2003	51,795
2008	64,238
2018	95,088

Sources: Historical - FAA Terminal Area Forecast, 1999.  
 Projected - Mead & Hunt, Inc., 1999.

**Tongass Avenue Floatplane Docks Passenger Enplanements.** Medium growth projections of passenger enplanements at the Tongass Avenue floatplane docks assume a compounded growth rate of 2.2 percent, increasing from 140,800 in 1998 to 216,600 enplanements in 2018. **Table 5** presents the historical and projected passenger enplanements at the Tongass Avenue floatplane docks.

**Table 5**  
**Tongass Avenue Floatplane Docks**  
**Projected Air Taxi Enplanements (Medium-Growth Scenario)**

<i>Historical:</i>	
1998	140,800
<i>Projected:</i>	
2003	165,300
2008	190,300
2018	216,600

Sources: Historical - Estimates by Taquan Air, Promech Air, and Seaborne Aviation, 1999.  
 Projected - Mead & Hunt, Inc., 1999.

### 3.4 Aircraft Operations

**Ketchikan International Airport.** Medium growth projections of total operations at KIA assume a compounded annual growth rate of 1.5 percent, increasing from 35,547 in 1998 to 48,003 in 2018. **Table 6** presents historical and projected total aircraft operations for the airport.

**Table 6**  
**Ketchikan International Airport**  
**Total Projected Aircraft Operations (Medium-Growth Scenario)**

<i>Historical:</i>	
1998	35,547
<i>Projected:</i>	
2003	38,926
2008	42,106
2018	48,003

Sources: Historical - Airport Management records, Official Airline Guide, and estimates (military), 1999.  
 Projected - Mead & Hunt, Inc., 1999.

Aircraft operations at KIA consist of air carrier, air taxi, GA, military, and floatplane components. Air carrier operations are projected to increase from 5,906 in 1998 to 8,066 in 2018 under the medium-growth scenario at a compounded annual growth rate of 1.6 percent. Air taxi operations are projected to increase with the medium-growth scenario at a compounded annual growth rate of 4.0 percent, from 2,222 in 1998 to 4,862 in 2018. Under the medium-growth scenario, GA operations are forecast at a moderate growth rate of 1.0 percent, from 8,403 in 1998 to 10,253 in 2018. Military operations at KIA are shown to have been fairly static, although accurate records are not kept. A “best guess” estimate of recent demand of approximately 250 operations annually is assumed and is projected to remain constant in the future. Under the medium-growth scenario, floatplane operations

are forecast to increase at a modest annual rate of 1.4 percent, from a total of 18,766 in 1998 to 24,572 in 2018. **Table 7** presents historical and projected operations for these components.

**Table 7**  
**Ketchikan International Airport**  
**Projected Aircraft Operations (Medium-Growth Scenario)**

	Runway 11/29 @ KIA					Floatplane		
	Air Carrier	Air Taxi	GA	Military	Total	Air Taxi	GA	Total
<i>Historical:</i>								
1998	5,906	2,222	8,403	250	16,781	18,578	188	18,766
<i>Projected:</i>								
2003	6,650	2,974	8,832	250	18,705	20,014	208	20,221
2008	7,378	3,618	9,282	250	20,528	21,349	229	21,578
2018	8,066	4,862	10,253	250	23,431	24,292	279	24,572

Sources: Historical - Airport Management records, Official Airline Guide, and estimates (military), 1999.  
Projected - Mead & Hunt, Inc., 1999.

**Tongass Avenue Floatplane Docks.** Projections of total operations at the Tongass Avenue floatplane docks assume a compounded annual growth rate of 2.4 percent, increasing from 86,072 in 1998 to 137,951 in 2018. **Table 8** presents historical and projected aircraft operations for the Tongass Avenue floatplane docks.

**Table 8**  
**Tongass Avenue Floatplane Docks**  
**Projected Aircraft Operations (Medium-Growth Scenario)**

<i>Historical:</i>	
1998	86,072
<i>Projected:</i>	
2003	98,579
2008	111,869
2018	137,951

Sources: Historical - Estimates by Taquan Air, Promech Air, and Seaborne Aviation, 1999.  
Projected - Mead & Hunt, Inc., 1999.

**Murphy's Pullout Projected Floatplane Facility Operational Demand.** Aircraft operational demand at Murphy's Pullout is projected to increase from 1,600 operations in 1998 to 4,400 operations in 2018, representing a compounded annual growth rate of 5.2 percent.

**Peninsula Point.** A modest growth rate of 1.0 percent is assumed for projecting future Peninsula Point aircraft operations, increasing from 10,200 operations in 1998 to 12,400 operations in 2018.

### 3.5 Aircraft Fleet Mix

**Ketchikan International Airport.** The dominant aircraft at KIA has historically been the Boeing 737. The majority of the B737 operations are performed by Alaska Airlines. Air cargo operations conducted by Evergreen International Airlines, which began in 1994, account for the DC9-30 operations at the airport. Based on Alaska Airlines's fleet acquisition plans, it is projected that the Boeing 737 (including the -400 and advanced -700 and -900 series) will be the design aircraft at KIA through the planning period.

The historical air taxi fleet mix at KIA is made up of wheeled aircraft that use the runway and floatplane aircraft. The air taxi fleet mix on the KIA runway consists of approximately 90 percent single-engine aircraft and approximately 10 percent twin-engine aircraft. The floatplane air taxi fleet mix at KIA consists of approximately 90 percent single-engine aircraft, such as Otters, Beavers, and Cessnas; and approximately 10 percent twin-engine aircraft, such as Twin Otters. It is projected that this fleet mix will remain about the same in the future. In addition, many large corporate jets, such as Gulfstreams, Lears, and Cessna Citation Jets, use the airport on a regular basis.

**Tongass Avenue Floatplane Docks.** The historic air taxi fleet mix at the Tongass Avenue floatplane docks consists of approximately 90 percent single-engine aircraft, such as Otters, Beavers, and Cessnas; and approximately 10 percent twin-engine aircraft, such as Twin Otters. It is projected that this fleet mix will remain the same in the future.

**Murphy's Pullout.** The aircraft fleet mix at Murphy's Pullout consists of single-engine floatplanes only. The fleet mix at Murphy's Pullout is projected to remain constant.

**Peninsula Point.** It is assumed that operations at Peninsula Point consist of approximately 29 percent single-engine aircraft and approximately 71 percent helicopters. TEMSCO Helicopters uses HU-500, Bell 212, and A-Star helicopters. It is projected that this fleet mix is representative of the fleet mix at Peninsula Point in the future.

### 3.6 Air Cargo

Based on modest assumptions concerning the future of the local Ketchikan economy, air freight and U.S. Mail are projected to increase at a compounded annual growth rate of 1.0 percent, from a total of approximately 21.3 million pounds of air cargo in 1998 to approximately 26.0 million pounds of air cargo in 2018.

### **3.7 General Aviation Based Aircraft**

Forecasts for the future number of GA based aircraft are modest, projecting that the historical majority of single-engine piston aircraft will remain the majority aircraft in the future. Under the mid-growth scenario, GA based aircraft are projected to increase from 19 single-engine piston aircraft in 1999 to 26 single-engine piston aircraft in 2018, multi-engine piston aircraft are projected to increase from 1 in 1999 to 3 in 2018, and jet aircraft are projected to increase from 2 in 1999 to 3 in 2018.

## 4 SUMMARY OF AIRPORT IMPROVEMENT NEEDS

This section presents a summary of improvements needed at KIA, as well as those needed at off-airport floatplane facilities, to accommodate long-range aviation demand in the Ketchikan area.

### 4.1 Ketchikan International Airport Facility Needs

**Taxiway.** The addition of an exit taxiway on Runway 11 end will much improve airfield safety at the airport by eliminating the need for aircraft landing on Runway 29 or departing on Runway 11 to back-taxi on the runway itself. In addition, an exit taxiway on Runway 11 end would improve the demand/capacity situation at the airport.

**Helicopter Landing Area.** It was recommended in the master plan review that the delineation of a helicopter landing pad would be desirable. However, due to space limitations and the limited amount of helicopter activity, it was decided that delineating such a facility was not necessary at this time.

**Runway Safety Area.** The current Runway 11/29 runway safety area (RSA) does not meet FAA design criteria. It is 300 feet wide and extends 200 feet beyond each runway threshold. To meet FAA design criteria, the RSA should be 500 feet wide and should extend 1,000 feet beyond each runway threshold.

The proposed project shifts the runway 800 feet to the southeast and improves the RSA by clearing trees and terrain. The estimated cost for this project is \$17,600,000. This project is required to meet the FAA's standards for RSAs. The runway currently does not meet standards for RSAs, based on objects, such as terrain and trees, in the RSA. Much of the terrain off the runway ends is not currently capable of supporting an aircraft without causing structural damage, nor is it capable of supporting firefighting equipment if an aircraft undershoots or overruns the runway.

**FAR Part 77 Surfaces.** Removal of airspace obstructions on the runway approach, primary, and transitional surfaces is recommended.

**Passenger Terminal Building.** The current plan to renovate and expand the passenger terminal building will provide adequate facilities through the 20-year planning period. The possibility of implementing a remote terminal concept was also explored. The implementation of this concept would involve the separation of some passenger terminal building functions (e.g., ticketing, baggage check-in, baggage claim, concessions, rental car, etc.) to a remote passenger terminal building on Revillagigedo Island. Concourses would remain in the existing passenger terminal building on Gravina Island. The implementation of such a project would require the addition of a 23,000-square-foot (sf) building on Revillagigedo Island.

**General Aviation and Air Cargo Apron.** To provide for future GA parking and storage space demands at the airport, hangar space for a total of 23 based aircraft<sup>1</sup>, tie-down space for nine based aircraft<sup>2</sup>, and additional parking stalls for 16 automobiles is recommended.

To meet the needs of the existing and future transient aircraft fleet, a minimum of 11,500 square yards (sy) of apron is required. Based on the existing amount of 8,944 sy, additional apron area of at least 2,500 sy is required to accommodate the needs of transient aircraft through 2018.

Construction of two large-scale commercial lease lots is proposed with a minimum of 4,000 sy of additional aircraft apron on the west side of the Terminal. In addition, construction to the east side will provide lease area for the development of T-hangars, covered tie-downs, and executive hangars. This project also involves reserving an additional GA development area to the west of the runway. The estimated cost for this project is \$2,100,000. This project is necessary to meet adequate aircraft apron and storage requirements at KIA through 2018.

A total of 4,000 sy of air cargo apron is required to accommodate the needs of the existing and projected air cargo users. Based on the existing amount of approximately 3,500 sy, an additional 500 sy is required.

**ARFF Building and Maintenance/SRE Building.** The addition of approximately 6,000 sf of space to the Aircraft Rescue and Firefighting (ARFF) and Maintenance/Snow Removal Equipment (SRE) building would provide needed space for additional bays and storage.

The proposed project involves constructing a 6,000 sf addition to the ARFF/SRE building. The estimated cost of this project is \$1,100,000. This project is required because the existing building is currently inadequate. It was constructed in the early 1980s and was not designed with enough capacity or floor slab strength to accommodate the larger, modern equipment. These inadequacies cause the equipment to be exposed to the outside elements and the floors to crack and swell.

**KIA Fuel Storage.** The airport serves as a fueling facility for air carrier, air taxi, and GA aircraft operators; however, there is limited existing capacity for storing aviation fuels at the airport. Aircraft operators currently purchase aviation fuels from bulk suppliers in Ketchikan. The addition of a fuel farm with a storage capacity of 100,000 gallons is recommended at KIA.

**KIA Floatplane Facility.** The launch ramp at the KIA floatplane facility is currently aligned cross-wind and cross-current, often making aircraft entry and exit from the waterway difficult. An additional ramp should be oriented so that it is aligned approximately northwest-southeast (with prevailing winds).

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<sup>1</sup> An additional 17 aircraft hangar spaces are planned because hangar space is currently available for six aircraft.

<sup>2</sup> Tie-down spaces could be developed as covered tie-down spaces, if required, based on tenant preferences.

Construction of a floatplane pullout ramp is proposed at KIA. The estimated cost for the project is \$1,600,000. The existing orientation of the KIA floatplane ramp is such that aircraft being pulled out of the Tongass Narrows are often pushed to the side by the prevailing wind and tidal current. The existing ramp planks are in bad condition and the location conflicts with other activities.

**KIA Infrastructure.** The water line that supplies water to the airport is under-sized and needs to be upgraded to a minimum 10-inch line. The wastewater treatment plant outfall needs to be extended so that it is at least 4 feet below the mean lower low tide elevation. In addition, the emergency generator in the main terminal building needs to be replaced with a minimum 150-kilowatt (KW) generator.

#### 4.2 Off-Airport Floatplane Facility Needs

**Murphy's Pullout.** The addition of 16 pullout spaces at Murphy's Pullout is recommended to accommodate this component of demand. Auto parking (at a ratio of one space per two additional pullouts) is also recommended.

The proposed project includes the two-phased construction of two piers with eight pullout spaces each (total of 16 pullout spaces). The construction of additional automobile parking will also be required. The estimated cost of this project is \$2,200,000. This project is required to satisfy the demand for pullout spaces at Murphy's Pullout through the planning period.

**Peninsula Point.** The addition of a 10,000-sf hangar is recommended to accommodate projected aircraft activities at Peninsula Point.

**New Public Floatplane/Terminal Facility.** Based on comments received during public presentations of the Master Plan, the concept of a new public floatplane facility was developed. It is likely that such a facility can serve the needs of private and commercial floatplane operators, as well as Alaska Airlines (in terms of remote terminal functions). This facility will also serve to replace capacity at the Tongass Avenue floatplane docks.

The proposed project will construct a public-use floatplane/passenger terminal facility directly across (on Revillagigedo Island) the Tongass Narrows from KIA. This new facility will consist of a remote passenger terminal building, a floatplane passenger dock, an aircraft storage hangar, and spaces for buses and automobiles. The estimated cost for this project is \$20,000,000. This project will serve as a public use facility to consolidate the needs of airport users. It will meet demand for a remote air carrier passenger terminal and the need to develop public floatplane facilities for private users.

**Airport Parking and Circulation.** If the ferry continues to operate between Gravina and Revillagigedo Islands, vehicle parking needs will be met by existing parking areas and consideration of management options. If a hard-link is established, the addition of 80 auto parking spaces and associated circulation on Gravina Island is recommended.

The proposed project includes construction of a multi-level parking structure with a 5,500-sf footprint. The estimated cost of this project is \$1,080,000. This project is required to meet projected automobile parking requirements at KIA, if a hard link is constructed. In the event this road is not constructed, expansion of the existing long-term parking lot should be implemented instead.

## 5 RECOMMENDED AIRPORT IMPROVEMENTS

This section presents a summary of the recommended improvements for the various aviation facilities at KIA and the off-airport floatplane facilities.

**Airfield Facilities.** The recommended exit taxiway improvement, shown in **Exhibit 3**, includes the development of an exit taxiway from the terminal apron area to the Runway 11 end. The recommended RSA improvements, also shown in Exhibit 3, require an 800-foot shift to the southeast.

With respect to a helicopter landing area, the master plan review indicated that such a facility could be co-located with the exit taxiway in the vicinity of the terminal building. Guidance signage on the taxiway would be required to make pilots aware of the helicopter approach area. However; as was stated previously, due to the infrequency of such operations, it was decided that delineating such a facility was not necessary at this time. Airport management may choose to revisit this issue in the future, if the nature and volume of helicopter activity changes significantly.

**Passenger Terminal Facility Improvements.** Improvements planned for the existing passenger terminal building will provide adequate space through the planning period. However, developing a remote facility (across the Narrows) which would include key functional elements of a passenger terminal; such as parking, ticketing, baggage check-in, rental car, etc.; is recommended for KIA (see **Exhibit 4**). A concept that would co-locate these passenger terminal functions with floatplane passenger functions at a site across the Narrows is also part of this recommendation and would likely give such a project a greater chance of success (more efficient utilization of limited land available).

**General Aviation Facilities.** To accommodate current development and future needs the recommended GA facilities at KIA will be developed in two separate areas. Improvements to the existing GA facilities will be referred to as the East GA Apron. The recommended improvements for the East GA Apron are depicted in **Exhibit 5**. The concept identifies lease area for the development of T-hangars, covered tie-downs, and executive hangars (two at 3,600 sf each). Existing apron space to accommodate aircraft tie-downs (which could be converted to additional covered tie-downs, if required by tenants) is also maintained under this concept.

A new GA facility will be located to the west of the terminal in the area of the proposed floatplane pullout and will be referred to as the West GA Apron. The recommended improvements for the West GA Apron are depicted in **Exhibit 6**. The concept identifies two lease lots to the northwest of the terminal. These lease lots are accessed by a new proposed taxiway from the aircraft apron. It provides two large-scale commercial lease lots (26,250 sf each) with a minimum of 4,000 sy of additional aircraft apron. These lease lots would provide the required 2,500 sy of additional transient aircraft apron and the required 500 sy of additional cargo apron.

In addition to the GA facility improvements shown on Exhibits 5 and 6, an additional GA development reserve area has been set aside on the west side of the runway (see **Exhibit 7**)

**Floatplane Facilities.** The recommended floatplane facility recommendations are made for KIA, Murphy's Pullout, Peninsula Point, and for a new public-use floatplane/terminal facility. For KIA, the recommended Floatplane Pullout Ramp improvements are depicted in **Exhibit 6**.

At Murphy's Pullout (see **Exhibit 8**), an additional 16 pullout spaces plus auto parking is recommended. At Peninsula Point, an additional 10,000-sf hangar is recommended<sup>3</sup> (see **Exhibit 9**).

It is recommended in this Master Plan that consideration be given for developing a new public-use floatplane/terminal facility directly across the Tongass Narrows from the airport. Although the specific facility needs for this facility are in excess of what is needed to meet future aviation demand based on the net effect of other facility recommendations, it is believed that such a facility could efficiently serve the needs of private and commercial floatplane operators, as well as Alaska Airlines (in terms of remote terminal functions). Specific facilities included in this concept (shown on **Exhibit 10**) include: 23,000 sf of passenger terminal space, 30 floatplane slips, 800 linear feet of floatplane passenger dock, 5,000 sf of floatplane freight/storage space, 5,000 sf of aircraft storage hangar, 225 linear feet (lf) of curbside, 220 auto parking spaces, as well as bus parking spaces.

**Support Facilities.** Support facility recommendations include a 6,000-sf addition to the ARFF/SRE building (see **Exhibit 11**) and a 100,000-gallon fuel farm southeast of the terminal area (near the airport access road, see Exhibit 5).

**Surface Transportation and Auto Parking.** Plans for an airport bypass road that provides access between developments on Gravina Island without requiring traffic to travel through the terminal area is recommended. The bypass should accommodate future taxiway and apron development on the south side of the runway.

Should the Gravina Island Crossing be constructed, additional parking near the airport will be needed. This parking need should be met by constructing a parking structure adjacent to the terminal building (as shown in **Exhibit 12**). If a hard-link is not constructed, it is recommended that improvements be made to the long-term parking lot.

**Utilities.** It is recommended that the outfall at the wastewater treatment plant be extended at least 4 feet below the mean lower low tide elevation. It is also recommended that the deficiencies be addressed. It is recommended that the emergency generator in the terminal building be replaced with a minimum 150-KW generator. The water line should be replaced with a new line and the heating oil fuel tank should be replaced.

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<sup>3</sup> It is also recommended that Peninsula Point remain the primary location for helicopter operations in Ketchikan.

## 6 AIRPORT LAYOUT PLAN

This section of the Master Plan presents the approved ALP set for KIA, Peninsula Point, and Murphy's Pullout and provides discussion of the various sheets in the ALP set. The section is organized into the following subsections (and the ALP sheets are included in **Appendix A** of this report):

### *Ketchikan International Airport (total of 22 sheets)*

- Sheet 1 - Narrative Report
- Sheet 2 - Existing Airport Layout Drawing
- Sheet 3 - Ultimate Airport Layout Plan
- Sheets 4 to 5 - Part 77 Airspace
- Sheets 6 to 9 - Inner Portion of Approach Surface
- Sheets 10 to 12 - Approach Surface & Runway Surface Profiles
- Sheets 13 to 16 - Feature & Obstruction Table
- Sheet 17 - Existing Terminal Area Drawing
- Sheet 18 - Ultimate Airport Terminal Area Drawing
- Sheet 19 - Ultimate Floatplane Terminal Area Drawing
- Sheet 20 - Airport Land Use Drawing
- Sheet 21 - Airport Reserve Land Use Drawing
- Sheet 22 - Property Map

### *Peninsula Point (one sheet)*

- Sheet 1 - Peninsula Point Floatplane Facility Airport Layout Plan

### *Murphy's Pullout (one sheet)*

- Sheet 1 - Murphy's Pullout Floatplane Facility Airport Layout Plan

## 6.1 Ketchikan International Airport

**Sheet 1 - Narrative Report.** This sheet of the ALP set provides key information from the Master Plan research, including projected aircraft operations, passenger enplanements, and the critical aircraft. In addition, the sheet provides text descriptions of some of the key improvement projects, along with the estimated project budgets.

**Sheet 2 - Existing Airport Layout Drawing.** This sheet presents key technical data for the airport, including wind roses, airport data (such as elevation, navigational aids [NAVAIDs], and airport reference point coordinates), and runway data (such as runway and safety area dimensions, pavement strength, and runway end coordinates). The existing buildings/facilities at the airport are identified and coded with a table indicating what they are. The sheet also shows the existing airfield and terrain surrounding the airfield, as well as the runway protection zones (RPZs) off each runway end.

**Sheet 3 - Ultimate Airport Layout Plan.** This sheet is similar to the previous one, except that it also depicts proposed airport improvements (such as the taxiway to Runway 11, the runway shift, and the ultimate GA development areas). This sheet is the most important in the entire ALP set and is generally referenced by the other sheets in the set.

**Sheets 4 to 5 - Part 77 Airspace.** These two drawings depict the plan view of imaginary surfaces defined under Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*. The drawings define surfaces around the airport operating area that should not be penetrated by any objects, with certain exceptions. The airspace off the end of Runway 11 is shown in greater detail since that is the runway with the precision instrument landing system (ILS) approach.

**Sheets 6 to 9 - Inner Portion of Approach Surface.** These sheets depict more detail of the FAR Part 77 surfaces, in plan view.

**Sheets 10 to 12 - Approach Surface & Runway Surface Profiles.** These sheets depict the profile views of Runway 11/29, as well as the approaches off the runway ends. For Runway 11 end, a 50:1 approach surface is shown, since it has a precision instrument approach, while on Runway 29 end a 34:1 approach surface is shown, since it has a non-precision instrument approach. The significance of these sheets is that they indicate the areas where some terrain or object penetrates the approach surfaces.

**Sheets 13 to 16 - Feature & Obstruction Table.** These sheets provide a detailed listing of objects that penetrate, or obstruct, the airspace around the runway. The list also indicates what the planned disposition of the obstruction is. As shown in the tables, there is a considerable amount of trees and terrain that represent obstructions.

**Sheet 17 - Existing Terminal Area Drawing.** This sheet has similar information as shown on the Existing Airport Layout Drawing, except it is shown at an enlarged scale and zooms in on the area around the terminal. It provides an improved scale for viewing the existing buildings and other facilities in the airport terminal area, including the GA facilities.

**Sheet 18 - Ultimate Airport Terminal Area Drawing.** Similar to sheet 17, this sheet shows buildings and other facilities in the terminal area at a scale that improves clarity. This sheet, however, depicts improvements planned for KIA based on the Master Plan recommendations, and based on those improvements needed in order for the airport to accommodate aviation demand in the long run.

**Sheet 19 - Ultimate Floatplane Terminal Area Drawing.** This sheet depicts a planned concept for developing a new public-use floatplane facility and passenger terminal. This facility would include floatplane pullout docks, fixed-base operator (FBO) services, a passenger terminal building (to serve floatplane as well as air carrier passengers in a remote setup), and parking.

**Sheet 20 - Airport Land Use Drawing.** This sheet depicts the various on-airport land uses designated for KIA. It earmarks specific portions of the airport land envelope for specific functions, including: aviation use, terminal area (airside and landside), commercial aviation, GA, air cargo, airport development reserve, airport reserve, general, and general revenue support.

**Sheet 21 - Airport Reserve Land Use Drawing.** This sheet delineates airport reserve land into the following land use categories: aviation, airport reserve, airport development, heavy industrial, light industrial, and general commercial.

**Sheet 22 - Property Map.** This sheet provides a general depiction of existing airport property, including a listing of who the parcels were purchased from and the dates the parcels were purchased.

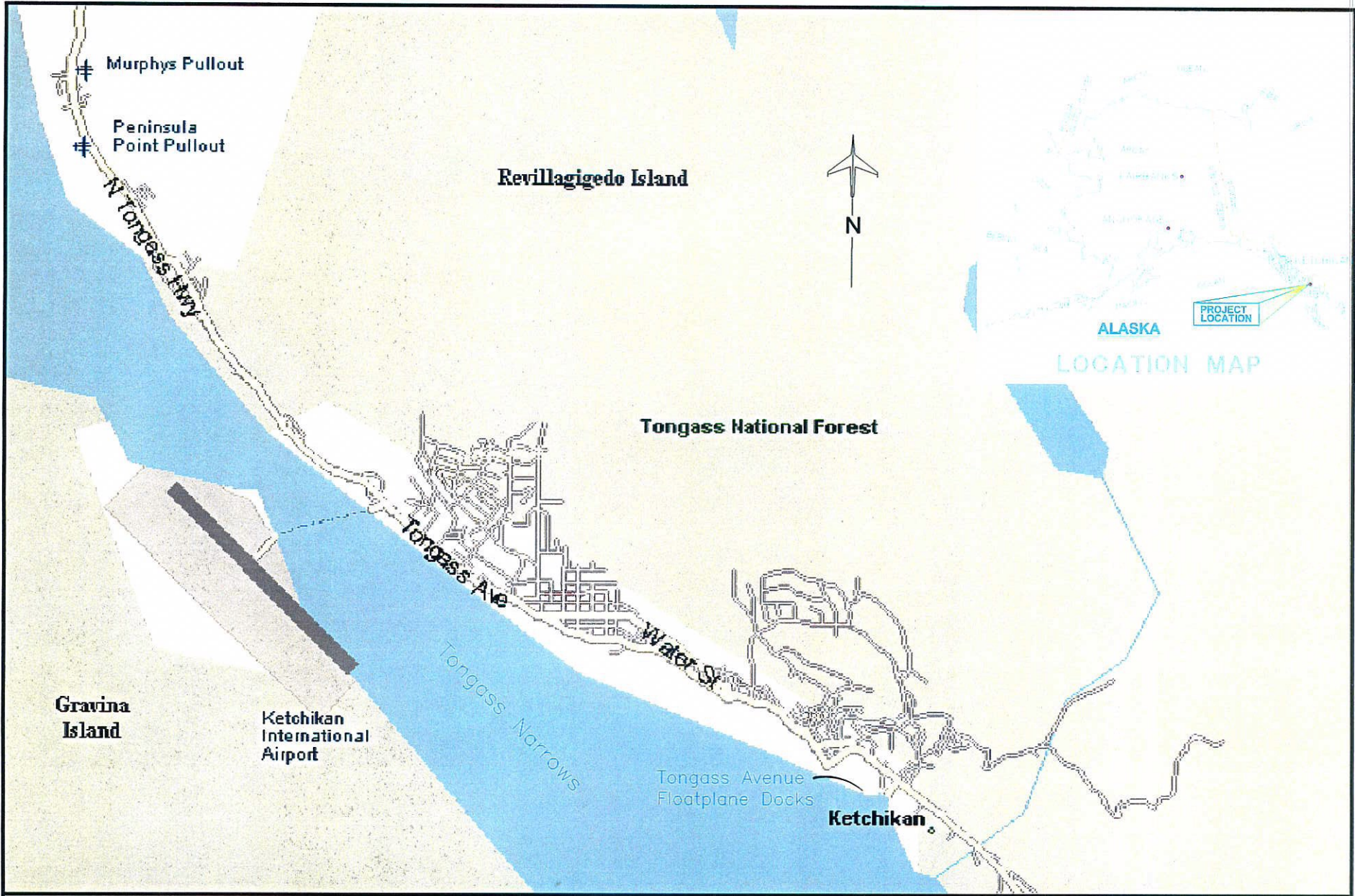
## **6.2 Peninsula Point**

**Sheet 1 - Peninsula Point Floatplane Facility Airport Layout Plan.** This sheet comprises the ALP for the Peninsula Point Floatplane Facility. The plan indicates existing buildings and other facilities on this site, as well as proposed new hangars.

## **6.3 Murphy's Pullout**

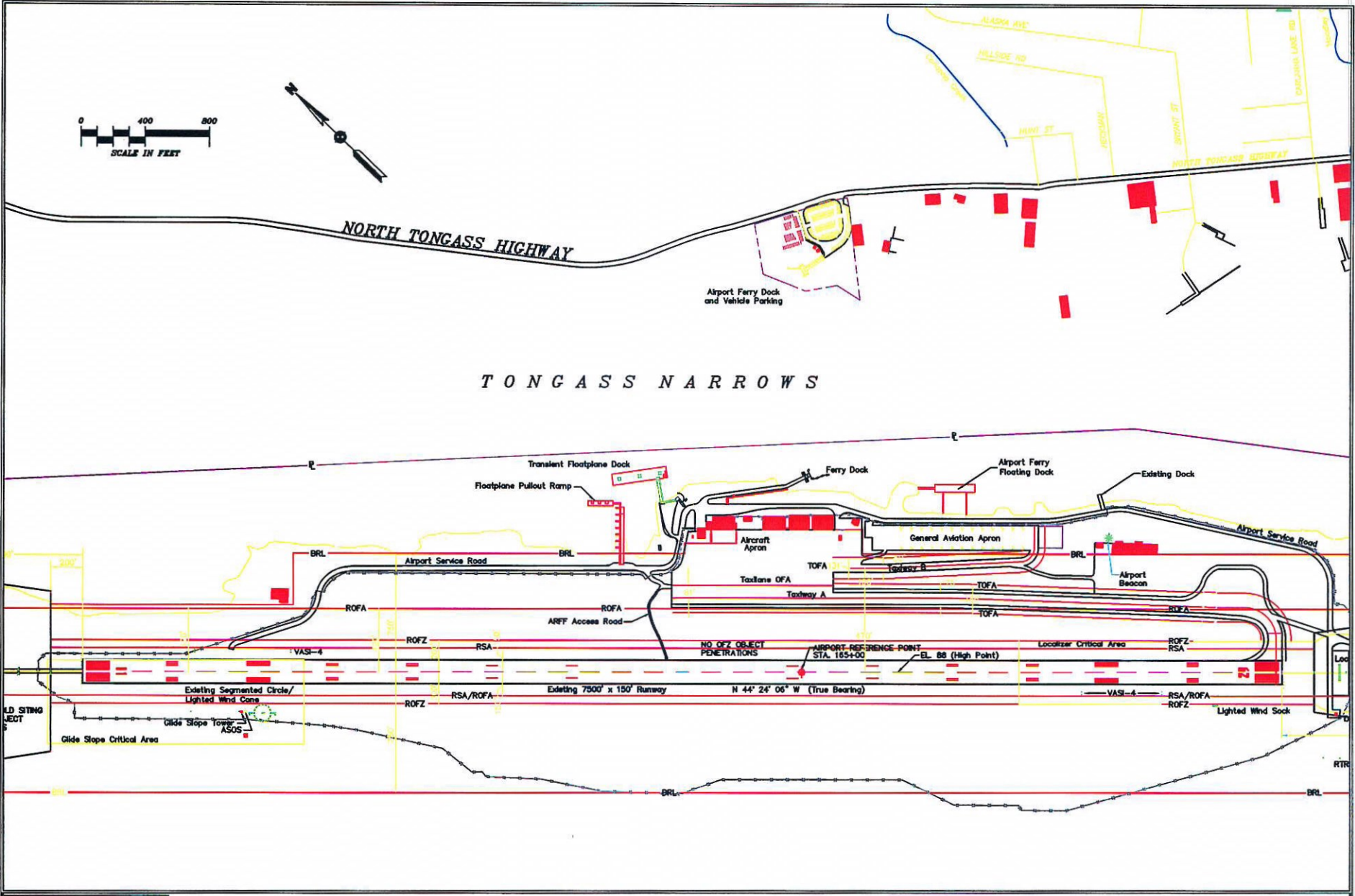
**Sheet 1 - Murphy's Pullout Floatplane Facility Airport Layout Plan.** This sheet comprises the ALP for Murphy's Pullout Floatplane Facility. The plan shows the existing floatplane pullout ramp and vehicle parking (in the center) and proposed new pullout ramps and vehicle parking (on both sides of the existing facility).

## **Exhibits**



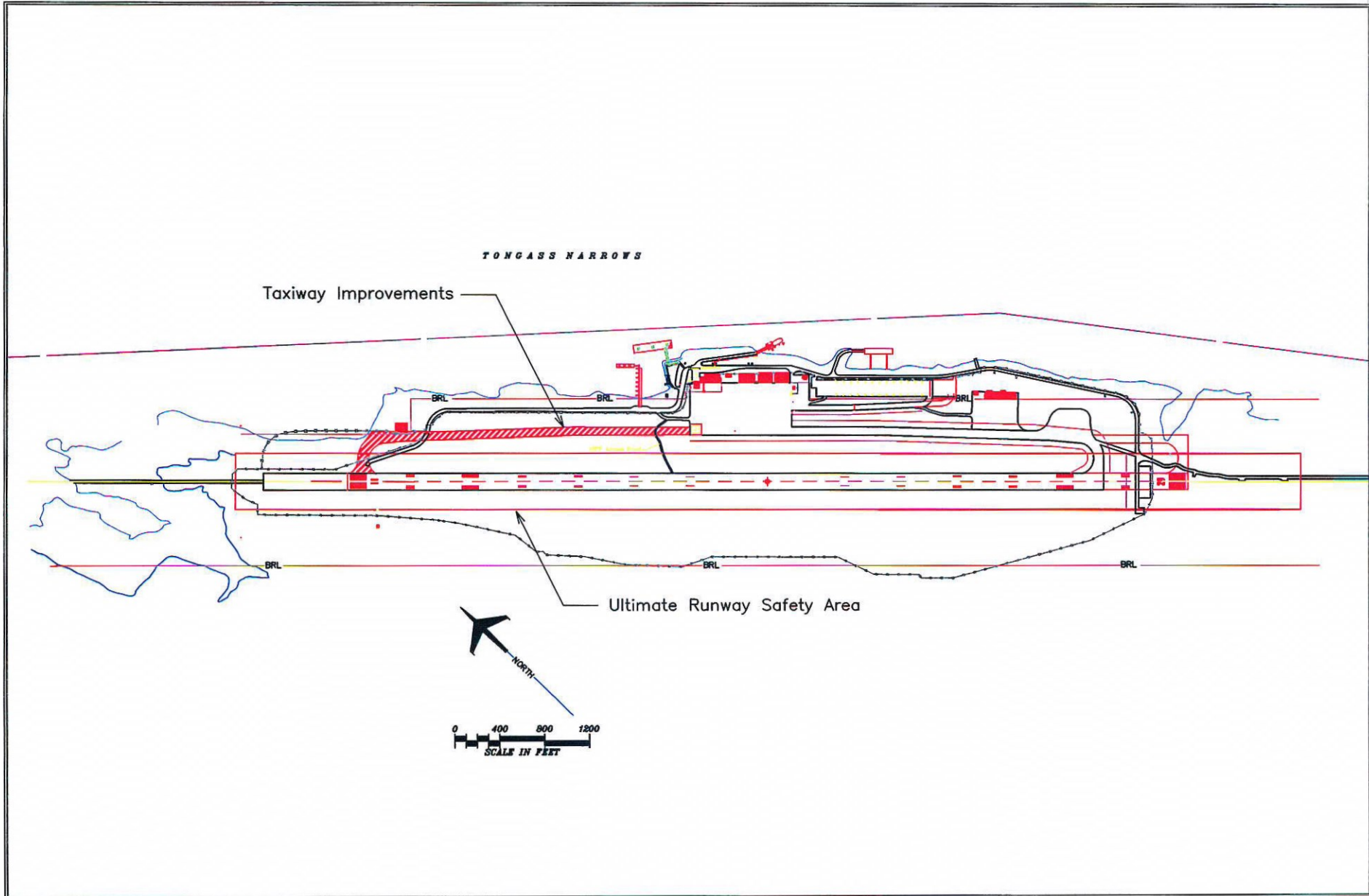
**Ketchikan International Airport  
Master Plan**

Exhibit 1  
Study Area/Location Map



Ketchikan International Airport  
Master Plan

Exhibit 2  
KIA Existing Facilities



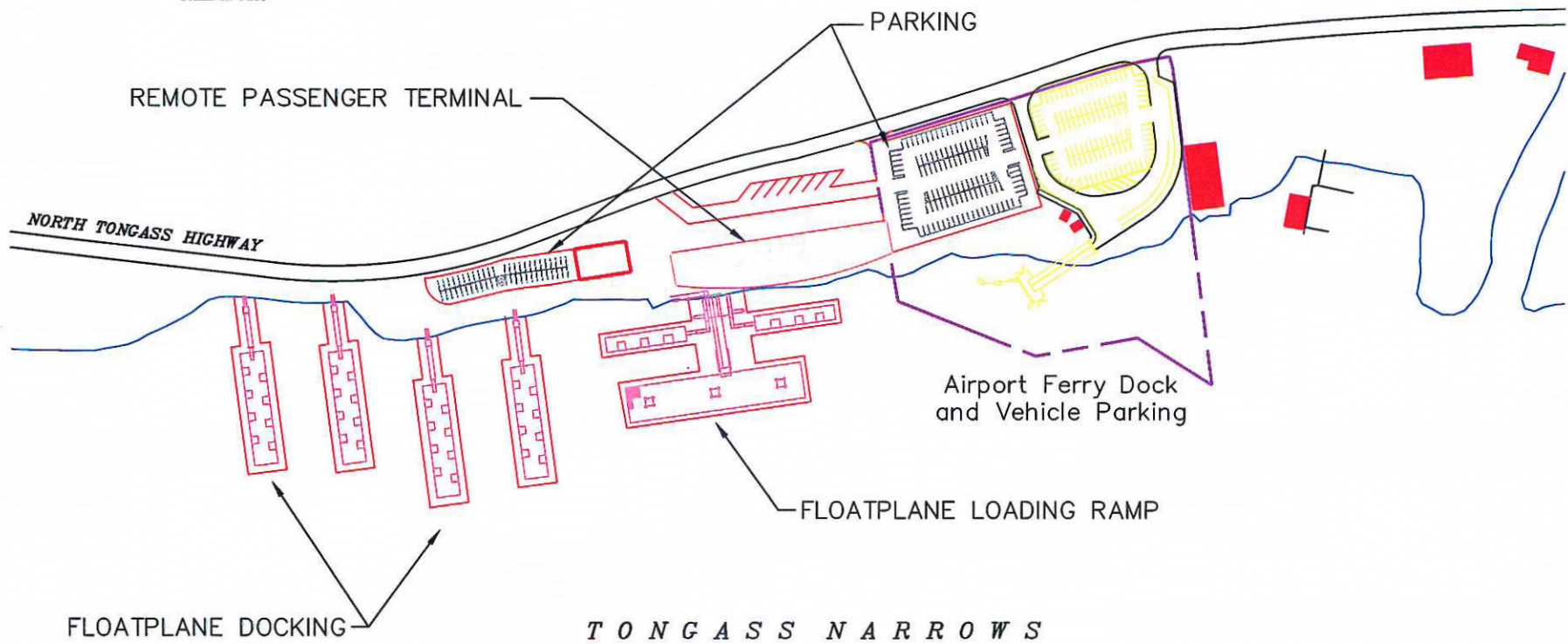
Ketchikan International Airport  
Master Plan

Exhibit 3  
Recommended Airfield Improvements



0 100 200 300  
SCALE IN FEET

REVILLAGIGEDO ISLAND



Ketchikan International Airport  
Master Plan

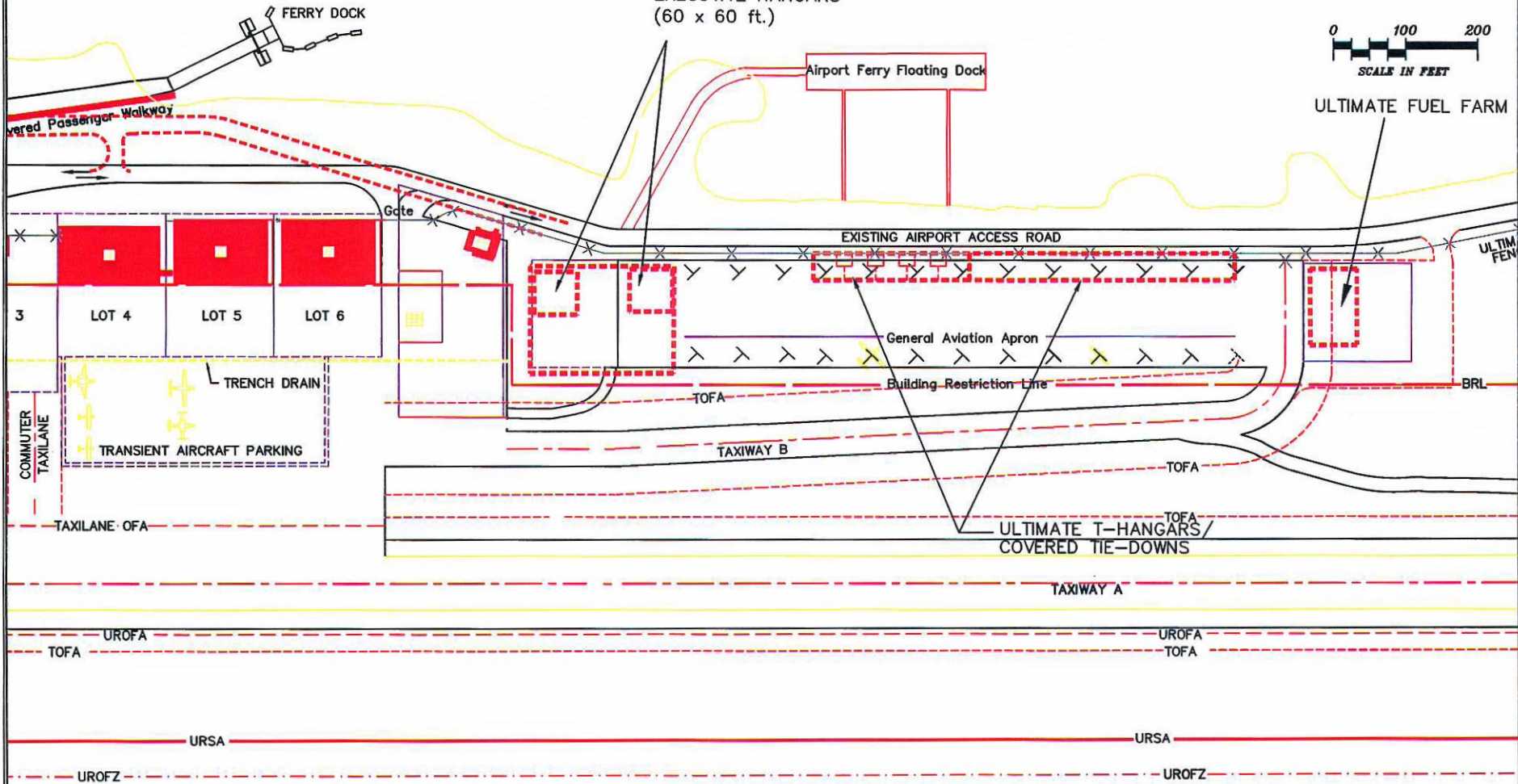
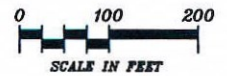
Exhibit 4  
Remote Passenger Terminal Concept

TONGASS NARROWS

EAST APRON



ULTIMATE EXECUTIVE HANGARS  
(60 x 60 ft.)



Ketchikan International Airport  
Master Plan

Exhibit 5  
Recommended Fuel Farm and  
General Aviation Improvements

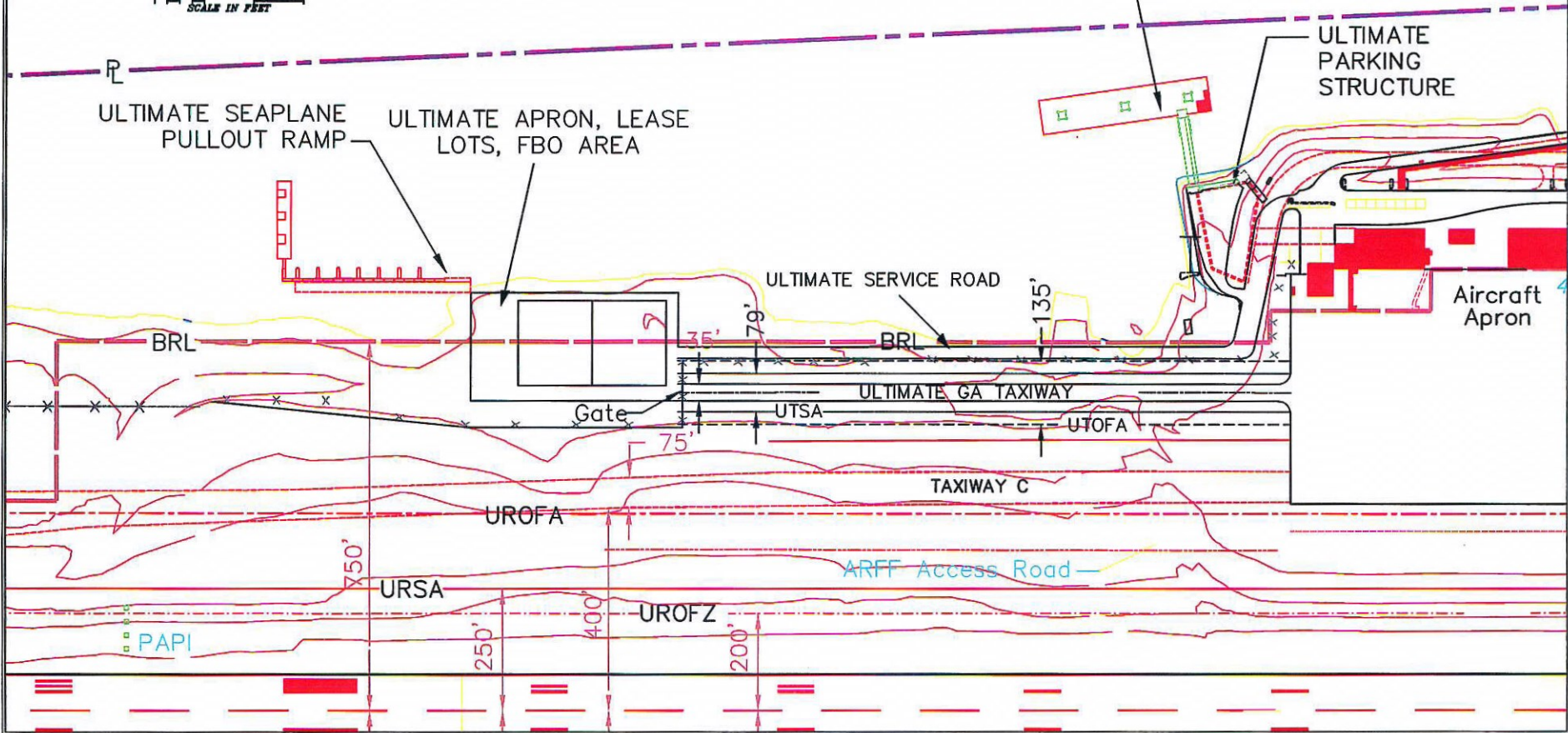
TONGASS NARROWS

WEST APRON

Transient Floatplane Dock

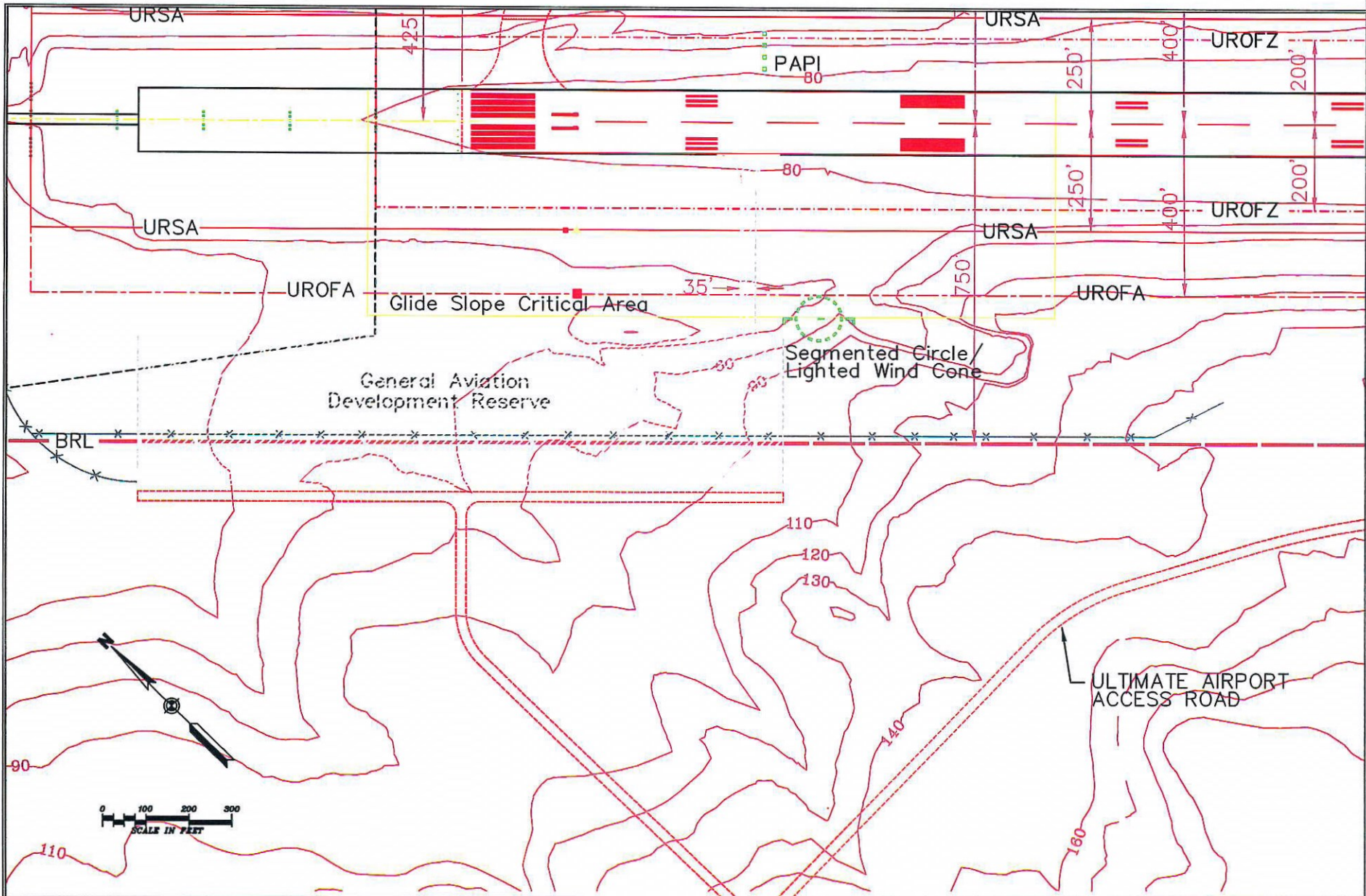


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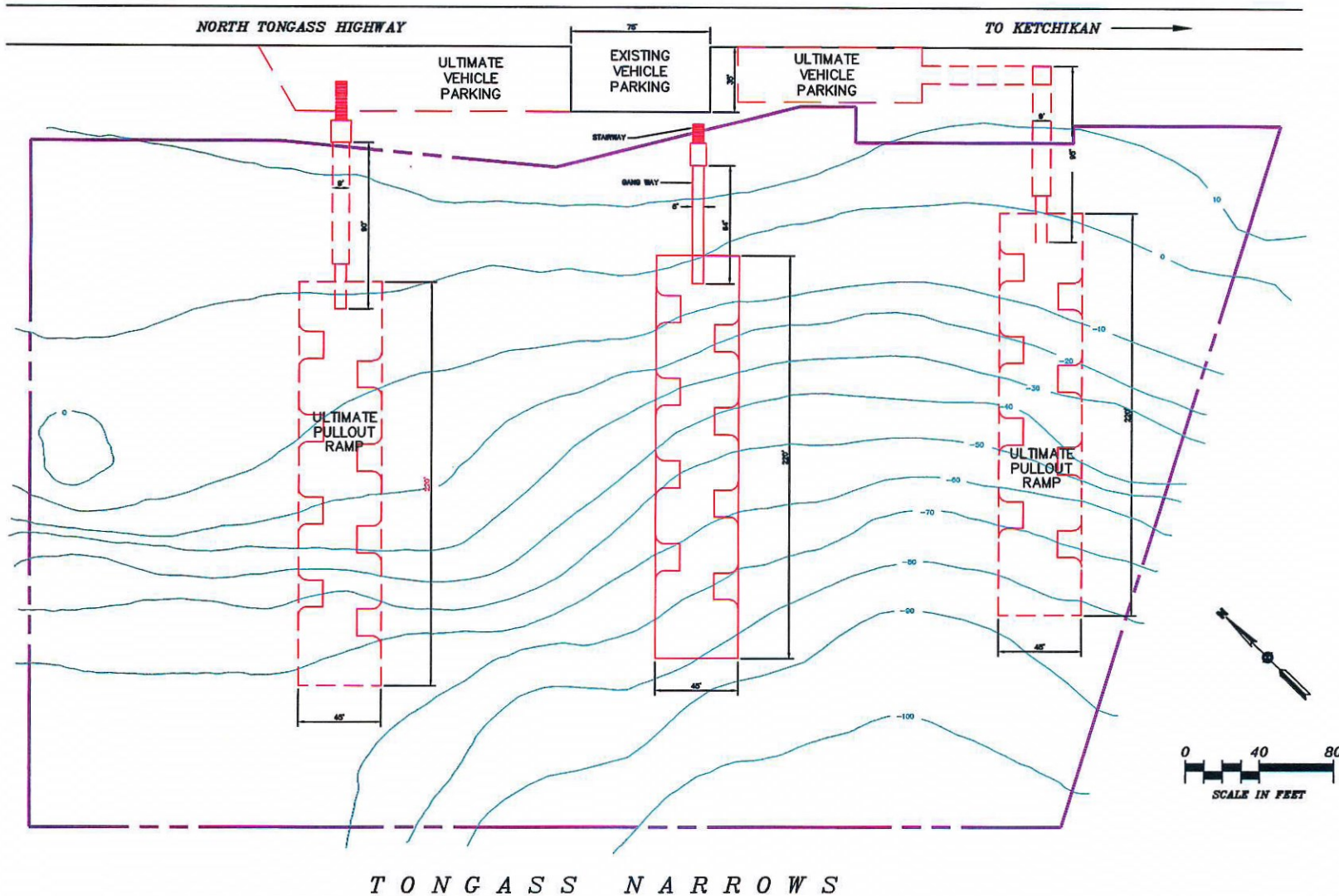
Ketchikan International Airport  
Master Plan

Exhibit 6  
Recommended General Aviation and  
KIA Floatplane Improvements



Ketchikan International Airport  
Master Plan

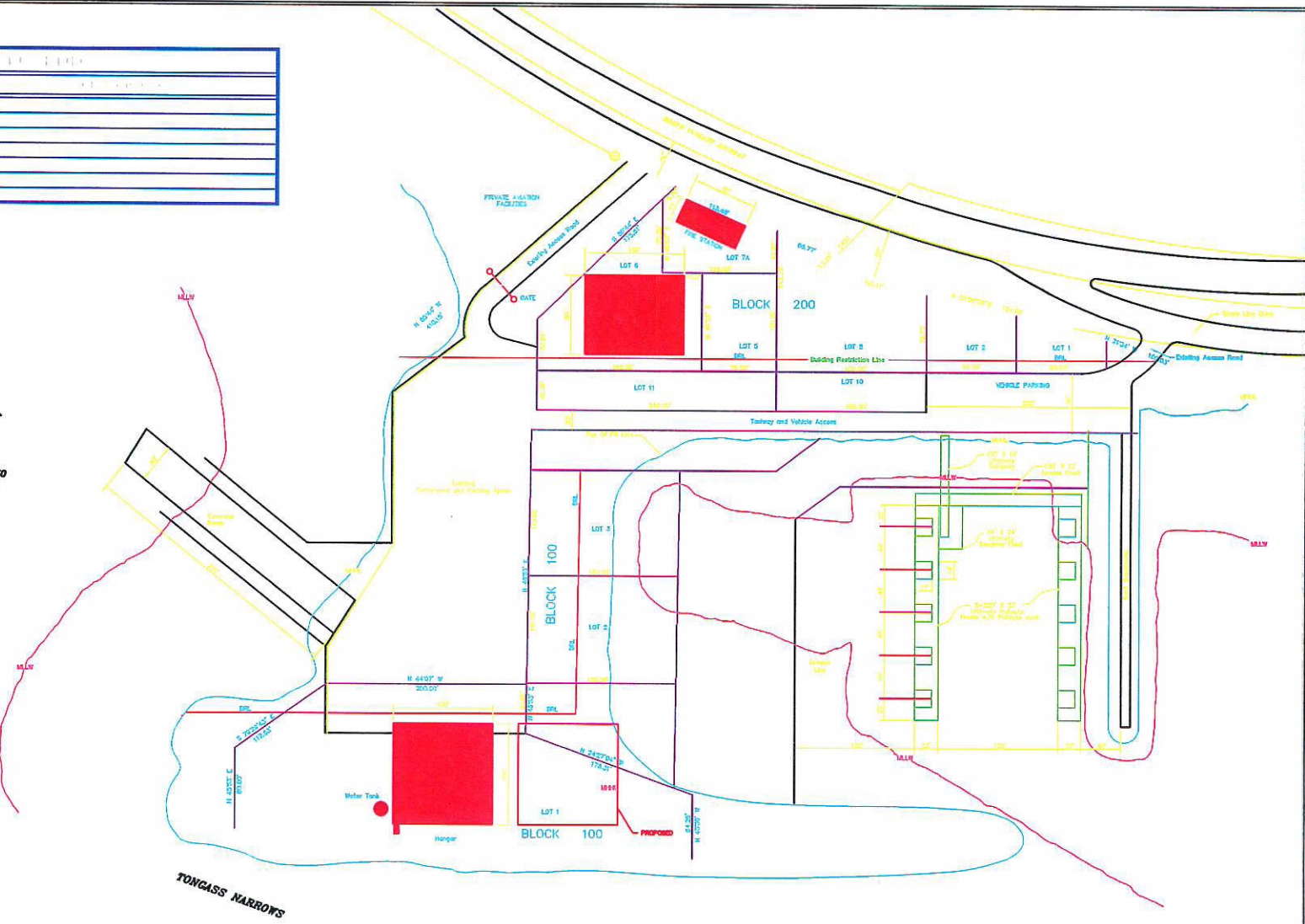
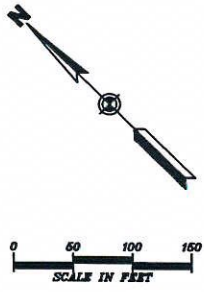
Exhibit 7  
General Aviation Development Reserve



Ketchikan International Airport  
Master Plan

Exhibit 8  
Recommended Murphy's Pullout  
Improvements

Symbol	Description
[Red Box]	Proposed
[Red Line]	BRL
[Red Circle]	1000
[Green Circle]	



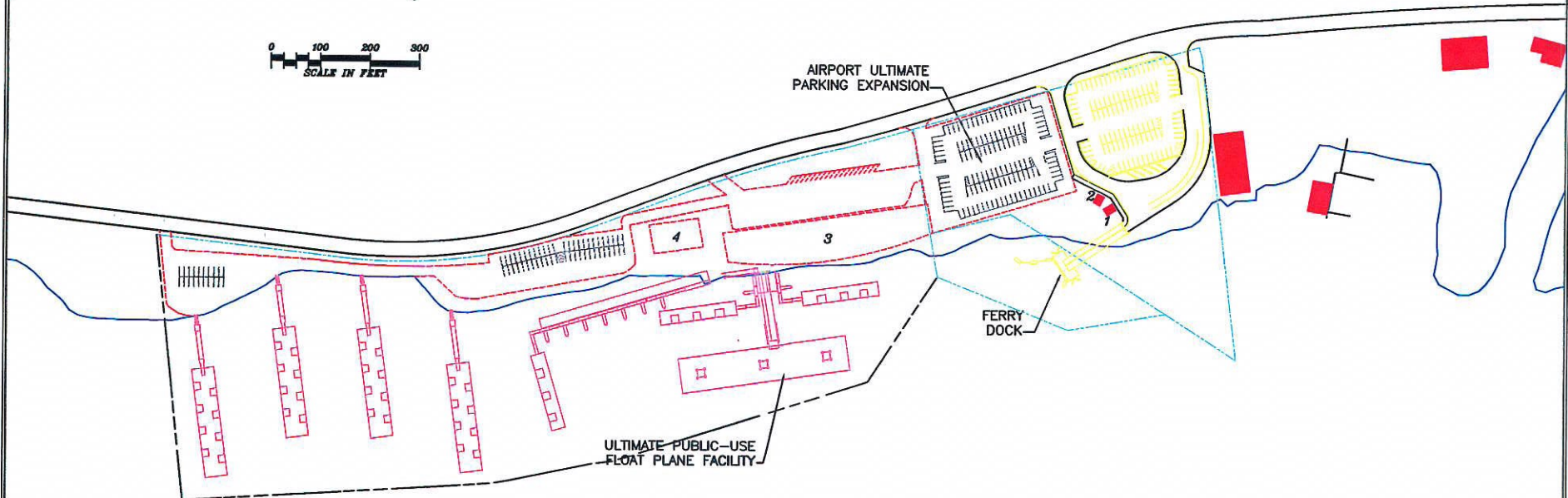
Ketchikan International Airport  
Master Plan

Exhibit 9  
Recommended Peninsula Point  
Improvements

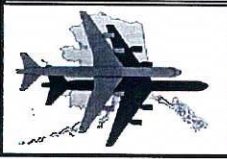
BUILDINGS/FACILITIES		
EXISTING	ULTIMATE	DESCRIPTION
1	1	PASSENGER SHELTER
2	2	STORAGE BUILDING
--	3	TERMINAL BUILDING
--	4	HANGAR



REVILLAGIGEDO ISLAND



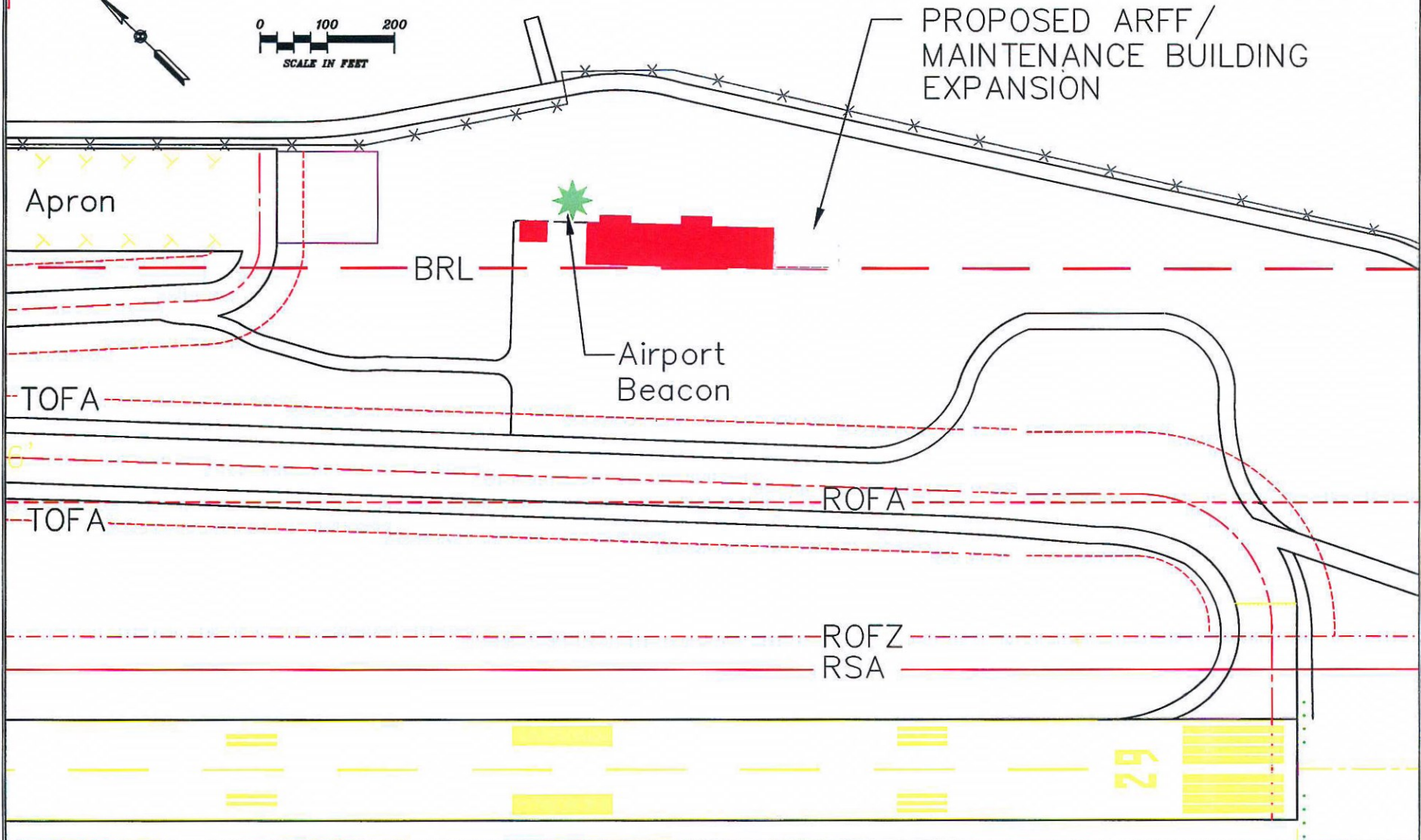
TONGASS NARROWS



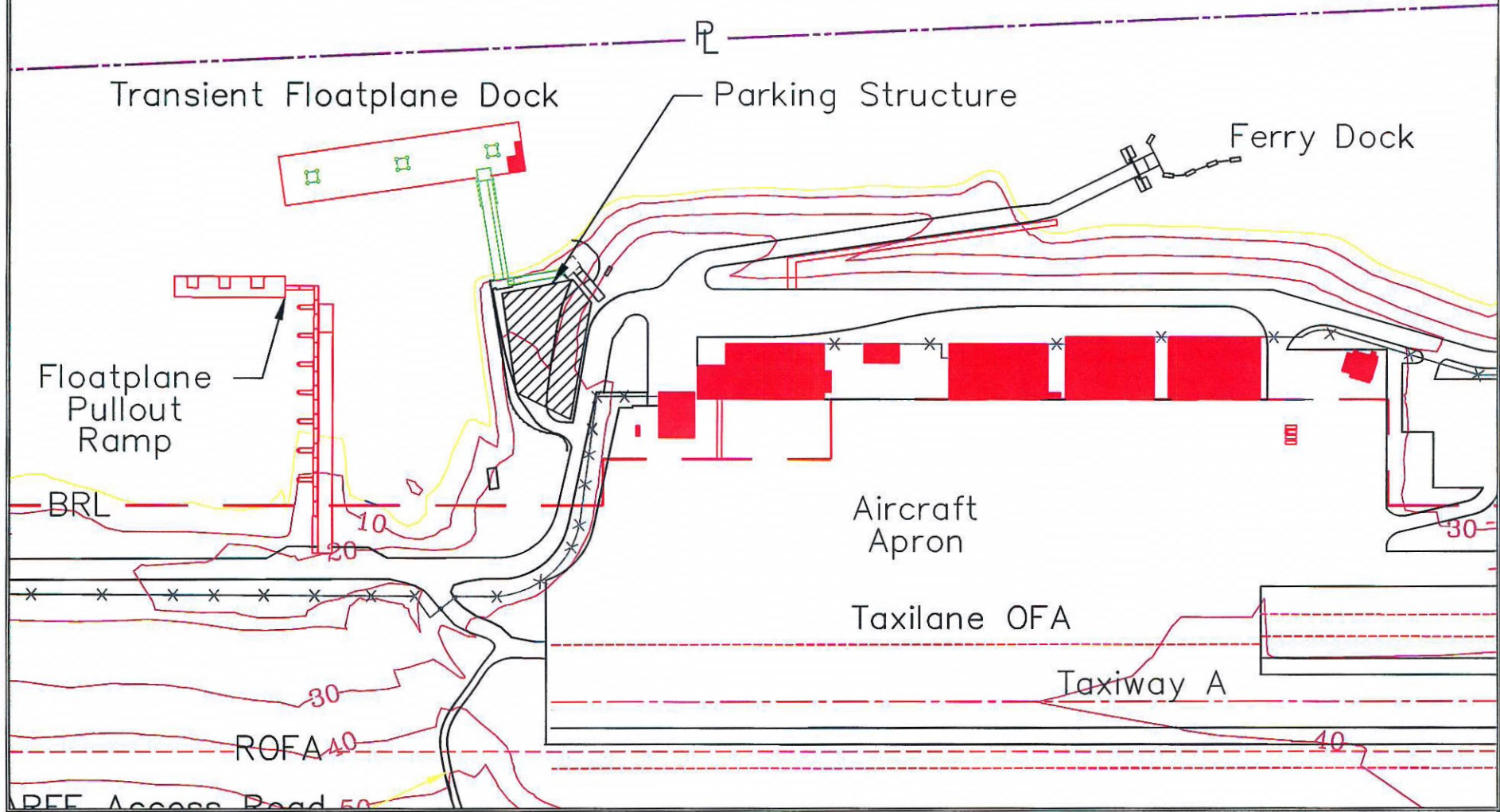
Ketchikan International Airport  
Master Plan

Exhibit 10  
Proposed Ultimate Public-Use Float Plane/  
Terminal Facility Concept

TONGASS NARROWS



TONGASS NARROWS



Ketchikan International Airport  
Master Plan

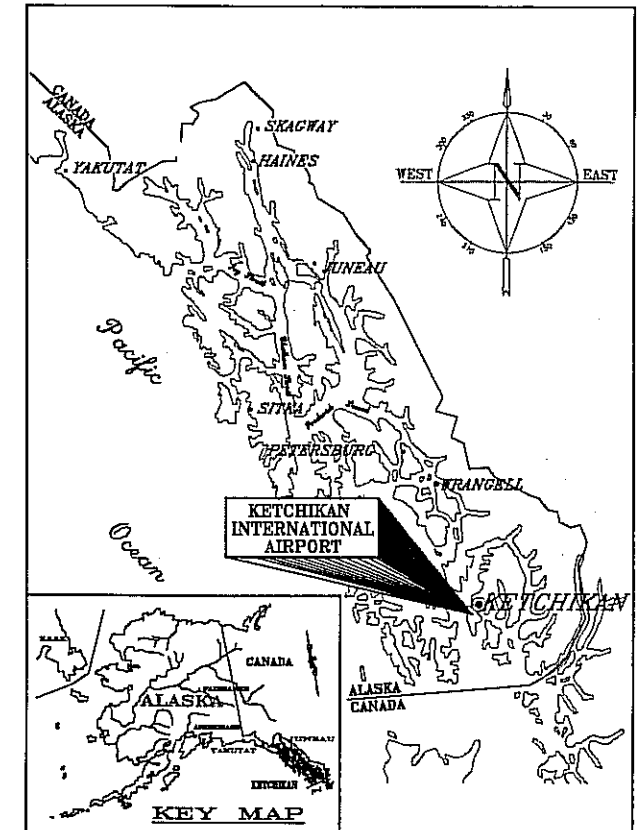
Exhibit 12  
Recommended KIA Parking Improvement

**Appendix A**  
**Airport Layout Plan Sheets**

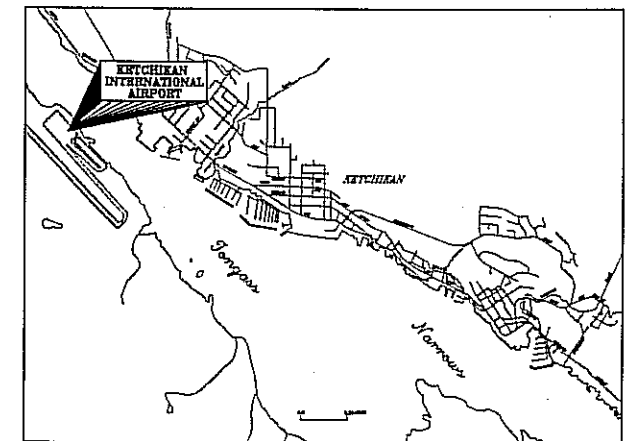
# NARRATIVE REPORT: KETCHIKAN INTERNATIONAL AIRPORT MASTER PLAN REPORT, 2002

FORECASTS									
Year	RUNWAY 11/29 OPERATIONS				FLOAT PLANE OPERATIONS			Total Aircraft Operations	
	Air Carrier	Air Taxi	GA	Military	Total Runway 11/29 Ops	Air Taxi	GA		Total Float Plane Ops
2003	6,650	2,974	8,832	250	18,705	20,014	208	20,221	38,926
2008	7,378	3,618	9,282	250	20,528	21,349	229	21,578	42,106
2018	8,066	4,862	10,253	250	23,431	24,292	279	24,572	48,003

Year	2003	2008	2018
Critical Aircraft	Boeing 737-400	Boeing 737-400	Boeing 737-400
Approach Speed	139 Knots	139 Knots	139 Knots
Wing Span	94.8 feet	94.8 feet	94.8 feet
Weight: Max. Takeoff	150,000 Lbs.	150,000 Lbs.	150,000 Lbs.
Airport Reference Code	C-III	C-III	C-III
Number of Based Aircraft	24	27	32
Annual Operations of Current Critical Aircraft	4,189	4,722	5,243
Total Enplanements	162,526	185,003	232,503



**KEY MAP**  
**LOCATION MAP**  
SCALE 1:2,000,000



**VICINITY MAP**

## RATIONALE FOR PROPOSED IMPROVEMENTS

### CURRENT PRIORITIES

#### Runway Safety Area (RSA) Improvements \$20,200,000

Shift Runway 11/29 750 feet southeast along the centerline and construct the RSA to meet FAA standards.

**Rationale** - The construction is required to bring the airport into compliance with FAA standards. In addition, KIA is a primary air transportation hub in southern Southeast Alaska. The airport is located in mountainous terrain and experiences marginal weather conditions, making flights into and out of KIA challenging. Residents and businesses depend on the airport for goods and services. For all these reasons, meeting the standard is a necessary and prudent action for the safe operation of the airport.

#### Exit Taxiway \$14,000,000

Construction of an exit taxiway beginning at the new threshold, and leading to the terminal apron area.

**Rationale** - Significant safety and operational benefits for the airfield at KIA.

#### ARFF Building and Maintenance/SRE Building Expansion \$1,100,000

Addition of approximately 4,000-square feet to the Snow Removal Equipment (SRE) building, and approximately 2000-square foot addition to the Aircraft Rescue and Firefighting (ARFF) building and maintenance facility.

**Rationale** - Provide for needed equipment bays, and office and storage space.

#### General Aviation (GA) and Air Cargo Apron Expansion \$2,100,000

Construction of hangar space for a total of 23 based aircraft, tiedown space for nine based aircraft, and additional parking stalls for 16 automobiles to provide for future GA parking and storage space demands at the Airport.

Expansion of apron to include an additional 2,500 square yards to accommodate transient aircraft, plus additional 500 square yards of air cargo apron required to accommodate the needs of existing and projected air cargo users.

**Rationale** - A minimum of 11,500 square yards of apron are required to meet the needs of the existing and future transient aircraft fleet. Based on the existing amount of 8,944 square yards, additional apron area of at least 2,500 square yards is required to accommodate the needs of transient aircraft through 2018.

A total of 4,000-square yards of air cargo apron is required to accommodate the needs of the existing and projected air cargo users. Based on the existing amount of approximately 3,500 square yards, an additional 500 square yards is required.

#### New Public Float Plane/Terminal Facility \$20,000,000

Purchase property adjacent to the airport ferry parking area on Revillagigedo Island, for construction of a float plane/terminal facility. The facility would include a terminal building to provide space for remote air carrier functions, commercial float plane and fixed base operator operations. The facility would also include a float plane passenger dock, a float plane freight/storage space, aircraft storage hangars, auto parking and curbside area for buses and taxis.

**Rationale** - The purpose of this project is to provide a consolidated facility to serve the needs of private and commercial float plane operators, and to provide for a remote terminal facility.

#### Seaplane Pullout Ramp \$1,600,000

Replace KIA float plane pullout ramp, and realign ramp northwest-southeast to reduce adverse wind and tidal current effects.

**Rationale** - The float plane launch ramp at the KIA float plane facility is currently aligned cross-wind and crosscurrent (northeast-southwest). Due to its orientation, aircraft entry and exit from the waterway is often dangerous and difficult. Additionally, the ramp's concrete planks are deteriorated and unusable at low tide.

### ULTIMATE PRIORITIES

#### Airport Parking and Circulation \$1,080,000

Construction of a multi-level parking structure with a 5,500 square foot footprint over the existing transient floatplane parking area and access road.

**Rationale** - Provided that access between Gravina and Revillagigedo Islands are improved, a large amount of parking will be required. Construction of a multi-level parking structure would minimize the area needed for parking.

#### KIA Fuel Storage \$100,000

Addition of a fuel farm at KIA with a storage capacity of 100,000 gallons.

**Rationale** - The Airport serves as a fueling facility for air carrier, air taxi and GA aircraft operators; however, there is limited existing capacity for storing aviation fuels at the Airport. Aircraft operators currently purchase aviation fuels from bulk suppliers in Ketchikan. A fuel farm would allow direct deliveries, better quality control, and more efficient filtering of fuel.

FAA AIRSPACE REVIEW NO. 08AAL-001 NRA

SUBJECT TO FAA APPROVAL LETTER

FAA APPROVAL/LETTER DATE 11/12/02

BY: *Paul L. O'Neil*  
PAL, AIRPORT DIVISION  
ALASKAN REGION, AAL-500

PREVIOUS ALP FAA APPROVAL DATE 7/1/01

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

APPROVED BY:

Verne Skagerberg, Transportation Planner  
for Andy Hughes, Chief of Planning

Date

**USKH** Architecture • Engineering  
Land Surveying • Planning



STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT

NARRATIVE  
REPORT

KETCHIKAN, ALASKA

PLANNED BY: D.L.M.

DETAILED BY: D.R.J.

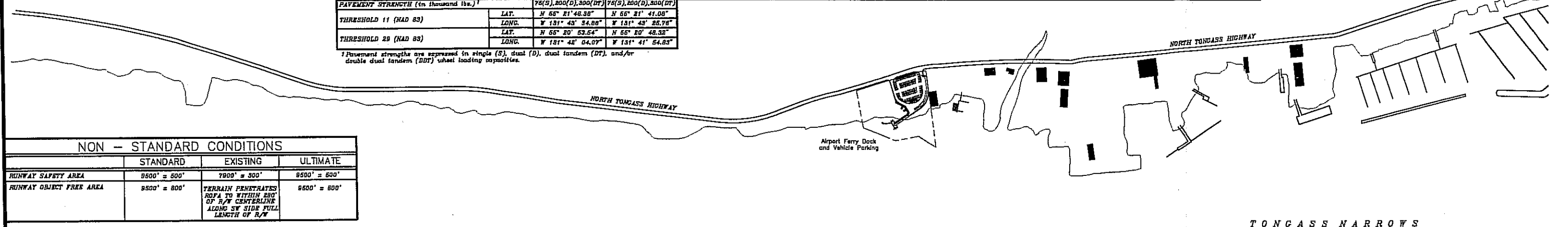
CHECKED BY: D.L.M.

DATE: OCTOBER 2002

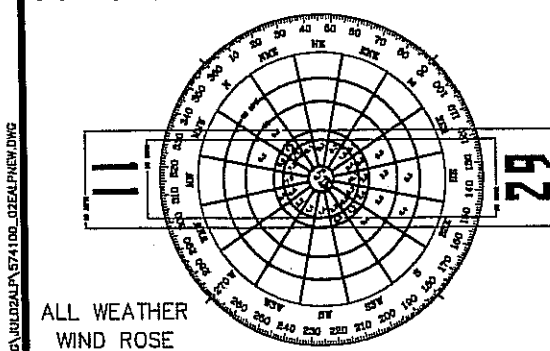
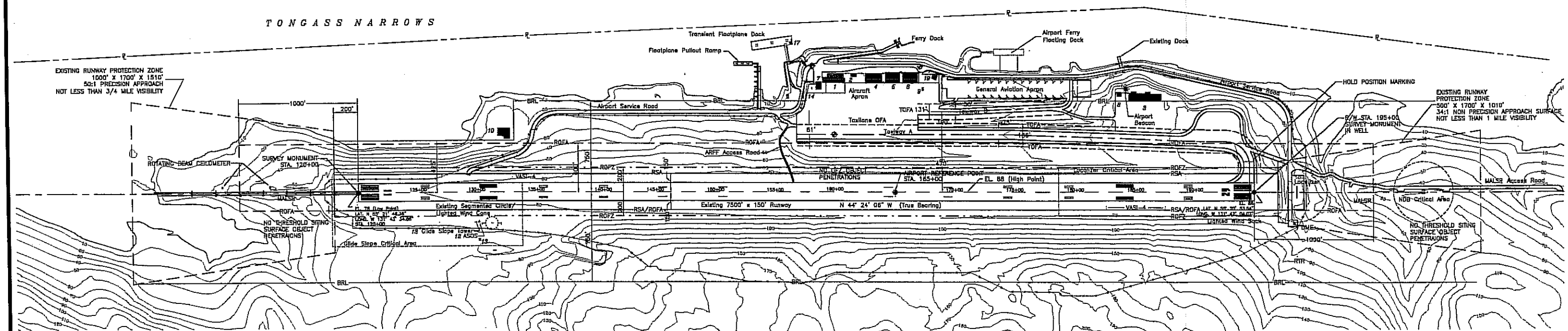
SHEET 1 OF 22

AIRPORT DATA			RUNWAY DATA		RUNWAY 11-29		BUILDINGS/FACILITIES		LEGEND	
	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE
AIRPORT TYPE	Primary	Primary	C-III	C-III	1	1	TERMINAL BUILDING			
AIRPORT REFERENCE CODE	C-III	C-III	7500' ± 150'	7500' ± 150'	2	2	FISH COOLER			
AIRPORT ELEVATION	88' MSL	88' MSL	N 44° 24' 08" W	N 44° 24' 08" W	3	3	AIRPORT RESCUE & FIRE FIGHTING (ARFF) EQUIP. BLDG			
MEAN MAXIMUM TEMPERATURE OF HOTTEST MONTH	84° F	84° F	PRECISION	PRECISION	4	4	TAQUAN AIR			
AIRPORT REFERENCE POINT (ARP) COORDINATES - NAD '83	Latitude N 66° 21' 19.85"	Latitude N 66° 21' 14.54"	7900' ± 300'	9500' ± 500'	5	5	TAQUAN AIR			
AIRPORT and TERMINAL NAVIGATIONAL AIDS	DMR	DMR	7900' ± 400'	7900' ± 400'	6	6	TAQUAN AIR			
	NDB	NDB	9500' ± 650'	9500' ± 800'	7	7	ALASKA AIRLINES EQUIPMENT BUILDING			
	ILS/CPS	ILS/CPS	98.4%	98.4%	8	8	REGULATOR BUILDING			
	NDB, DME	NDB, DME	60:1, 34:1	60:1, 34:1	9	9	UNDERGROUND FUEL TANKS (TO BE REMOVED)			
	ILS-Cat I	ILS-Cat I	3/4 MILE, 1 MILE	3/4 MILE, 1 MILE	10	10	STORAGE BUILDING (TO BE REMOVED)			
	MALSR	MALSR	HIRL	HIRL	11	11	EXECUTIVE HANGARS			
	VASI-4	VASI-4	PRECISION	PRECISION	12	12	AUTOMATED SURFACE OBSERVATION SYSTEM (ASOS)			
	NDB, DME	NDB, DME	MITL	MITL	13	13	GLIDE SLOPE TOWER			
	GPS	GPS	Centerline	Centerline	14	14	FUEL FACILITY			
	MALSR	MALSR	118'	118'	15	15	T-HANGER AND COVERED TIE DOWNS			
	VASI-4	VASI-4	79'	79'	16	16	FLOAT PLANE FACILITY			
			180'	180'	17	17	PASSENGER SHELTER, SEAPLANE FLOAT			
			131'	131'	18	18	ULTIMATE SEAPLANE FULLOUT RAMP			
			0.1442	0.1442	19	19	PETRO ALASKA INC.			
			Asphalt (Grooved)	Asphalt (Grooved)	20	20	FUEL FARM			
			75(S), 200(D), 300(DT)	75(S), 200(D), 300(DT)						
THRESHOLD 11 (NAD 83)	LAT. N 66° 21' 48.30"	LAT. N 66° 21' 41.00"								
	LONG. W 131° 43' 34.88"	LONG. W 131° 43' 25.78"								
THRESHOLD 29 (NAD 83)	LAT. N 66° 20' 53.54"	LAT. N 66° 20' 48.32"								
	LONG. W 131° 48' 04.07"	LONG. W 131° 41' 54.23"								

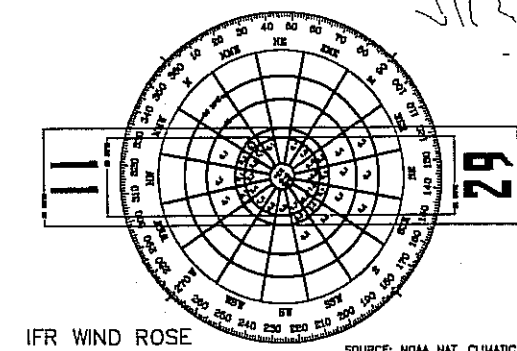
- GENERAL NOTES:
- Details concerning airport improvements are depicted on the TERMINAL AREA PLAN.
  - Recommended land uses within the airport environs are depicted on the AIRPORT LAND USE PLAN.
  - Contours are based on Mean Lower Low Water (MLLW), Mean Tide Level (MTL) approximates Level (MSL) and is 8.00' above Mean Lower Low Water (MLLW).
  - Runway elevations are Mean Sea Level.
  - Latitude and Longitude are in accordance with North American Datum 1983 (NAD'83).



NON - STANDARD CONDITIONS			
	STANDARD	EXISTING	ULTIMATE
RUNWAY SAFETY AREA	9500' ± 500'	7900' ± 300'	9500' ± 500'
RUNWAY OBJECT FREE AREA	9500' ± 800'	TERRAIN PENETRATES 20% TO WITHIN 200' OF R/W CENTERLINE ALONG SW SIDE FULL LENGTH OF R/W	9500' ± 800'

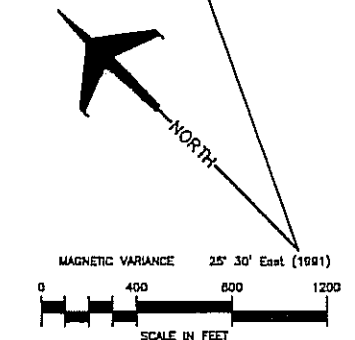


WIND DATA	
12 MPH (15 MPH)	98.4%
98.4%	99.3%



WIND DATA	
12 MPH (15 MPH)	97.8%
97.8%	99.3%

SOURCE: NOAA NAT. CLIMATIC SERVICE  
 ABEVILLE, N.C.  
 KETCHIKAN FLIGHT SERVICE  
 KETCHIKAN, ALASKA  
 JAN-DEC 1979  
 9117 OBSERVATIONS



FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/26/02  
 BY: P. P. P.  
 P.A. AIRPORT DIVISION  
 ALASKAN REGION, AAL-800  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature] 7/2/02  
 Versa S. [Signature] Transportation Planner Date  
 for Andy Hughes, Chief of Planning

**USKH** Architecture • Engineering  
 Land Surveying • Planning

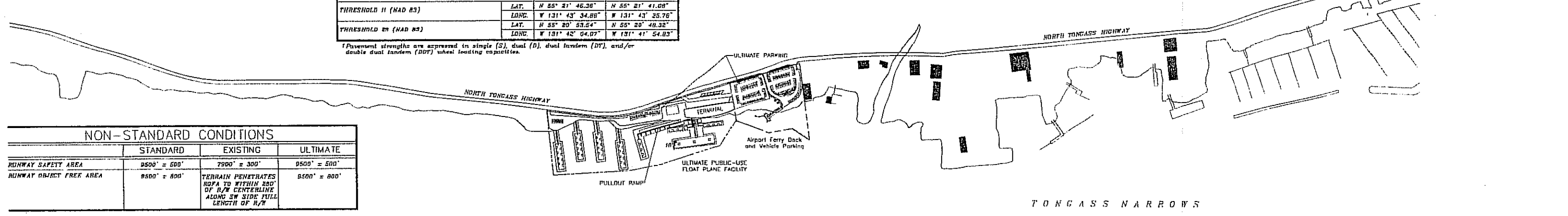
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT  
 EXISTING  
 AIRPORT LAYOUT DRAWING  
 KETCHIKAN, ALASKA

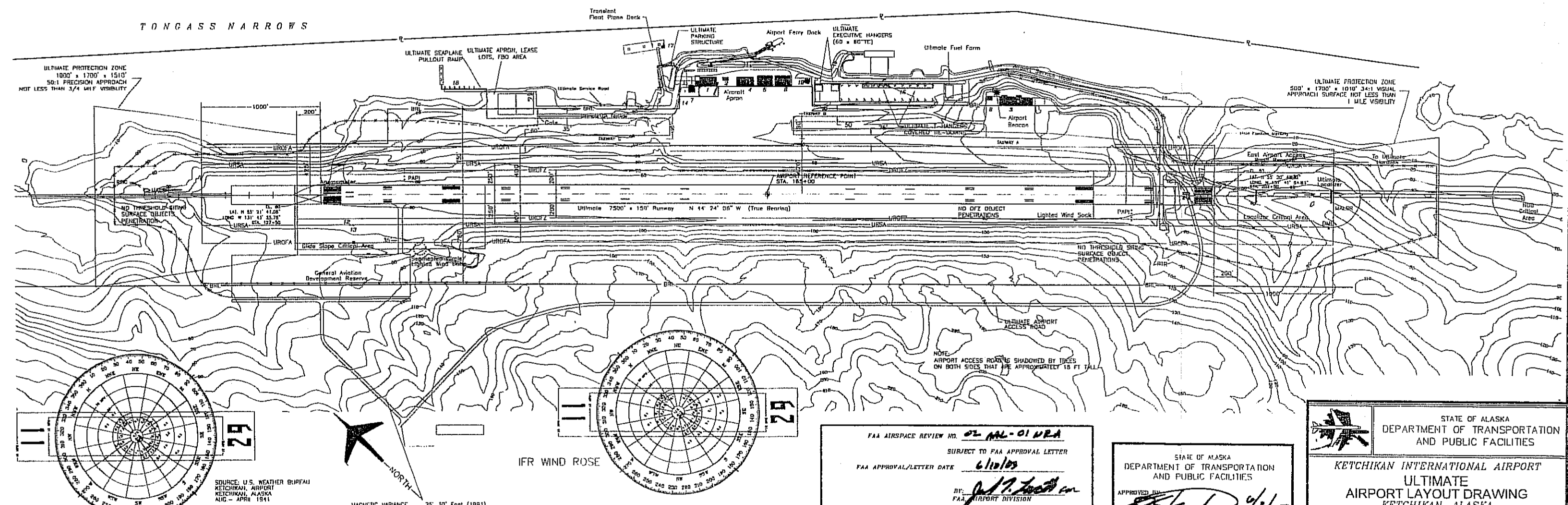
PLANNED BY: K.L.L.    DETAILED BY: C.M.B.    CHECKED BY: D.L.M.  
 DATE: JULY 2002    SHEET 2 OF 22

AIRPORT DATA	EXISTING		ULTIMATE		RUNWAY DATA		RUNWAY 11-29		BUILDINGS/FACILITIES		LEGEND	
	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE
AIRPORT TYPE	Primary	Primary	AIRPORT REFERENCE CODE (APPROACH CAT. - DESIGN GR.)		C-III	C-III	1	1	TERMINAL BUILDING	1	1	AIRPORT PROPERTY LINE
AIRPORT REFERENCE CODE	C-III	C-III	RUNWAY DIMENSIONS		7500' x 150'	7500' x 150'	2	2	FISH COOLER	2	2	AIRPORT REFERENCE POINT (ARP)
AIRPORT ELEVATION	88' MSL	88' MSL	RUNWAY BEARING		N 44° 24' 06" W	N 44° 24' 06" W	3	3	AIRPORT RESCUE & FIREFIGHTING (ARFF) & EQUIP. BLDG.	3	3	AIRPORT ROTATING BEACON
MEAN MAXIMUM TEMPERATURE OF HOTTEST MONTH	64° F	64° F	RUNWAY INSTRUMENTATION		Precision	Precision	4	4	TAQUAN AIR	4	4	BUILDING CONSTRUCTION
AIRPORT REFERENCE POINT (ARP) COORDINATES - NAD '83	Latitude N 55° 21' 19.95"	N 55° 21' 14.52"	RUNWAY SAFETY AREA		7900' x 300'	8500' x 500'	5	5	TAQUAN AIR	5	5	BUILDING RESTRICTION LINE (BRL)
AIRPORT and TERMINAL NAVIGATIONAL AIDS	Longitude W 131° 42' 49.46"	W 131° 42' 49.84"	RUNWAY OBSTACLE FREE ZONE		7900' x 400'	7800' x 400'	6	6	TAQUAN AIR	6	6	DRAINAGE
	DME	DME	RUNWAY OBJECT FREE AREA DIMENSIONS		8500' x 550'	8500' x 800'	7	7	ALASKA AIRLINES EQUIPMENT BUILDING	7	7	FACILITY CONSTRUCTION
	NDB	NDB	RUNWAY PERCENTAGE WIND COVERAGE		98.4%	99.4%	8	8	REGULATOR BUILDING	8	8	FRNCING
	ILS/GPS	ILS/GPS	RUNWAY APPROACH SURFACES 11 & 29, RESPECTIVELY		50:1, 34:1	50:1, 34:1	9	9	UNDERGROUND FUEL TANKS (TO BE REMOVED)	9	9	NAVIGATIONAL AID INSTALLATION
NAVIGATIONAL AIDS (RUNWAY 11)	NDB, DME	NDB, DME	APPROACH VISIBILITY MINIMUMS 11 & 29, RESPECTIVELY		3/4 MILE, 1 MILE	3/4 MILE, 1 MILE	10	10	STORAGE BUILDING (TO BE REMOVED)	10	10	RUNWAY END IDENTIFICATION LIGHTS (REIL)
	ILS-Cat I	ILS-Cat I	RUNWAY LIGHTING		HIRL	HIRL	11	11	EXECUTIVE HANGARS	11	11	RUNWAY THRESHOLD LIGHTS
	MALS/R	MALS/R	RUNWAY MARKING		Precision	Precision	12	12	AUTOMATED SURFACE OBSERVATION SYSTEM (ASOS)	12	12	SECTION CORNER
	VASI-4	VASI-4	TAXIWAY LIGHTING		MITL	MITL	13	13	GLIDE SLOPE TOWER	13	13	SEGMENTED CIRCLE/WIND INDICATOR
NAVIGATIONAL AIDS (RUNWAY 29)	NDB, DME	NDB, DME	TAXIWAY MARKING		Centerline	Centerline	14	14	FUEL FACILITY	14	14	TOPOGRAPHIC CONTOURS
	GPS	GPS	TAXIWAY A SAFETY AREA WIDTH		118'	118'	15	15	T-HANGER AND COVERED TIE DOWNS	15	15	WIND INDICATOR (Lighted)
	MALS/R	MALS/R	TAXIWAY B SAFETY AREA WIDTH		79'	79'	16	16	FLOAT PLANE FACILITY	16	16	AUTOMATED SURFACE OBSERVATION STATION (ASOS)
	VASI-4	VASI-4	TAXIWAY A OBJECT FREE AREA WIDTH		188'	186'	17	17	PASSENGER SHELTER, SEAPLANE FLOAT	17	17	SURVEY MONUMENTS
			TAXIWAY B OBJECT FREE AREA WIDTH		121'	121'	18	18	ULTIMATE SEAPLANE PULLOUT RAMP	18	18	SHORE LINE
			EFFECTIVE RUNWAY GRADIENT (in %)		0.1442	0.1442	19	19	PSTRO ALASKA INC.	19	19	ROAD
			PAVEMENT MATERIAL		Asphalt (Gravel)	Asphalt (Gravel)	20	20	FUEL FARM	20	20	
			PAVEMENT STRENGTH (in thousand lbs.) <sup>1</sup>		75(S), 200(D), 300(DT)	75(S), 200(D), 300(DT)						
			THRESHOLD 11 (NAD 83)		LAT. N 55° 21' 46.38"	N 55° 21' 41.08"						
			THRESHOLD 29 (NAD 83)		LAT. N 55° 20' 53.64"	N 55° 20' 48.38"						
					LONG. W 131° 43' 34.88"	W 131° 43' 35.76"						
					LAT. N 55° 20' 53.64"	N 55° 20' 48.38"						
					LONG. W 131° 42' 04.07"	W 131° 41' 54.83"						

- GENERAL NOTES:
1. Details concerning airport improvements are depicted on the TERMINAL AREA DRAWING.
  2. Recommended land uses within the airport environs are depicted on the AIRPORT LAND USE DRAWINGS.
  3. Contours are based on Mean Lower Low Water (MLLW), Mean Tide Level (MTL), approximately Mean Sea Level (MSL) and is 8.00' above Mean Lower Low Water (MLLW).
  4. Runway elevations are Mean Sea Level.
  5. Latitude and Longitude are in accordance with North American Datum 1983 (NAD '83).



NON-STANDARD CONDITIONS			
	STANDARD	EXISTING	ULTIMATE
RUNWAY SAFETY AREA	8500' x 500'	7900' x 300'	8500' x 500'
RUNWAY OBJECT FREE AREA	8500' x 800'	TERRAIN PENETRATES ROPA TO WITHIN 200' OF R/W CENTERLINE ALONG SW SIDE FULL LENGTH OF R/W	8500' x 800'



ALL WEATHER WIND ROSE

WIND DATA  
Runway 11-29  
12 MPH 75 MPH  
98.4% 99.8%

WIND DATA  
Runway 11-29  
12 MPH 75 MPH  
97.6% 99.3%

SCALE IN FEET

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT  
ULTIMATE AIRPORT LAYOUT DRAWING  
KETCHIKAN, ALASKA

PLANNED BY: VRS  
DATE: APRIL 2003

Detailed by: VRS  
Checked by: VRS

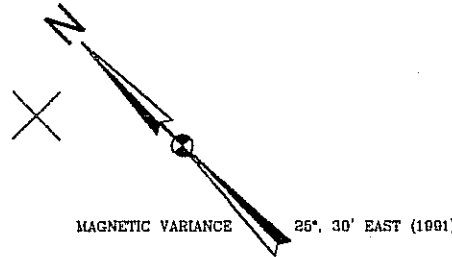
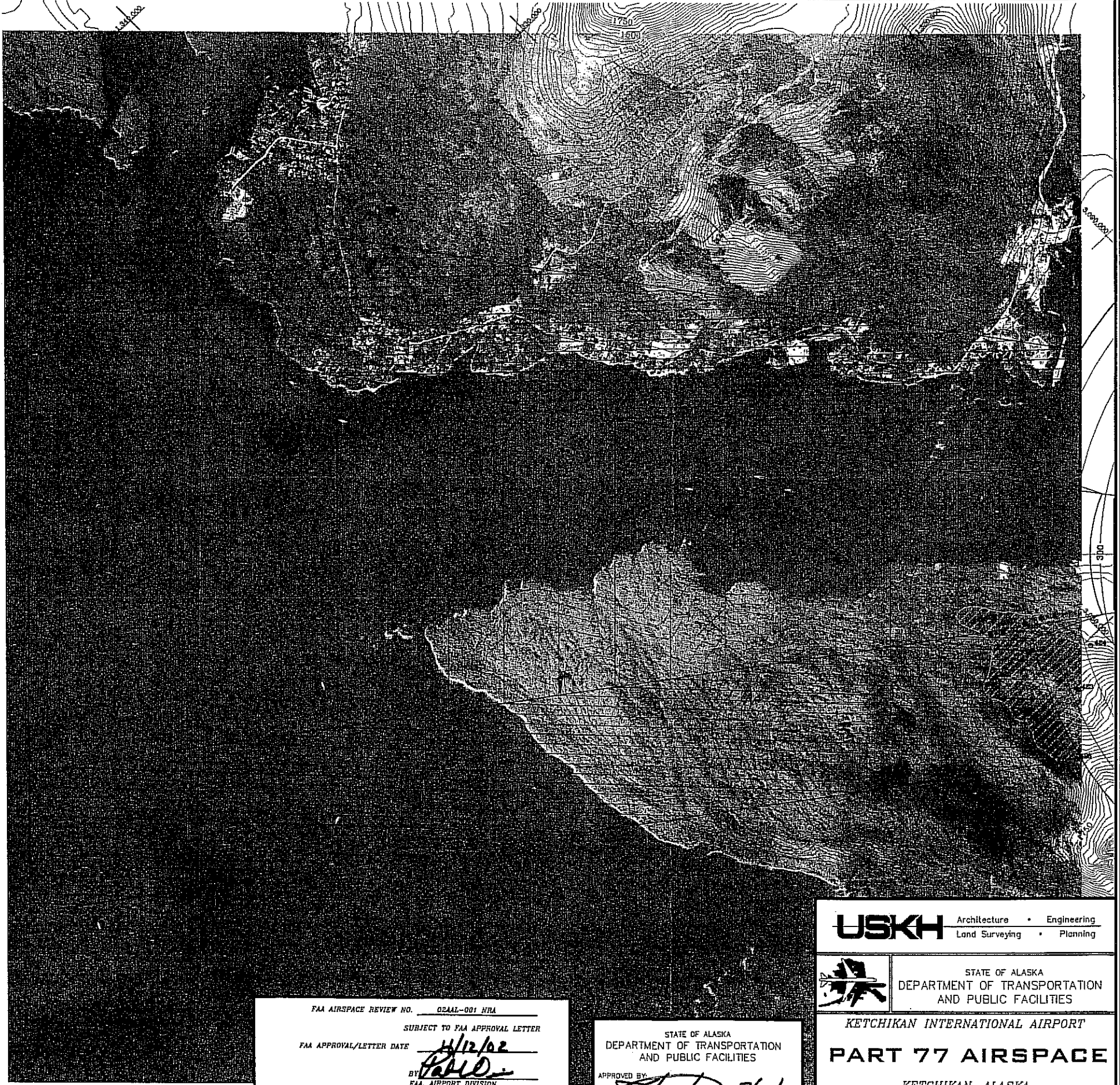
SHEET 3 of 22

FAA AIRSPACE REVIEW NO. 02 AL-01 NFA  
SUBJECT TO FAA APPROVAL LETTER  
FAA APPROVAL/LETTER DATE 6/10/03  
BY: [Signature]  
FAA AIRPORT DIVISION  
ALASKAN REGION, AAL-800  
PREVIOUS ALP FAA APPROVAL DATE 11/25/02

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

APPROVED BY: [Signature] 4/2/03  
Veronica [Signature] Planning  
for Andy Hughes, Chief of Planning

SOURCE: NOAA NAT. CLIMATIC SERVICE  
ASVILLE, N.C.  
KETCHIKAN FLIGHT SERVICE  
KETCHIKAN, ALASKA  
JAN-DEC 1975  
9117 OBSERVATIONS



SCALE: 1 IN = 2000 FT.  
 CONTOUR INTERVAL: 50 FT.

SHEET INDEX

4	5
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Notes:

The 1"=2000' digital orthophoto was created from the USGS DEM.  
 Areas denoting vegetation cover on the ground should be considered less accurate. This map is not reliable for engineering purposes until field checked in accordance with ASPRS Standards.  
 This map projection is based upon Alaska State Plane Coordinate System, of 1983 Zone 1, as expressed in U.S. Survey Feet.  
 Vertical data is referenced to Mean Sea Level.  
 This map is based on photography acquired 7-2-1999 at a nominal scale of 1"=1200'.

PREPARED BY: AEROMAP U.S. I.P.C.

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U:\574100\DMC\AAL\02\AFL\574100\_LG47719E.MXD

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N 1,200,000

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 4/12/02  
 BY [Signature]  
 FAA, AIRPORT DIVISION  
 ALASKAN REGION, AAL-800  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/07

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY [Signature] 7/2/02  
 Vern Soderberg, Transportation Planner  
 for Andy Hughes, Chief of Planning

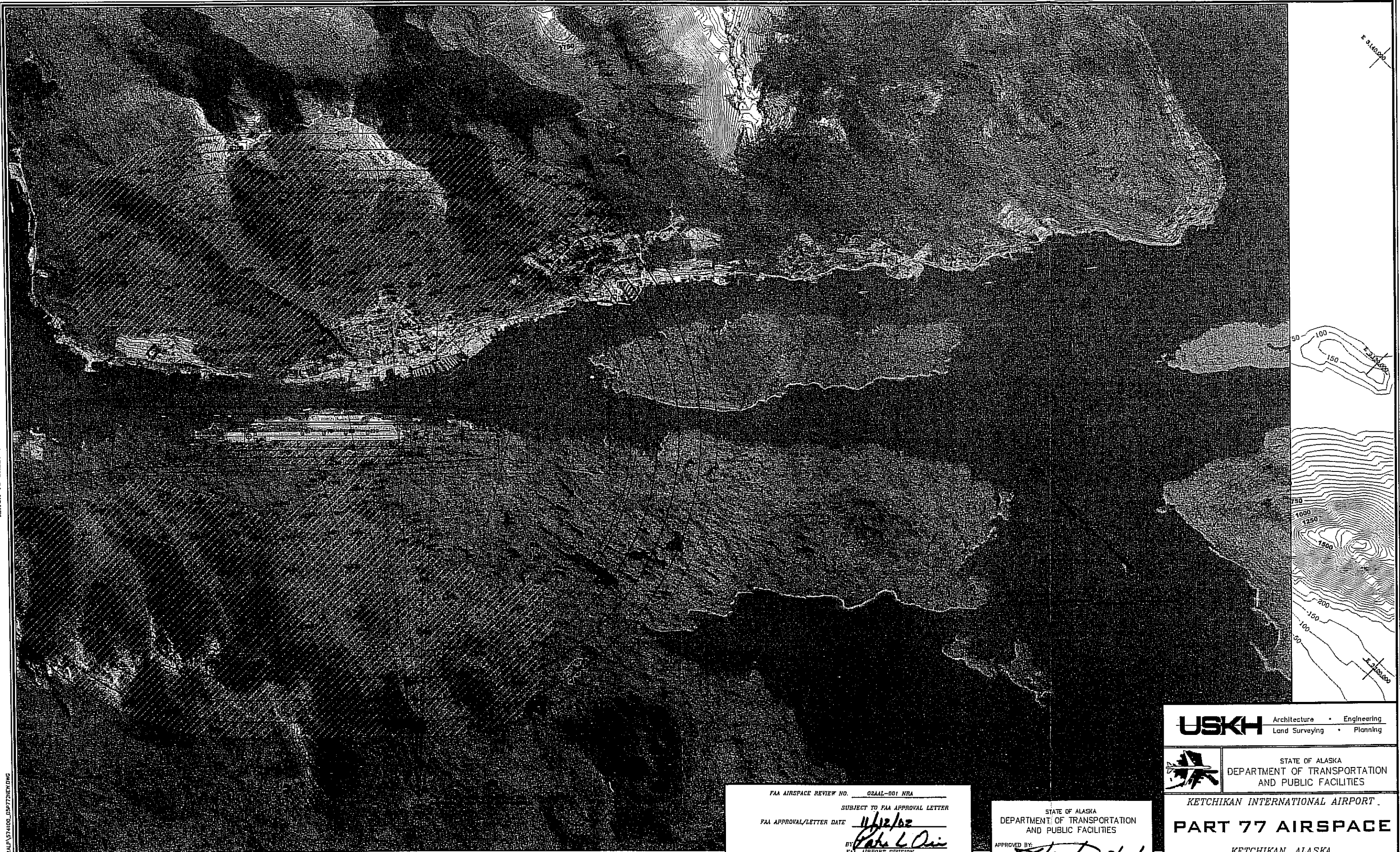
**USKH** Architecture • Engineering  
 Land Surveying • Planning

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT  
**PART 77 AIRSPACE**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002		SHEET 4 OF 22

MATCH TO SHEET 4



741003.DWG \\ALASKA\1574100\_08P77NEW.DWG

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/12/02  
 BY Pete L. Qui  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-600  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

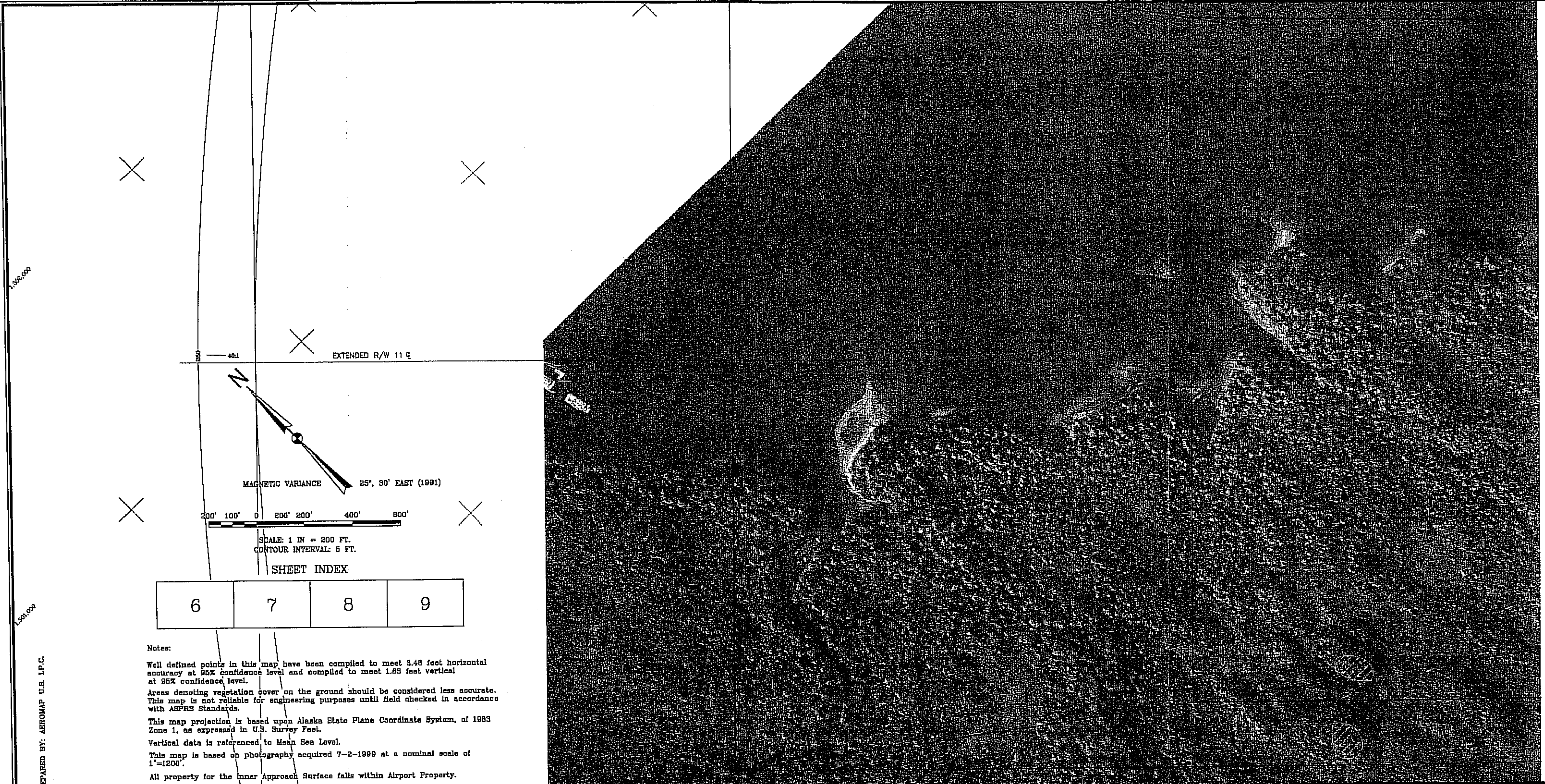
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature] 7/12/02  
 Verne Skogberg, Transportation Planner  
 for Andy Hughes, Chief of Planning Date

**USKH** Architecture • Engineering  
 Land Surveying • Planning

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT  
**PART 77 AIRSPACE**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002		SHEET 5 OF 22



SHEET INDEX

6	7	8	9
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Notes:

Well defined points in this map have been compiled to meet 3.48 feet horizontal accuracy at 95% confidence level and compiled to meet 1.83 feet vertical at 95% confidence level.

Areas denoting vegetation cover on the ground should be considered less accurate. This map is not reliable for engineering purposes until field checked in accordance with ASPRS Standards.

This map projection is based upon Alaska State Plane Coordinate System, of 1983 Zone 1, as expressed in U.S. Survey Feet.

Vertical data is referenced to Mean Sea Level.

This map is based on photography acquired 7-2-1989 at a nominal scale of 1"=1200'.

All property for the Inner Approach Surface falls within Airport Property.

PREPARED BY: AEROMAP U.S. I.P.C.

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FAA AIRSPACE REVIEW NO. 02AAL-001 NRA

SUBJECT TO FAA APPROVAL LETTER

FAA APPROVAL/LETTER DATE 11/12/02

BY: [Signature]  
 AIRPORT DIVISION  
 ALASKAN REGION, AAL-600

PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

APPROVED BY: [Signature] 7/2/02  
 Verne [Name] [Title]  
 for Andy Hughes, Chief of Planning

**USKH** Architecture • Engineering  
 Land Surveying • Planning

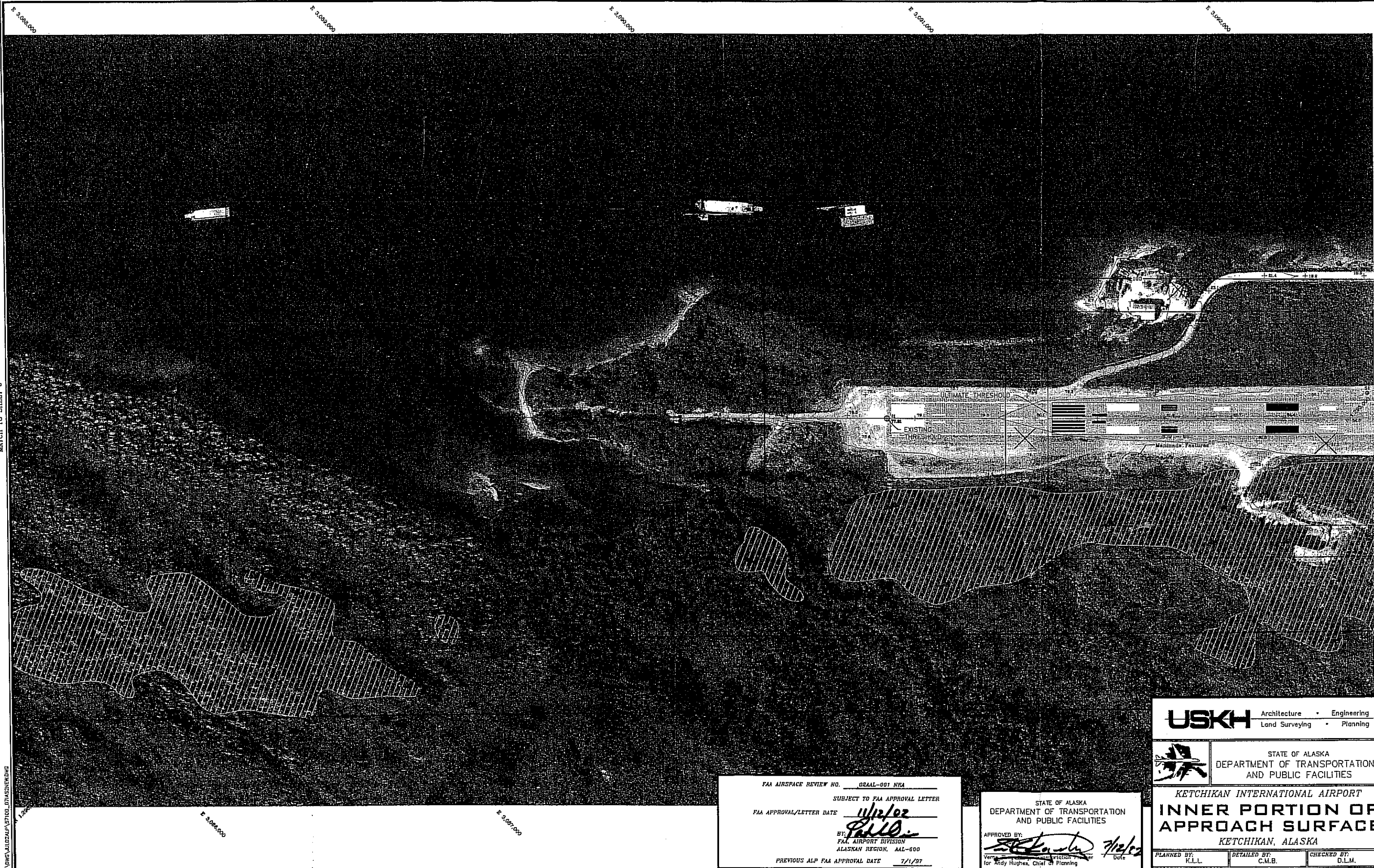
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT  
**INNER PORTION OF  
 APPROACH SURFACE**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002		SHEET 6 OF 22

E:\STATIONING\DRAWINGS\AAL-600\BRAINEN.DWG

MATCH TO SHEET 6



12741000.DWG, JLDZAP, 07/10/02, DTASZHEW.DWG

FAA AIRSPACE REVIEW NO. ORAAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/12/02  
 BY: [Signature]  
 FAA, AIRPORT DIVISION  
 ALASKAN REGION, AAL-800  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature] 7/1/02  
 Verified by: [Signature] 7/1/02  
 for Andy Hughes, Chief of Planning

**USKH** Architecture • Engineering  
 Land Surveying • Planning



STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

**KETCHIKAN INTERNATIONAL AIRPORT**  
**INNER PORTION OF**  
**APPROACH SURFACE**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002	SHEET 7 OF 22	

MATCH TO SHEET 7

1:574100 UTM, 540000 NAD 83, 574100 UTM, 540000 NAD 83



MATCH TO SHEET 8

E 3,000,000

E 3,000,000

E 3,000,000

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA

SUBJECT TO FAA APPROVAL LETTER

FAA APPROVAL/LETTER DATE 11/12/02

BY [Signature]

FAA AIRPORT DIVISION  
ALASKAN REGION, AAL-600

PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

APPROVED BY: [Signature] 7/12/02

for Andy Hughes, Chief of Planning

**USKH** Architecture • Engineering  
Land Surveying • Planning

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

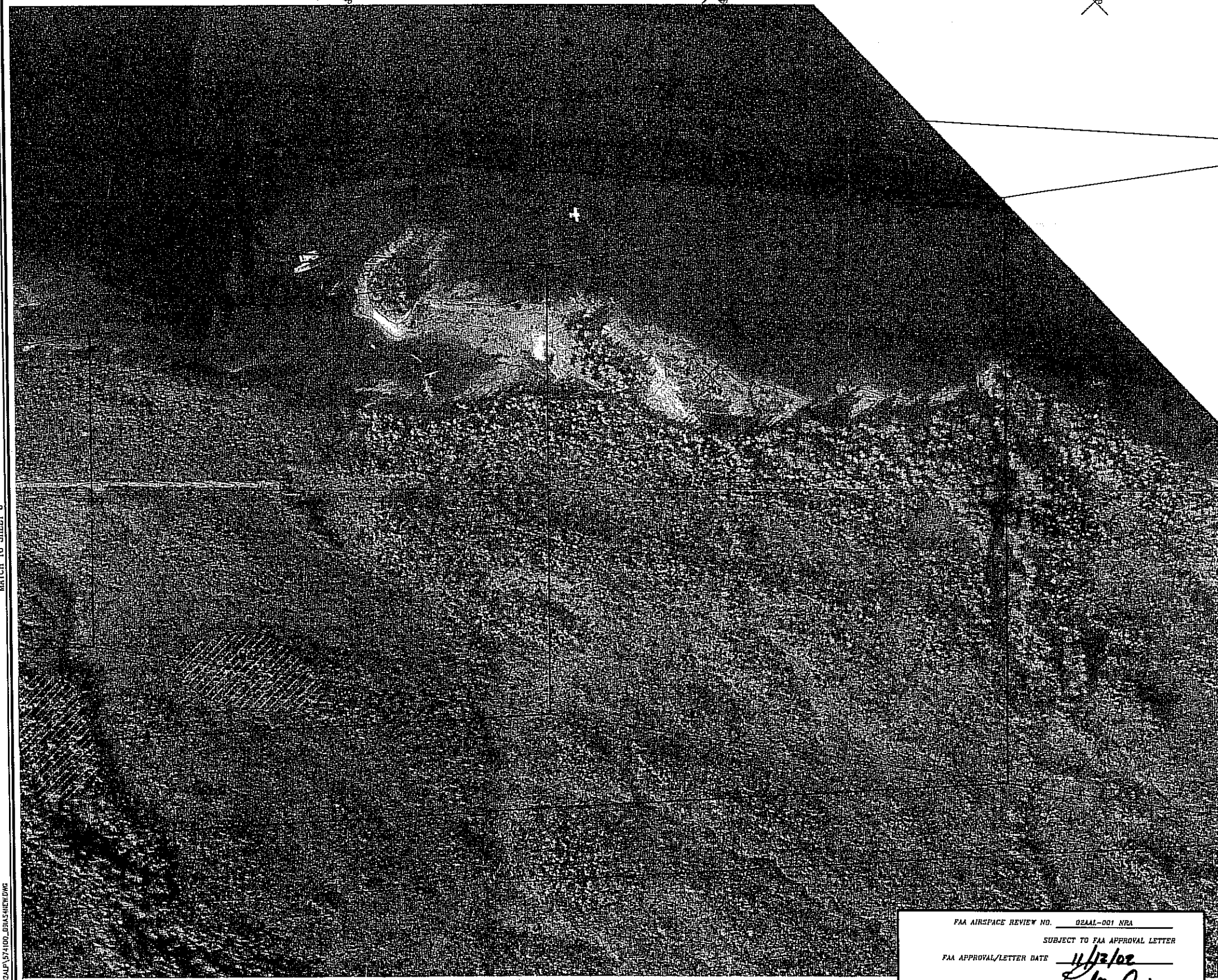
KETCHIKAN INTERNATIONAL AIRPORT  
**INNER PORTION OF  
APPROACH SURFACE**  
KETCHIKAN, ALASKA

PLANNED BY: K.L.L.    DETAILED BY: C.M.B.    CHECKED BY: D.L.M.

DATE: JULY 2002    SHEET **8** OF **22**

MATCH TO SHEET B

K:\574100\DWG\ALP\02ALP\574100\_DBA5-NEW.DWG



E 3,102,000

E 3,102,000

E 3,102,000

E 3,102,000

N 1,224,000

N 1,224,000

E 3,092,000

E 3,092,000

EXTENDED R/W 29 @

200' 100' 0 200' 400' 600'

SCALE: 1 IN = 200 FT.  
CONTOUR INTERVAL: 5 FT.  
FOR NOTES SEE SHEET 1

MAGNETIC VARIANCE 26°, 30' EAST (1991)

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/12/02  
 BY: *Fahr Oair*  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-600  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/07

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: *Verne Skogerboe* 7/2/02  
 Verne Skogerboe, Transportation Engineer  
 for Andy Hughes, Chief of Planning

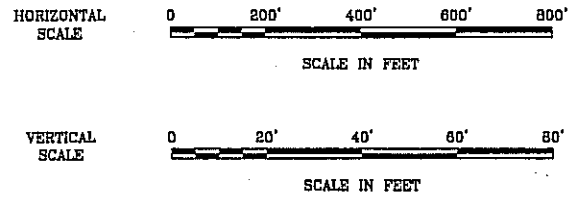
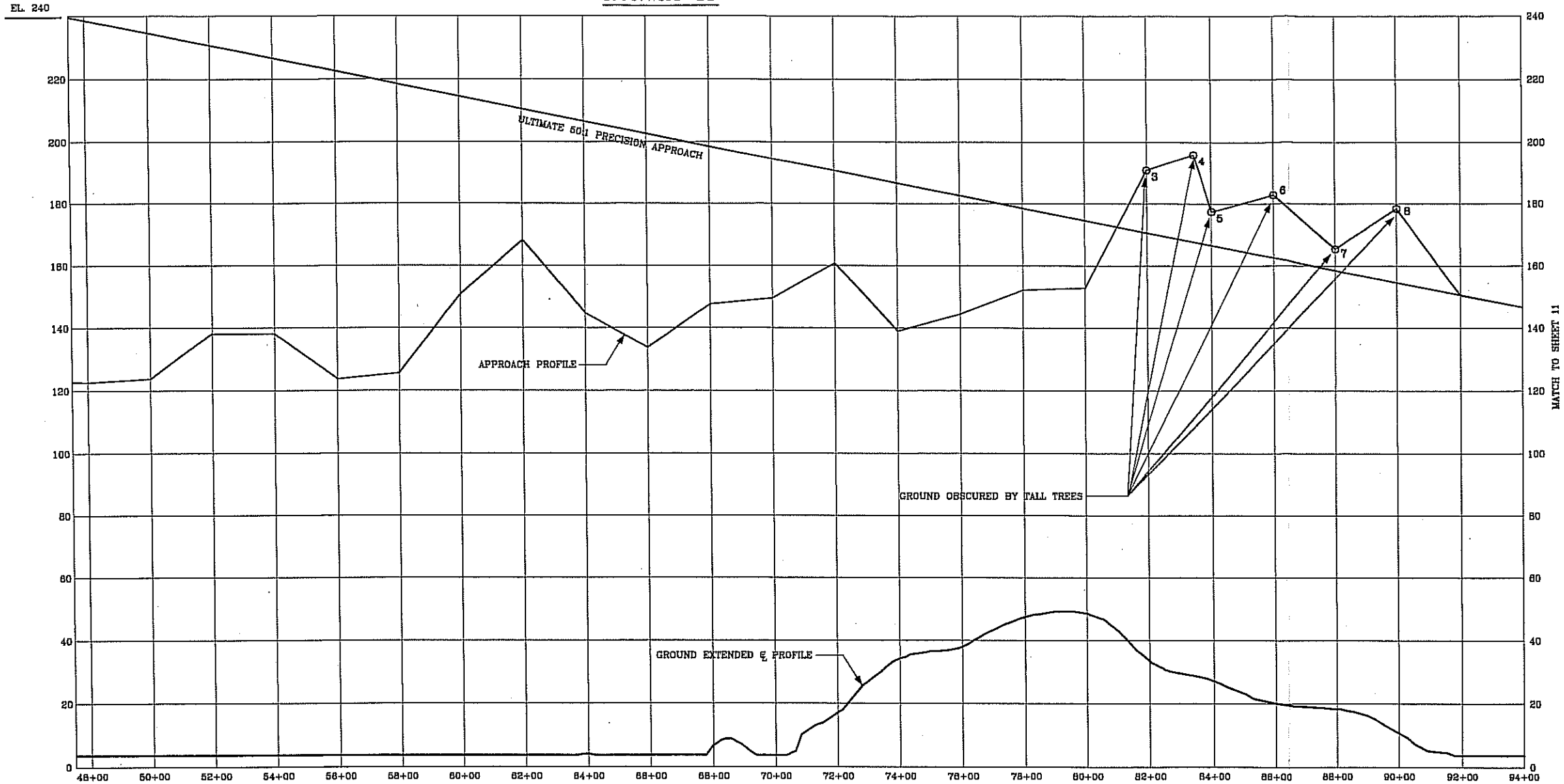
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 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT  
**INNER PORTION OF  
 APPROACH SURFACE**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002	SHEET 9 OF 22	

RUNWAY 11



OBSTRUCTION TABLE			
Description	Elevation (MSL)	Obstruction	Recommendation
3. TREE	EL. 191	20' obstruction to 50:1 Precision Approach	Remove
4. TREE	EL. 198	28' obstruction to 50:1 Precision Approach	Remove
5. TREE	EL. 178	11' obstruction to 50:1 Precision Approach	Remove
6. TREE	EL. 183	20' obstruction to 50:1 Precision Approach	Remove
7. TREE	EL. 185	7' obstruction to 50:1 Precision Approach	Remove
8. TREE	EL. 178	24' obstruction to 50:1 Precision Approach	Remove

Notes:  
 APPROACH PROFILE IS A COMPOSITE PROFILE OF HIGHEST TERRAIN & VEGETATION ALONG APPROACH SURFACE.

PROFILE DATA COMPILED USING PHOTOGRAMMETRIC PROCEDURES USING PHOTOGRAPHY DATED JULY 2, 1998.

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/12/02  
 BY: [Signature]  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-800  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature]  
 Verne Sandberg, Transportation Planner  
 for Andy Hughes, Chief of Planning

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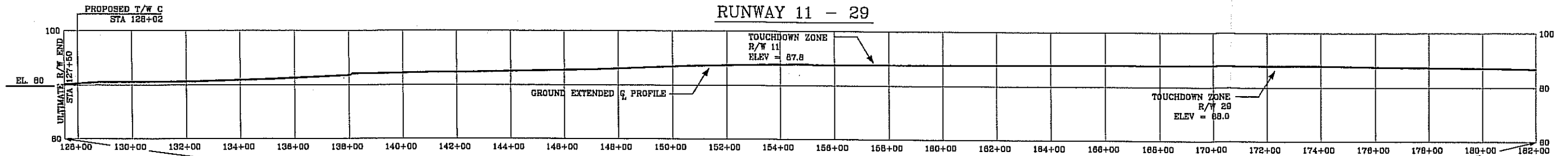
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

**KETCHIKAN INTERNATIONAL AIRPORT**  
**APPROACH SURFACE &  
 RUNWAY SURFACE PROFILES**  
 KETCHIKAN, ALASKA

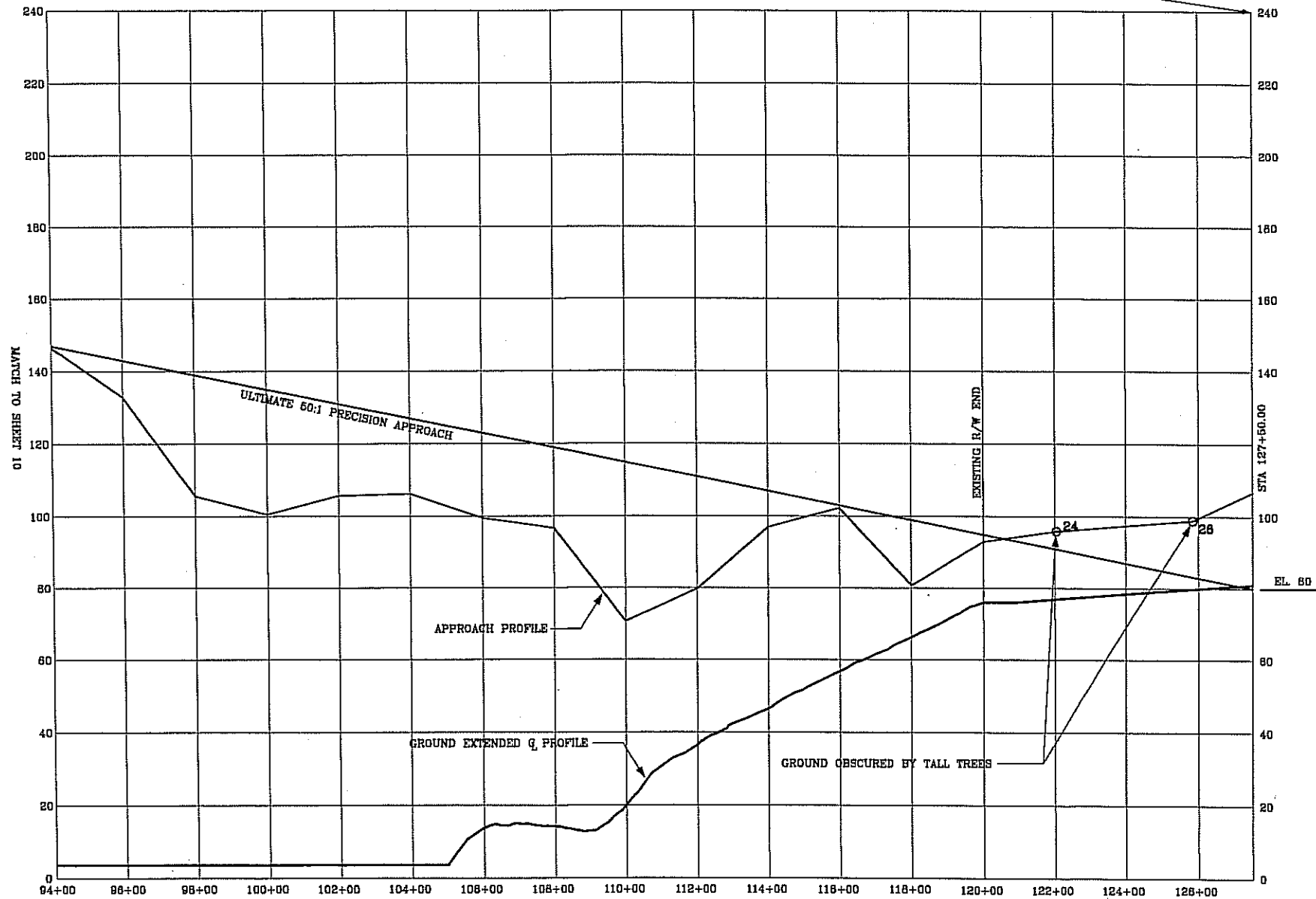
PLANNED BY: K.L.L.    DETAILED BY: C.M.B.    CHECKED BY: D.L.M.  
 DATE: JULY 2002    SHEET 10 of 22

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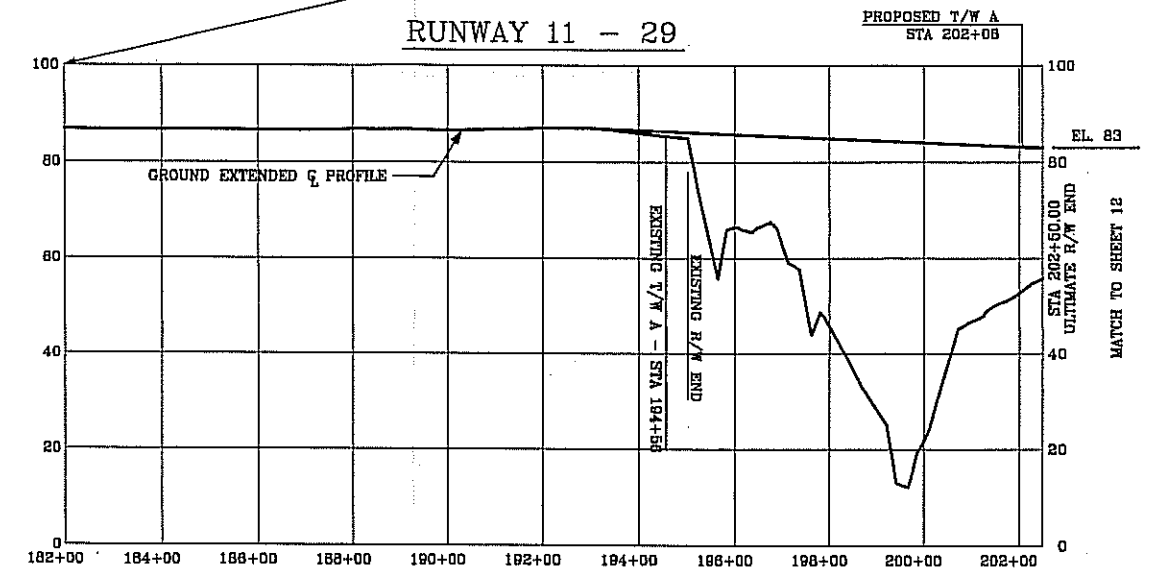
RUNWAY 11 - 29



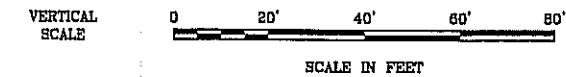
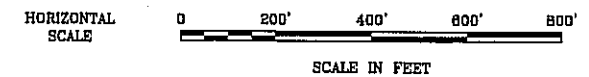
RUNWAY 11



RUNWAY 11 - 29



Notes:  
 APPROACH PROFILE IS A COMPOSITE PROFILE OF HIGHEST TERRAIN & VEGETATION ALONG APPROACH SURFACE.  
 PROFILE DATA COMPILED USING PHOTOGRAMMETRIC PROCEDURES USING PHOTOGRAPHY DATED JULY 2, 1999.



OBSTRUCTION TABLE			
Description	Elevation (MSL)	Obstruction	Recommendation
24. TREE	EL. 107	5' obstruction to 50:1 Precision Approach	Remove
26. TREE	EL. 109	18' obstruction to 50:1 Precision Approach	Remove

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/3/02  
 BY: [Signature]  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-800  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature]  
 Date 7/1/02  
 Verified by: [Signature]  
 for Andy Hughes, Chief of Planning

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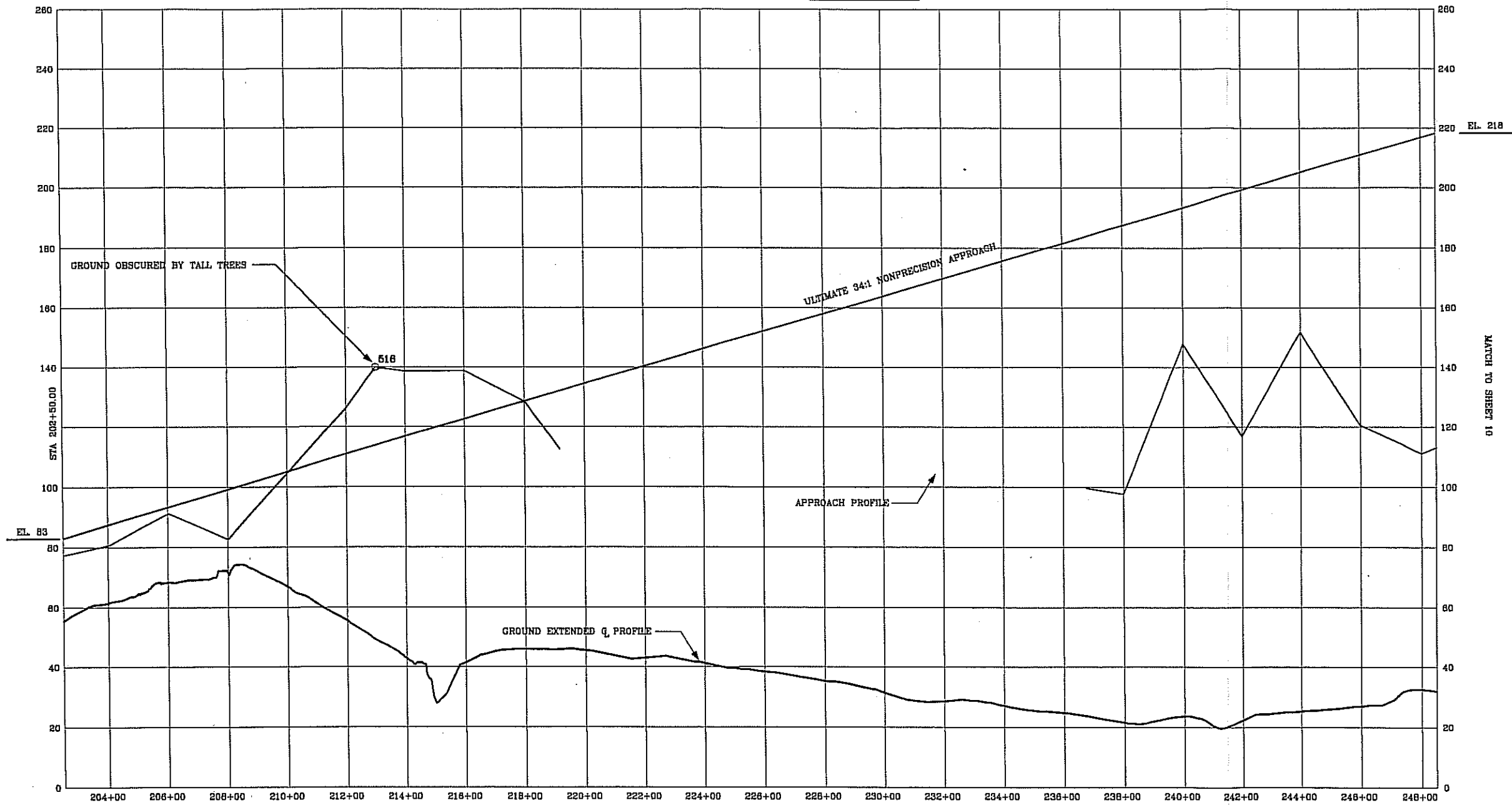
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT  
**APPROACH SURFACE &  
 RUNWAY SURFACE PROFILES**  
 KETCHIKAN, ALASKA

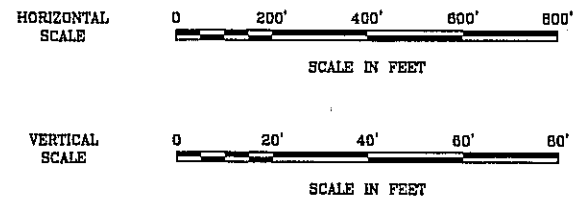
PLANNED BY: K.L.L.    DETAILED BY: C.M.B.    CHECKED BY: D.L.M.  
 DATE: JULY 2002    SHEET 11 OF 22

I:\57100\Draws\AL02ALP\571100\_100100.DWG

# RUNWAY 29



**Notes:**  
 APPROACH PROFILE IS A COMPOSITE PROFILE OF HIGHEST TERRAIN & VEGETATION ALONG APPROACH SURFACE.  
 PROFILE DATA COMPILED USING PHOTOGRAMMETRIC PROCEDURES USING PHOTOGRAPHY DATED JULY 2, 1999.



OBSTRUCTION TABLE			
Description	Elevation (MSL)	Obstruction	Recommendation
516. TREE	EL. 140	25' obstruction to 34:1 Nonprecision Approach	Remove

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/12/02  
 BY [Signature]  
 PAL AIRPORT DIVISION  
 ALASKAN REGION, AAL-800  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

APPROVED BY [Signature] 7/1/02  
 Date  
 for Andy Hughes, Chief of Planning

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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

**KETCHIKAN INTERNATIONAL AIRPORT**  
**APPROACH SURFACE &  
 RUNWAY SURFACE PROFILES**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002		SHEET 12 OF 22

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FEATURE & OBSTRUCTION TABLE

Description	Elevation (MSL)	Obstruction	Obstruction	Sheet No. 200'/2000'	Recommendation
1. TREE	EL 193	Yes	7' obstruction to 50:1 Transitional Approach	Sheet 6 5	To Remain
2. TREE	EL 246	Yes	21' obstruction to 7:1 Transitional Surface	Sheet 6 5	To Remain
3. TREE	EL 191	Yes	20' obstruction to 50:1 Precision Approach	Sheet 7 5	Remove
4. TREE	EL 196	Yes	28' obstruction to 50:1 Precision Approach	Sheet 7 5	Remove
5. TREE	EL 178	Yes	11' obstruction to 50:1 Precision Approach	Sheet 7 5	Remove
6. TREE	EL 183	Yes	20' obstruction to 50:1 Precision Approach	Sheet 7 5	Remove
7. TREE	EL 165	Yes	7' obstruction to 50:1 Precision Approach	Sheet 7 5	Remove
8. TREE	EL 178	Yes	24' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
9. TREE	EL 214	Yes	21' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
10. TREE	EL 238	Yes	80' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
11. TREE	EL 150	No		Sheet 7 5	To Remain
12. TREE	EL 160	Yes	13' obstruction to 50:1 Precision Approach	Sheet 7 5	To Remain
13. TREE	EL 147	Yes	18' obstruction to 50:1 Precision Approach	Sheet 7 5	To Remain
14. TREE	EL 133	No		Sheet 7 5	To Remain
15. TREE	EL 229	Yes	45' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
16. TREE	EL 152	Yes	8' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
17. TREE	EL 190	Yes	7' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
18. TREE	EL 97	No		Sheet 7 5	To Remain
19. TREE	EL 103	No		Sheet 7 5	To Remain
20. TREE	EL 102	Yes	1' obstruction to 50:1 Precision Approach	Sheet 7 5	To Remain
21. TREE	EL 122	Yes	20' obstruction to 50:1 Precision Approach	Sheet 7 5	To Remain
22. TREE	EL 82	No		Sheet 7 5	To Remain
23. TREE	EL 93	No		Sheet 7 5	To Remain
24. TREE	EL 97	Yes	5' obstruction to the 50:1 Precision Approach	Sheet 7 5	Remove
25. TREE	EL 132	Yes	13' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
26. TREE	EL 99	Yes	16' obstruction to the 50:1 Precision Approach	Sheet 7 5	Remove
27. TREE	EL 129	Yes	20' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
28. TREE	EL 112	Yes	34' obstruction to the Primary Surface	Sheet 7 5	To Remain
29. TREE	EL 127	Yes	32' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
30. VASI	EL 81	Yes	3' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
31. VASI	EL 81	Yes	3' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
32. MISC. OBJECT	EL 89	Yes	10' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
33. VASI	EL 84	Yes	5' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
34. VASI	EL 82	Yes	3' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
35. MISC. OBJECT	EL 82	Yes	3' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
36. ANTENNA	EL 98	Yes	19' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
37. BUILDING	EL 83	Yes	4' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
38. UTILITY POLE	EL 94	Yes	15' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
39. ASOS	EL 84	Yes	5' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
40. WINDSOCK	EL 98	Yes	19' obstruction to the Primary Surface	Sheet 7 5	Fixed by Function
41. TREE	EL 119	Yes	39' obstruction to the Primary Surface	Sheet 7 5	To Remain
42. TREE	EL 110	Yes	31' obstruction to the Primary Surface	Sheet 7 5	To Remain
43. TREE	EL 123	Yes	31' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
44. TREE	EL 112	Yes	33' obstruction to the Primary Surface	Sheet 7 5	To Remain
45. BUILDING	EL 89	Yes	8' obstruction to the Primary Surface	Sheet 7 5	To Remain
46. FENCE	EL 110	Yes	31' obstruction to the Primary Surface	Sheet 7 5	To Remain
47. TREE	EL 131	Yes	52' obstruction to the Primary Surface	Sheet 7 5	To Remain
48. TREE	EL 138	Yes	46' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
49. TREE	EL 132	Yes	52' obstruction to the Primary Surface	Sheet 7 5	To Remain
50. FENCE	EL 125	Yes	45' obstruction to the Primary Surface	Sheet 7 5	To Remain
51. MISC. OBJECT	EL 84	Yes	4' obstruction to the Primary Surface	Sheet 7 5	To Remain
52. TREE	EL 148	Yes	59' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
53. FENCE	EL 137	Yes	44' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
54. TREE	EL 154	Yes	32' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
55. TREE	EL 168	Yes	9' obstruction to 7:1 Transitional Surface	Sheet 7 5	To Remain
56. TREE	EL 173	Yes	21' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
57. TREE	EL 167	Yes	31' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
58. FENCE	EL 153	Yes	53' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
59. TREE	EL 159	Yes	76' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
60. TREE	EL 173	Yes	65' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
61. MISC. OBJECT	EL 88	Yes	7' obstruction to the Primary Surface	Sheet 8 5	To Remain
62. TREE	EL 175	Yes	77' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
63. TREE	EL 165	Yes	89' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
64. TREE	EL 178	Yes	57' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
65. TREE	EL 174	Yes	15' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
66. FENCE	EL 176	Yes	73' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
67. TREE	EL 194	Yes	17' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
68. TREE	EL 176	Yes	72' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
69. TREE	EL 180	Yes	75' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
70. FENCE	EL 153	Yes	43' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
71. FENCE	EL 153	Yes	52' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
72. TREE	EL 167	Yes	82' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
73. TREE	EL 188	Yes	82' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
74. TREE	EL 194	Yes	67' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
75. TREE	EL 194	Yes	32' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
76. TREE	EL 257	Yes	19' obstruction to the Horizontal Surface	Sheet 8 5	To Remain
77. TREE	EL 227	Yes	24' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
78. FENCE	EL 151	Yes	53' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
79. MISC. OBJECT	EL 89	Yes	7' obstruction to the Primary Surface	Sheet 8 5	To Remain
80. TREE	EL 156	Yes	74' obstruction to the Primary Surface	Sheet 8 5	To Remain
81. TREE	EL 181	Yes	88' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
82. TREE	EL 183	Yes	78' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
83. TREE	EL 182	Yes	88' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
84. TREE	EL 184	Yes	75' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
85. TREE	EL 183	Yes	90' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
86. FENCE	EL 169	Yes	71' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
87. TREE	EL 178	Yes	59' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
88. TREE	EL 216	Yes	35' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
89. TREE	EL 218	Yes	15' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
90. TREE	EL 196	Yes	36' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
91. TREE	EL 184	Yes	80' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
92. MISC. OBJECT	EL 89	Yes	6' obstruction to the Primary Surface	Sheet 8 5	To Remain
93. TREE	EL 164	Yes	79' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
94. FENCE	EL 148	Yes	51' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
95. TREE	EL 170	Yes	75' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
96. TREE	EL 181	Yes	74' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
97. TREE	EL 188	Yes	66' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
98. TREE	EL 164	Yes	81' obstruction to the Primary Surface	Sheet 8 5	To Remain
99. TREE	EL 182	Yes	79' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
100. TREE	EL 193	Yes	84' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
101. FENCE	EL 173	Yes	54' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
102. TREE	EL 185	Yes	52' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
103. TREE	EL 218	Yes	25' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
104. TREE	EL 243	Yes	6' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
105. TREE	EL 254	Yes	16' obstruction to the Horizontal Surface	Sheet 8 5	To Remain

NOTE:  
Obstructions Nos. 30-35 will be relocated with construction of west exit taxiway.

FEATURE & OBSTRUCTION TABLE

Description	Elevation (MSL)	Obstruction	Obstruction	Sheet No. 200'/2000'	Recommendation
106. TREE	EL 229	Yes	41' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
107. TREE	EL 201	Yes	64' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
108. TREE	EL 197	Yes	91' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
109. FENCE	EL 197	Yes	77' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
110. FENCE	EL 197	Yes	73' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
111. TREE	EL 203	Yes	73' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
112. TREE	EL 215	Yes	50' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
113. TREE	EL 222	Yes	11' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
114. TREE	EL 239	Yes	5' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
115. TREE	EL 236	Yes	39' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
116. TREE	EL 216	Yes	52' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
117. TREE	EL 197	Yes	68' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
118. TREE	EL 198	Yes	92' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
119. MISC. OBJECT	EL 87	Yes	3' obstruction to the Primary Surface	Sheet 8 5	To Remain
120. VASI	EL 86	Yes	2' obstruction to the Primary Surface	Sheet 8 5	Fixed by Function
121. VASI	EL 86	Yes	2' obstruction to the Primary Surface	Sheet 8 5	Fixed by Function
122. UTILITY	EL 86	Yes	2' obstruction to the Primary Surface	Sheet 8 5	To Remain
123. TREE	EL 175	Yes	86' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
124. FENCE	EL 185	Yes	63' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
125. TREE	EL 193	Yes	74' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
126. TREE	EL 190	Yes	65' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
127. TREE	EL 206	Yes	57' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
128. TREE	EL 224	Yes	48' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
129. TREE	EL 223	Yes	30' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
130. TREE	EL 250	Yes	12' obstruction to the Horizontal Surface	Sheet 8 5	To Remain
131. TREE	EL 224	Yes	21' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
132. FENCE	EL 165	Yes	55' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
133. TREE	EL 187	Yes	84' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
134. TREE	EL 195	Yes	84' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
135. VASI	EL 88	Yes	4' obstruction to the Primary Surface	Sheet 8 5	Fixed by Function
136. VASI	EL 88	Yes	4' obstruction to the Primary Surface	Sheet 8 5	Fixed by Function
137. TREE	EL 166	Yes	74' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
138. MISC. OBJECT	EL 119	Yes	34' obstruction to the Primary Surface	Sheet 8 5	To Remain
139. FENCE	EL 146	Yes	57' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
140. TREE	EL 232	Yes	18' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
141. TREE	EL 180	Yes	77' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
142. FENCE	EL 116	Yes	31' obstruction to the Primary Surface	Sheet 8 5	To Remain
143. TREE	EL 133	Yes	48' obstruction to the Primary Surface	Sheet 8 5	To Remain
144. ANTENNA	EL 144	Yes	54' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
145. TREE	EL 119	Yes	34' obstruction to the Primary Surface	Sheet 8 5	To Remain
146. ANTENNA	EL 144	Yes	55' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
147. TREE	EL 121	Yes	32' obstruction to the Primary Surface	Sheet 8 5	To Remain
148. BUILDING	EL 92	Yes	3' obstruction to the Primary Surface	Sheet 8 5	To Remain
149. TREE	EL 191	Yes	44' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
150. TREE	EL 168	Yes	12' obstruction to 7:1 Transitional Surface	Sheet 8 5	To Remain
151. TREE	EL 163	Yes	13' obstruction to the 7:1 Transitional Surface	Sheet 8 5	To Remain
152. TREE	EL 794	Yes	361' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
153. TREE	EL 412	Yes	142' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
154. TREE	EL 928	Yes	626' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
155. TREE	EL 1304	Yes	963' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
156. TREE	EL 906	Yes	518' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
157. TREE	EL 932	Yes	894' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
158. TREE	EL 363	Yes	125' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
159. TREE	EL 1657	Yes	1400' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
160. TREE	EL 1979	Yes	1556' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
161. TREE	EL 2096	Yes	1721' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
162. TREE	EL 2660	Yes	2259' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
163. TREE	EL 1471	Yes	1144' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
164. TREE	EL 1165	Yes	888' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
165. TREE	EL 1305	Yes	1060' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
166. TREE	EL 2069	Yes	1784' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
167. TREE	EL 1243	Yes	1005' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
168. TREE	EL 1359	Yes	1121' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
169. TREE	EL 827	Yes	589' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
170. TREE	EL 1205	Yes	967' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
171. TREE	EL 360	Yes	122' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
172. TREE	EL 354	Yes	116' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
173. TREE	EL 517	Yes	279' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
174. TREE	EL 696	Yes	458' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
175. TREE	EL 317	Yes	79' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
176. TREE	EL 374	Yes	136' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
177. TREE	EL 340	Yes	102' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
178. TREE	EL 702	Yes	464' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
179. TREE	EL 999	Yes	761' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
180. TREE	EL 660	Yes	422' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
181. TREE	EL 549	Yes	311' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
182. TREE	EL 953	Yes	715' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
183. TREE	EL 1596	Yes	1358' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
184. TREE	EL 723	Yes	485' obstruction to the Horizontal Surface	Sheet 5 5	To Remain
185. TREE	EL 1076	Yes	801' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
186. TREE	EL 1403	Yes	1072' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
187. TREE	EL 2536	Yes	2102' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
188. TREE	EL 1814	Yes	1415' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
189. TREE	EL 1579	Yes	1212' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
190. TREE	EL 871	Yes	563' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
191. TREE	EL 1492	Yes	1207' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
192. TREE	EL 2199	Yes	1875' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
193. TREE	EL 1816	Yes	1537' obstruction to 20:1 Conical Surface	Sheet 5 5	To Remain
194. TREE	EL 1589	Yes	1351' obstruction to the Horizontal Surface</		



FEATURE & OBSTRUCTION TABLE

Description	Elevation (MSL)	Obstruction	Obstruction	Sheet No: 200'/2000'	Recommendation
397. UTILITY POLE	EL. 357	Yes	79' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
398. BUILDING	EL. 343	Yes	63' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
399. TREE	EL. 351	Yes	67' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
400. TREE	EL. 340	Yes	48' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
401. BUILDING	EL. 336	Yes	37' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
402. TREE	EL. 434	No		Sheet 4	To Remain
403. TREE	EL. 476	Yes	48' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
404. TREE	EL. 487	Yes	64' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
405. TREE	EL. 476	Yes	58' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
406. TREE	EL. 474	Yes	57' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
407. TREE	EL. 531	Yes	124' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
408. TREE	EL. 570	Yes	167' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
409. TREE	EL. 438	Yes	14' obstruction to 7:1 Transitional Surface	Sheet 4	To Remain
410. TREE	EL. 608	Yes	210' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
411. TREE	EL. 618	Yes	221' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
412. TREE	EL. 617	Yes	230' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
413. TREE	EL. 622	Yes	229' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
414. TREE	EL. 634	Yes	257' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
415. TREE	EL. 615	Yes	238' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
416. TREE	EL. 574	Yes	206' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
417. TREE	EL. 500	Yes	132' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
418. TREE	EL. 410	Yes	48' obstruction to 40:1 Precision Approach	Sheet 4	To Remain
419. TREE	EL. 583	Yes	73' obstruction to 7:1 Transitional Surface	Sheet 4	To Remain
420. TREE	EL. 828	Yes	189' obstruction to 7:1 Transitional Surface	Sheet 4	To Remain
421. TREE	EL. 845	Yes	166' obstruction to 7:1 Transitional Surface	Sheet 4	To Remain
422. TREE	EL. 1096	Yes	276' obstruction to 7:1 Transitional Surface	Sheet 4	To Remain
423. TREE	EL. 722	Yes	332' obstruction to 20:1 Conical Surface	Sheet 4	To Remain
424. TREE	EL. 413	Yes	75' obstruction to 20:1 Conical Surface	Sheet 4	To Remain
425. TREE	EL. 267	Yes	9' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
426. TREE	EL. 278	Yes	40' obstruction to the Horizontal Surface	Sheet 5	To Remain
427. TREE	EL. 1011	Yes	762' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
428. TREE	EL. 1549	Yes	502' obstruction to 7:1 Transitional Surface	Sheet 4	To Remain
429. TREE	EL. 2102	Yes	1697' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
430. TREE	EL. 1635	Yes	1306' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
431. TREE	EL. 294	Yes	56' obstruction to the Horizontal Surface	Sheet 5	To Remain
432. TREE	EL. 526	Yes	288' obstruction to the Horizontal Surface	Sheet 5	To Remain
433. TREE	EL. 337	Yes	99' obstruction to the Horizontal Surface	Sheet 5	To Remain
434. TREE	EL. 546	Yes	308' obstruction to the Horizontal Surface	Sheet 5	To Remain
435. TREE	EL. 458	Yes	220' obstruction to the Horizontal Surface	Sheet 5	To Remain
436. TREE	EL. 726	Yes	488' obstruction to the Horizontal Surface	Sheet 5	To Remain
437. TREE	EL. 1858	Yes	1526' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
438. GROUND	EL. 2325	Yes	1922' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
439. TREE	EL. 2087	Yes	1665' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
440. GROUND	EL. 2256	Yes	1921' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
441. GROUND	EL. 1902	Yes	1664' obstruction to the Horizontal Surface	Sheet 5	To Remain
442. TREE	EL. 1592	Yes	1354' obstruction to the Horizontal Surface	Sheet 5	To Remain
443. TREE	EL. 737	Yes	499' obstruction to the Horizontal Surface	Sheet 5	To Remain
444. TREE	EL. 992	Yes	754' obstruction to the Horizontal Surface	Sheet 5	To Remain
445. TREE	EL. 468	Yes	230' obstruction to the Horizontal Surface	Sheet 5	To Remain
446. TREE	EL. 247	Yes	9' obstruction to the Horizontal Surface	Sheet 5	To Remain
447. TREE	EL. 405	Yes	167' obstruction to the Horizontal Surface	Sheet 5	To Remain
448. TREE	EL. 682	Yes	444' obstruction to the Horizontal Surface	Sheet 5	To Remain
449. TREE	EL. 1428	Yes	1190' obstruction to the Horizontal Surface	Sheet 5	To Remain
450. TREE	EL. 1900	Yes	1652' obstruction to the Horizontal Surface	Sheet 5	To Remain
451. GROUND	EL. 2275	Yes	2008' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
452. TREE	EL. 1303	Yes	918' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
453. GROUND	EL. 1204	Yes	781' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
454. TREE	EL. 1454	Yes	1021' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
455. GROUND	EL. 2056	Yes	1632' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
456. GROUND	EL. 1914	Yes	1803' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
457. TREE	EL. 630	Yes	392' obstruction to the Horizontal Surface	Sheet 5	To Remain
458. TREE	EL. 674	Yes	436' obstruction to the Horizontal Surface	Sheet 5	To Remain
459. TREE	EL. 430	Yes	192' obstruction to the Horizontal Surface	Sheet 5	To Remain
460. TREE	EL. 285	Yes	27' obstruction to the Horizontal Surface	Sheet 5	To Remain
461. TREE	EL. 282	Yes	44' obstruction to the Horizontal Surface	Sheet 5	To Remain
462. TREE	EL. 258	Yes	20' obstruction to the Horizontal Surface	Sheet 5	To Remain
463. TREE	EL. 257	Yes	19' obstruction to the Horizontal Surface	Sheet 5	To Remain
464. TREE	EL. 275	Yes	37' obstruction to the Horizontal Surface	Sheet 5	To Remain
465. TREE	EL. 271	Yes	33' obstruction to the Horizontal Surface	Sheet 5	To Remain
466. TREE	EL. 367	Yes	129' obstruction to the Horizontal Surface	Sheet 5	To Remain
467. TREE	EL. 377	Yes	139' obstruction to the Horizontal Surface	Sheet 5	To Remain
468. TREE	EL. 393	Yes	155' obstruction to the Horizontal Surface	Sheet 5	To Remain
469. TREE	EL. 487	Yes	249' obstruction to the Horizontal Surface	Sheet 5	To Remain
470. TREE	EL. 494	Yes	256' obstruction to the Horizontal Surface	Sheet 5	To Remain
471. TREE	EL. 956	Yes	718' obstruction to the Horizontal Surface	Sheet 5	To Remain
472. TREE	EL. 540	Yes	186' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
473. TREE	EL. 705	Yes	390' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
474. TREE	EL. 1456	Yes	1024' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
475. TREE	EL. 1675	Yes	1305' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
476. TREE	EL. 613	Yes	375' obstruction to the Horizontal Surface	Sheet 5	To Remain
477. TREE	EL. 494	Yes	256' obstruction to the Horizontal Surface	Sheet 5	To Remain
478. TREE	EL. 500	Yes	262' obstruction to the Horizontal Surface	Sheet 5	To Remain
479. TREE	EL. 299	Yes	61' obstruction to the Horizontal Surface	Sheet 5	To Remain
480. TREE	EL. 291	Yes	53' obstruction to the Horizontal Surface	Sheet 5	To Remain
481. TREE	EL. 253	Yes	15' obstruction to the Horizontal Surface	Sheet 5	To Remain
482. TREE	EL. 269	Yes	31' obstruction to the Horizontal Surface	Sheet 5	To Remain
483. TREE	EL. 254	Yes	16' obstruction to the Horizontal Surface	Sheet 5	To Remain
484. TREE	EL. 266	Yes	28' obstruction to the Horizontal Surface	Sheet 5	To Remain
485. TREE	EL. 280	Yes	42' obstruction to the Horizontal Surface	Sheet 5	To Remain
486. TREE	EL. 265	Yes	27' obstruction to the Horizontal Surface	Sheet 5	To Remain
487. TREE	EL. 261	Yes	23' obstruction to the Horizontal Surface	Sheet 5	To Remain
488. TREE	EL. 253	Yes	15' obstruction to the Horizontal Surface	Sheet 5	To Remain
489. TREE	EL. 252	Yes	14' obstruction to the Horizontal Surface	Sheet 5	To Remain
490. TREE	EL. 252	Yes	14' obstruction to the Horizontal Surface	Sheet 5	To Remain
491. TREE	EL. 257	Yes	19' obstruction to the Horizontal Surface	Sheet 5	To Remain
492. TREE	EL. 259	Yes	21' obstruction to the Horizontal Surface	Sheet 5	To Remain
493. TREE	EL. 259	Yes	21' obstruction to the Horizontal Surface	Sheet 5	To Remain
494. TREE	EL. 266	Yes	28' obstruction to the Horizontal Surface	Sheet 5	To Remain
495. TREE	EL. 272	Yes	34' obstruction to the Horizontal Surface	Sheet 5	To Remain
496. TREE	EL. 248	Yes	10' obstruction to the Horizontal Surface	Sheet 5	To Remain
497. TREE	EL. 258	Yes	20' obstruction to the Horizontal Surface	Sheet 5	To Remain
498. TREE	EL. 251	Yes	13' obstruction to the Horizontal Surface	Sheet 5	To Remain
499. TREE	EL. 255	Yes	17' obstruction to the Horizontal Surface	Sheet 5	To Remain
500. TREE	EL. 256	Yes	18' obstruction to the Horizontal Surface	Sheet 5	To Remain

FEATURE & OBSTRUCTION TABLE

Description	Elevation (MSL)	Obstruction	Obstruction	Sheet No: 200'/2000'	Recommendation
501. TREE	EL. 242	Yes	4' obstruction to the Horizontal Surface	Sheet 5	To Remain
502. TREE	EL. 252	Yes	14' obstruction to the Horizontal Surface	Sheet 5	To Remain
503. TREE	EL. 277	Yes	39' obstruction to the Horizontal Surface	Sheet 5	To Remain
504. TREE	EL. 265	Yes	27' obstruction to the Horizontal Surface	Sheet 5	To Remain
505. TREE	EL. 261	Yes	23' obstruction to the Horizontal Surface	Sheet 5	To Remain
506. TREE	EL. 301	Yes	63' obstruction to the Horizontal Surface	Sheet 5	To Remain
507. TREE	EL. 373	Yes	135' obstruction to the Horizontal Surface	Sheet 5	To Remain
508. TREE	EL. 897	Yes	628' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
509. TREE	EL. 684	Yes	315' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
510. TREE	EL. 388	Yes	100' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
511. TREE	EL. 326	Yes	30' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
512. TREE	EL. 352	Yes	69' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
513. TREE	EL. 508	Yes	118' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
514. TREE	EL. 481	Yes	92' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
515. TREE	EL. 406	Yes	26' obstruction to 20:1 Conical Surface	Sheet 5	To Remain
516. TREE	EL. 140	Yes	26' obstruction to 34:1 Nonprecision Approach	Sheet 9	Remove
600. BUILDING	EL. 30	No		Sheet 7	To Remain
601. UTILITY POLE	EL. 68	No		Sheet 7	To Remain
602. UTILITY	EL. 30	No		Sheet 7	To Remain
603. UTILITY POLE	EL. 69	No		Sheet 7	To Remain
604. UTILITY POLE	EL. 71	No		Sheet 7	To Remain
605. UTILITY POLE	EL. 71	No		Sheet 7	To Remain
606. UTILITY POLE	EL. 72	No		Sheet 7	To Remain
607. BUILDING	EL. 46	No		Sheet 7	To Remain
608. BUILDING	EL. 48	No		Sheet 7	To Remain
609. UTILITY POLE	EL. 72	No		Sheet 7	To Remain
610. MISC. OBJECT	EL. 53	No		Sheet 7	To Remain
611. UTILITY POLE	EL. 75	No		Sheet 7	To Remain
612. FENCE	EL. 58	No		Sheet 7	To Remain
613. FENCE	EL. 67	No		Sheet 7	To Remain
614. FENCE	EL. 70	No		Sheet 7	To Remain
615. FENCE	EL. 56	No		Sheet 7	To Remain
616. UTILITY POLE	EL. 78	No		Sheet 7	To Remain
617. FENCE	EL. 66	No		Sheet 7	To Remain
618. FENCE	EL. 66	No		Sheet 7	To Remain
619. FENCE	EL. 67	No		Sheet 7	To Remain
620. FENCE	EL. 69	No		Sheet 7	To Remain
621. FENCE	EL. 57	No		Sheet 7	To Remain
622. FENCE	EL. 68	No		Sheet 7	To Remain
623. FENCE	EL. 71	No		Sheet 7	To Remain
624. FENCE	EL. 71	No		Sheet 7	To Remain
625. TANK	EL. 27	No		Sheet 7	To Remain
626. TANK	EL. 31	No		Sheet 7	To Remain
627. BUILDING	EL. 31	No		Sheet 7	To Remain
628. BUILDING	EL. 32	No		Sheet 7	To Remain
629. BUILDING	EL. 35	No		Sheet 7	To Remain
630. BUILDING	EL. 38	No		Sheet 7	To Remain
631. BUILDING	EL. 51	No		Sheet 7	To Remain
632. BUILDING	EL. 34	No		Sheet 7	To Remain
633. FENCE	EL. 48	No		Sheet 7	To Remain
634. FENCE	EL. 32	No		Sheet 7	To Remain
635. FENCE	EL. 32	No		Sheet 7	To Remain
636. FENCE	EL. 25	No		Sheet 7	To Remain
637. FENCE	EL. 69	No		Sheet 7	To Remain
638. MISC. OBJECT	EL. 79	No		Sheet 7	To Remain
639. POST	EL. 79	No		Sheet 7	To Remain
640. POST	EL. 79	No		Sheet 7	To Remain
641. POST	EL. 79	No		Sheet 7	To Remain
642. POST	EL. 79	No		Sheet 7	To Remain
643. POST	EL. 79	No		Sheet 7	To Remain
644. POST	EL. 79	No		Sheet 7	To Remain
645. POST	EL. 79	No		Sheet 7	To Remain
646. POST	EL. 79	No		Sheet 7	To Remain
647. POST	EL. 79	No		Sheet 7	To Remain
648. POST	EL. 79	No		Sheet 7	To Remain
649. POST	EL. 79	No		Sheet 7	To Remain
650. POST	EL. 79	No		Sheet 7	To Remain
651. POST	EL. 78	No		Sheet 7	To Remain
652. POST	EL. 78	No		Sheet 7	To Remain
653. POST	EL. 78	No		Sheet 7	To Remain
654. POST	EL. 79	No		Sheet 7	To Remain
655. POST	EL. 79	No		Sheet 7	To Remain
656. POST	EL. 78	No		Sheet 7	To Remain
657. POST	EL. 78	No		Sheet 7	To Remain
658. POST	EL. 79	No		Sheet 7	To Remain
659. POST	EL. 79	No		Sheet 7	To Remain
660. POST	EL. 80	No		Sheet 7	To Remain
661. POST	EL. 80	No		Sheet 7	To Remain
662. POST	EL. 80	No		Sheet 7	To Remain
663. FENCE	EL. 79	No		Sheet 7	To Remain
664. FENCE	EL. 23	No		Sheet 7	To Remain
665. FENCE	EL. 15	No		Sheet 8	To Remain
666. BUILDING	EL. 24	No		Sheet 8	To Remain
667. BUILDING	EL. 28	No		Sheet 8	To Remain
668. BUILDING	EL. 30	No		Sheet 8	To Remain
669. BUILDING	EL. 31	No		Sheet 8	To Remain
670. BUILDING	EL. 30	No		Sheet 8	To Remain
671. BUILDING	EL. 30	No		Sheet 8	To Remain
672. BUILDING	EL. 30	No		Sheet 8	To Remain
673. BUILDING	EL. 30	No		Sheet 8	To Remain
674. FENCE	EL. 22	No		Sheet 8	To Remain
675. LIGHT	EL. 18	No		Sheet 8	To Remain
676. LIGHT	EL. 18	No		Sheet 8	To Remain
677. LIGHT	EL. 21	No		Sheet 8	To Remain

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA

SUBJECT TO FAA APPROVAL LETTER

FAA APPROVAL/LETTER DATE 11/12/02

BY [Signature]  
FAA AIRPORT DIVISION  
ALASKAN REGION, AAL-600

PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

APPROVED BY [Signature] 7/12/02  
Verna M. [Signature]  
for Andy Hughes, Chief of Planning

**USKH** Architecture • Engineering  
Land Surveying • Planning

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT  
FEATURE & OBSTRUCTION  
TABLES  
KETCHIKAN, ALASKA

PLANNED BY: K.L.L.      DETAILED BY: C.M.B.      CHECKED BY: D.L.M.

DATE: JULY 2002      SHEET 15 OF 22

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FEATURE & OBSTRUCTION TABLE

Description	Elevation (MSL)	Obstruction	Obstruction	Sheet No: 200'/2000'	Recommendation
678. LIGHT	EL. 26	No		Sheet 8 5	To Remain
679. LIGHT	EL. 33	No		Sheet 8 5	To Remain
680. FENCE	EL. 26	No		Sheet 8 5	To Remain
681. FENCE	EL. 32	No		Sheet 8 5	To Remain
682. FENCE	EL. 29	No		Sheet 8 5	To Remain
683. FENCE	EL. 20	No		Sheet 8 5	To Remain
684. FENCE	EL. 20	No		Sheet 8 5	To Remain
685. FENCE	EL. 26	No		Sheet 8 5	To Remain
686. BUILDING	EL. 29	No		Sheet 8 5	To Remain
687. FENCE	EL. 29	No		Sheet 8 5	To Remain
688. SIGN	EL. 33	No		Sheet 8 5	To Remain
689. FENCE	EL. 28	No		Sheet 8 5	To Remain
690. FENCE	EL. 34	No		Sheet 8 5	To Remain
691. BUILDING	EL. 46	No		Sheet 8 5	To Remain
692. FENCE	EL. 38	No		Sheet 8 5	To Remain
693. LIGHT	EL. 60	No		Sheet 8 5	To Remain
694. LIGHT	EL. 58	No		Sheet 8 5	To Remain
695. LIGHT	EL. 54	No		Sheet 8 5	To Remain
696. LIGHT	EL. 68	No		Sheet 8 5	To Remain
697. FENCE	EL. 41	No		Sheet 8 5	To Remain
698. MISC. OBJECT	EL. 40	No		Sheet 8 5	To Remain
699. LIGHT	EL. 59	No		Sheet 8 5	To Remain
700. LIGHT	EL. 53	No		Sheet 8 5	To Remain
701. BUILDING	EL. 48	No		Sheet 8 5	To Remain
702. LIGHT	EL. 62	No		Sheet 8 5	To Remain
703. FENCE	EL. 40	No		Sheet 8 5	To Remain
704. BUILDING	EL. 102	No		Sheet 8 5	To Remain
705. BUILDING	EL. 56	No		Sheet 8 5	To Remain
706. LIGHT	EL. 46	No		Sheet 8 5	To Remain
707. LIGHT	EL. 39	No		Sheet 8 5	To Remain
708. FENCE	EL. 22	No		Sheet 8 5	To Remain
709. LIGHT	EL. 45	No		Sheet 8 5	To Remain
710. FENCE	EL. 45	No		Sheet 8 5	To Remain
711. SIGN	EL. 41	No		Sheet 8 5	To Remain
712. BUILDING	EL. 68	No		Sheet 8 5	To Remain
713. BUILDING	EL. 53	No		Sheet 8 5	To Remain
714. BUILDING	EL. 74	No		Sheet 8 5	To Remain
715. LIGHT	EL. 61	No		Sheet 8 5	To Remain
716. BUILDING	EL. 83	No		Sheet 8 5	To Remain
717. LIGHT	EL. 64	No		Sheet 8 5	To Remain
718. FENCE	EL. 39	No		Sheet 8 5	To Remain
719. FENCE	EL. 46	No		Sheet 8 5	To Remain
720. TANK	EL. 48	No		Sheet 8 5	To Remain
721. BUILDING	EL. 49	No		Sheet 8 5	To Remain
722. BUILDING	EL. 47	No		Sheet 8 5	To Remain
723. BUILDING	EL. 55	No		Sheet 8 5	To Remain
724. FENCE	EL. 39	No		Sheet 8 5	To Remain
725. BUILDING	EL. 31	No		Sheet 8 5	To Remain
726. MISC. OBJECT	EL. 49	No		Sheet 8 5	To Remain
727. MISC. OBJECT	EL. 47	No		Sheet 8 5	To Remain
728. UTILITY	EL. 41	No		Sheet 8 5	To Remain
729. MISC. OBJECT	EL. 41	No		Sheet 8 5	To Remain
730. UTILITY	EL. 42	No		Sheet 8 5	To Remain
731. LIGHT	EL. 41	No		Sheet 8 5	To Remain
732. FENCE	EL. 27	No		Sheet 8 5	To Remain
733. LIGHT	EL. 42	No		Sheet 8 5	To Remain
734. FENCE	EL. 18	No		Sheet 8 5	To Remain
735. LIGHT	EL. 24	No		Sheet 8 5	To Remain
736. LIGHT	EL. 24	No		Sheet 8 5	To Remain
737. FENCE	EL. 27	No		Sheet 8 5	To Remain
738. FENCE	EL. 25	No		Sheet 8 5	To Remain
739. MISC. OBJECT	EL. 24	No		Sheet 8 5	To Remain
740. FENCE	EL. 20	No		Sheet 8 5	To Remain
741. BUILDING	EL. 29	No		Sheet 8 5	To Remain
742. BUILDING	EL. 26	No		Sheet 8 5	To Remain
743. DECK	EL. 22	No		Sheet 8 5	To Remain
744. FENCE	EL. 28	No		Sheet 8 5	To Remain
745. ANTENNA	EL. 117	No		Sheet 8 5	To Remain
746. BUILDING	EL. 73	No		Sheet 8 5	To Remain
747. BUILDING	EL. 73	No		Sheet 8 5	To Remain
748. ANTENNA	EL. 81	No		Sheet 8 5	To Remain
749. BUILDING	EL. 73	No		Sheet 8 5	To Remain
750. BUILDING	EL. 88	No		Sheet 8 5	To Remain
751. BUILDING	EL. 74	No		Sheet 8 5	To Remain
752. MISC. OBJECT	EL. 77	No		Sheet 8 5	To Remain
753. FENCE	EL. 30	No		Sheet 8 5	To Remain
754. FENCE	EL. 29	No		Sheet 8 5	To Remain
755. UTILITY	EL. 82	No		Sheet 8 5	To Remain
756. MISC. OBJECT	EL. 86	No		Sheet 8 5	To Remain
757. FENCE	EL. 50	No		Sheet 8 5	To Remain
758. FENCE	EL. 43	No		Sheet 8 5	To Remain
759. MISC. OBJECT	EL. 87	No		Sheet 8 5	To Remain
760. UTILITY	EL. 91	No		Sheet 8 5	To Remain
761. FENCE	EL. 58	No		Sheet 8 5	To Remain
762. MISC. OBJECT	EL. 81	No		Sheet 8 5	To Remain
763. FENCE	EL. 81	No		Sheet 8 5	To Remain
764. MISC. OBJECT	EL. 21	No		Sheet 8 5	To Remain
765. ANTENNA	EL. 64	No		Sheet 8 5	To Remain
766. MISC. OBJECT	EL. 27	No		Sheet 8 5	To Remain
767. UTILITY POLE	EL. 78	No		Sheet 8 5	To Remain
768. UTILITY POLE	EL. 78	No		Sheet 8 5	To Remain
769. UTILITY POLE	EL. 80	No		Sheet 8 5	To Remain
770. UTILITY POLE	EL. 80	No		Sheet 8 5	To Remain
771. UTILITY POLE	EL. 81	No		Sheet 9 5	To Remain
772. ANTENNA	EL. 81	No		Sheet 9 5	To Remain
773. UTILITY POLE	EL. 81	No		Sheet 9 5	To Remain
774. UTILITY	EL. 78	No		Sheet 9 5	To Remain
775. FENCE	EL. 76	No		Sheet 9 5	To Remain
776. ANTENNA	EL. 94	No		Sheet 9 5	To Remain

FEATURE & OBSTRUCTION TABLE

Description	Elevation (MSL)	Obstruction	Obstruction	Sheet No: 200'/2000'	Recommendation
777. MISC. OBJECT	EL. 66	No		Sheet 4 2	
778. ANTENNA	EL. 72	No		Sheet 4 2	
779. MISC. OBJECT	EL. 42	No		Sheet 4 2	
780. MISC. OBJECT	EL. 57	No		Sheet 4 2	
781. BUILDING	EL. 237	No		Sheet 2	

A:5741001.DWG, JUL02AUP, 574100, 1:30P59EN.DWG

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/2/02  
 BY Fah Coia  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-800  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY [Signature] 7/1/02  
 Verne Madsen, Transportation Planner  
 for Andy Hughes, Chief of Planning

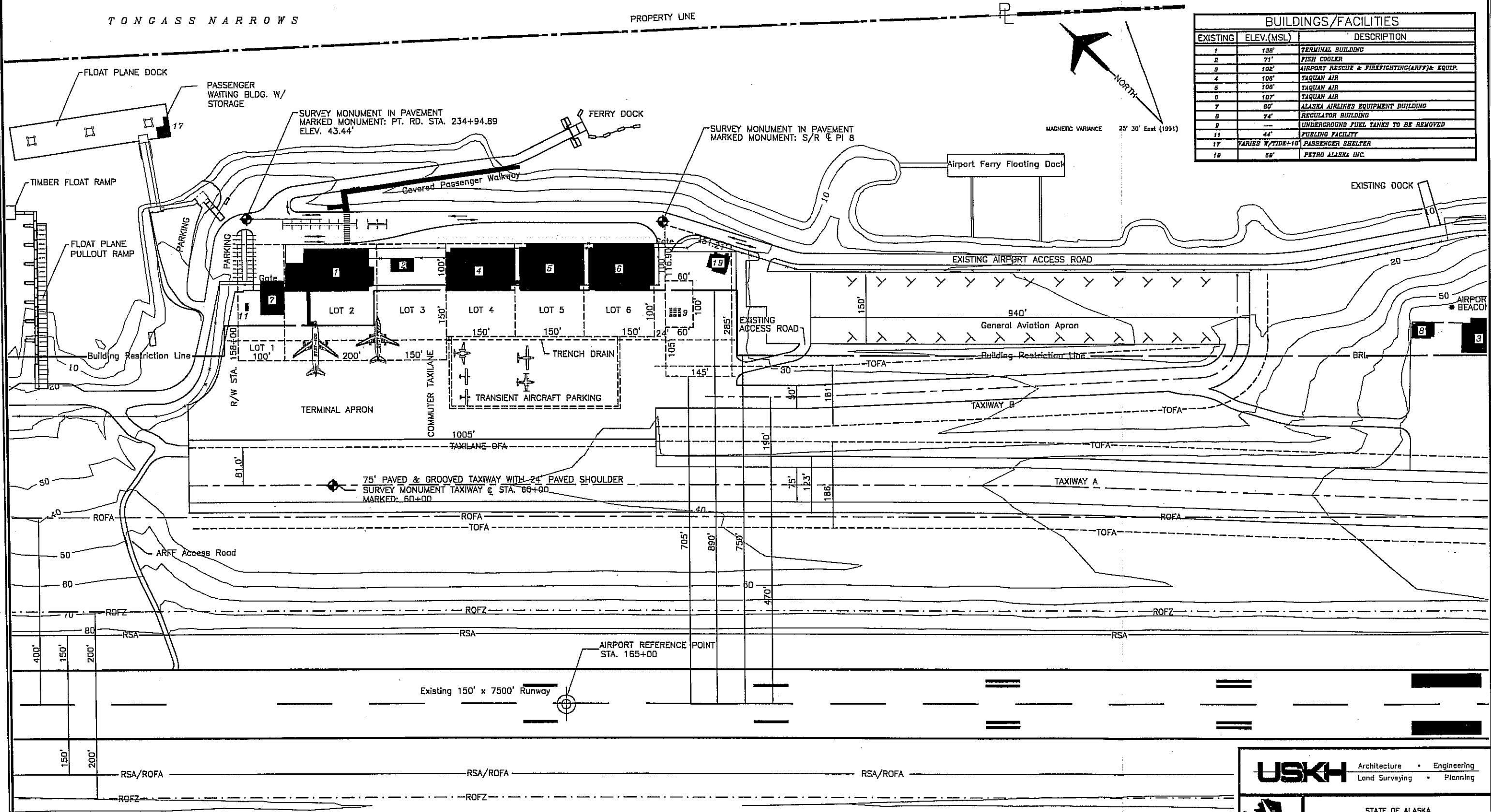
**USKH** Architecture • Engineering  
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

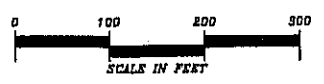
**KETCHIKAN INTERNATIONAL AIRPORT**  
**FEATURE & OBSTRUCTION**  
**TABLES**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002		SHEET 16 OF 22

BUILDINGS/FACILITIES		
EXISTING	ELEV.(MSL)	DESCRIPTION
1	138'	TERMINAL BUILDING
2	71'	FISH COOLER
3	102'	AIRPORT RESCUE & FIREFIGHTING (ARFF) EQUIP.
4	108'	TAQUAN AIR
5	108'	TAQUAN AIR
6	107'	TAQUAN AIR
7	80'	ALASKA AIRLINES EQUIPMENT BUILDING
8	74'	REGULATOR BUILDING
9	---	UNDERGROUND FUEL TANKS TO BE REMOVED
11	44'	FURLING FACILITY
17	VARIES W/TIDR+18'	PASSENGER SHELTER
19	69'	PETRO ALASKA INC.



E:\574100\DWG\JUL2002\574100\_17.TXP.DWG



FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/12/02  
 BY [Signature]  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-800  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY [Signature] 7/1/02  
 Verne Stangerberg, Transportation Planner Date  
 for Andy Hughes, Chief of Planning

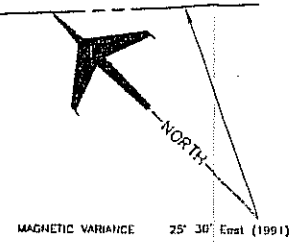
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STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

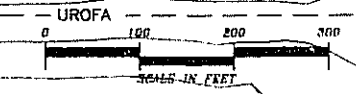
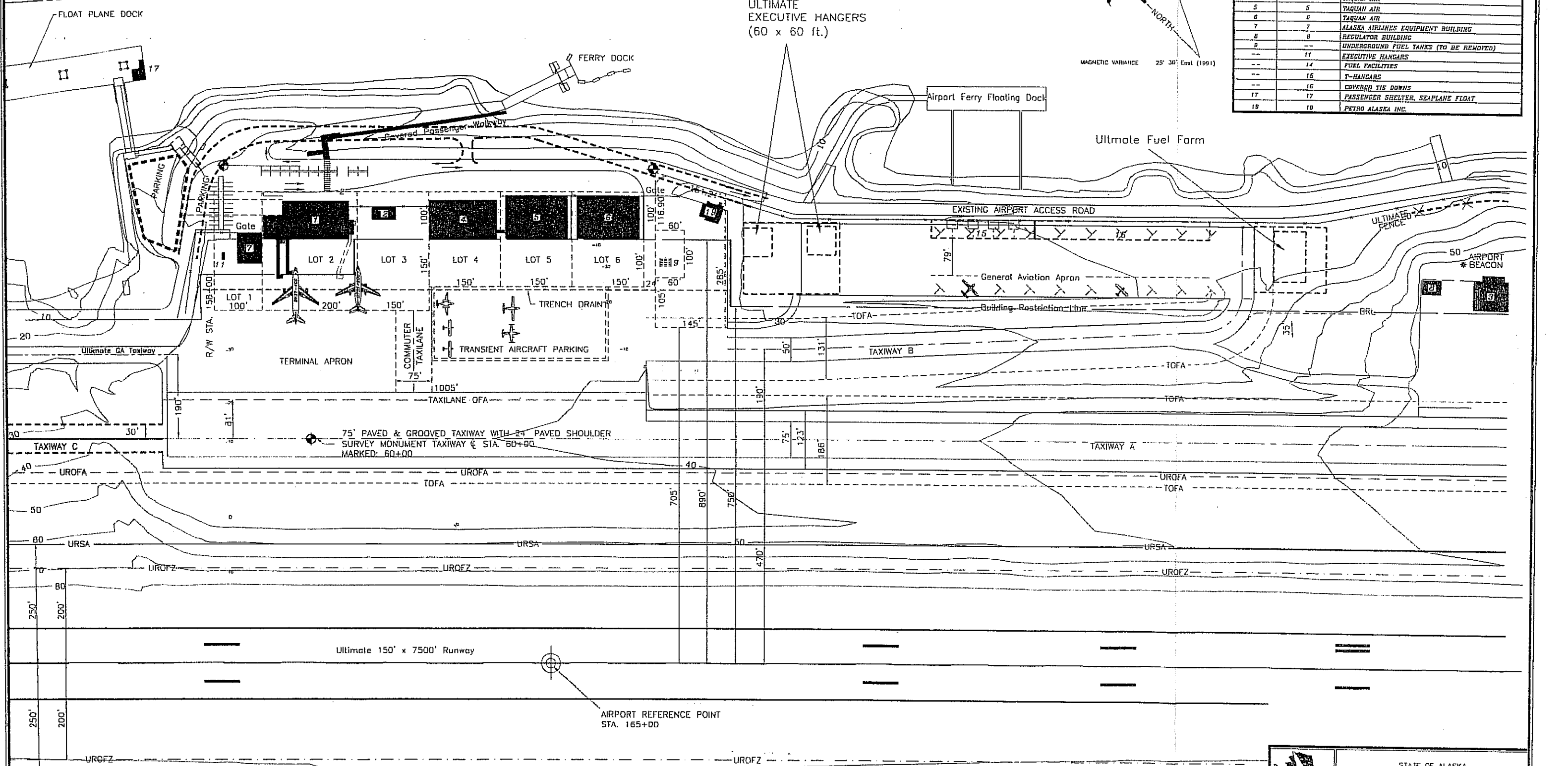
**KETCHIKAN INTERNATIONAL AIRPORT**  
**EXISTING**  
**TERMINAL AREA DRAWING**  
**KETCHIKAN, ALASKA**

PLANNED BY: K.L.L.    DETAILED BY: C.M.B.    CHECKED BY: D.L.M.

DATE: JULY 2002    SHEET 17 of 22



BUILDINGS/FACILITIES		
EXISTING	ULTIMATE	DESCRIPTION
1	1	TERMINAL BUILDING
2	2	FISH COOLER
3	3	AIRPORT RESCUE & FIREFIGHTING (ARFF) EQUIP.
4	4	TAQUAN AIR
5	5	TAQUAN AIR
6	6	TAQUAN AIR
7	7	ALASKA AIRLINES EQUIPMENT BUILDING
8	8	REGULATOR BUILDING
9	--	UNDERGROUND FUEL TANKS (TO BE REMOVED)
--	11	EXECUTIVE HANGARS
--	14	FUEL FACILITIES
--	15	T-HANGARS
--	16	COVERED TIE DOWNS
17	17	PASSENGER SHELTER, SEAPLANE FLOAT
19	19	PETRO ALASKA INC.



FAA AIRSPACE REVIEW NO. 02 AAL-01 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 1/10/03  
 BY: [Signature]  
 FAA, AIRPORT DIVISION  
 ALASKAN REGION, AAL-600  
 PREVIOUS AIP FAA APPROVAL DATE 11/12/02

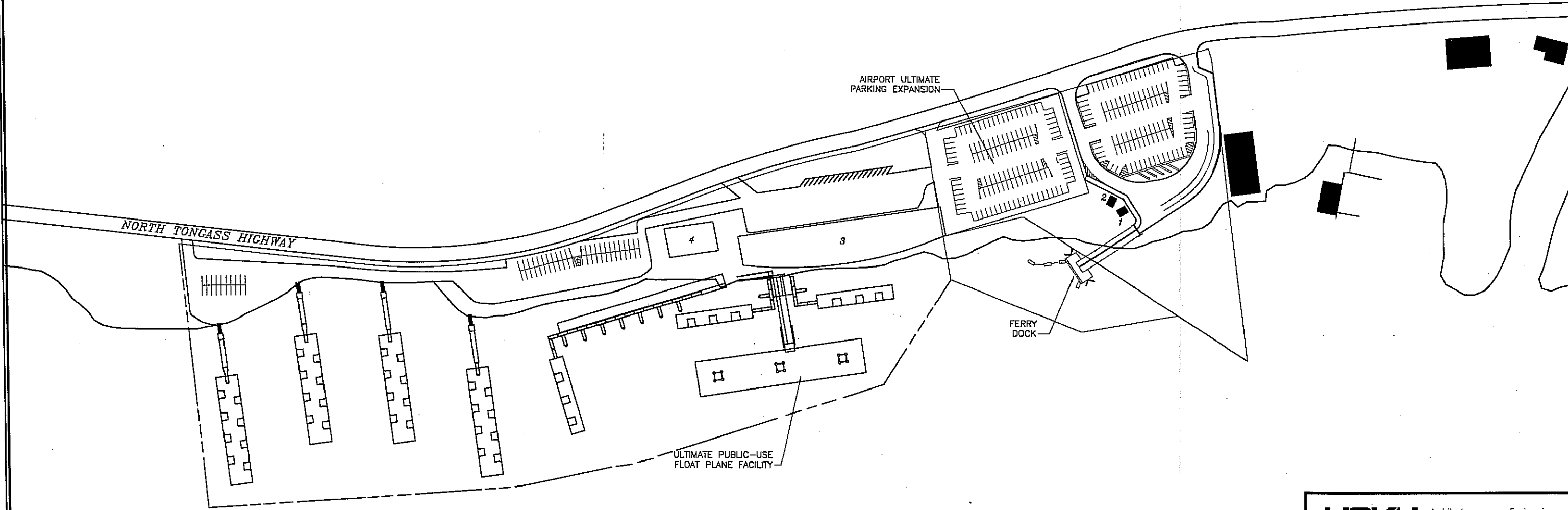
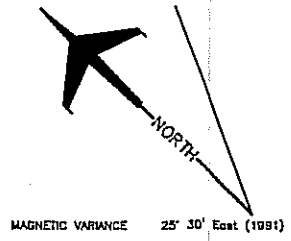
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature] 4/2/03  
 Verne [Signature] Chief of Planning  
 for Andy Hughes, Chief of Planning

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

**KETCHIKAN INTERNATIONAL AIRPORT**  
**ULTIMATE AIRPORT**  
**TERMINAL AREA DRAWING**  
 KETCHIKAN, ALASKA

PLANNED BY: VRS    DETAILED BY: VRS    CHECKED BY: VRS  
 DATE: APRIL 2003    SHEET 18 OF 22

BUILDINGS/FACILITIES		
EXISTING	ULTIMATE	DESCRIPTION
1	1	PASSENGER SHELTER
2	2	STORAGE BUILDING
--	3	TERMINAL BUILDING
--	4	HANGAR



FAA AIRSPACE REVIEW NO. 02AL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/2/02  
 BY: *Pak L. O...*  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-800  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97







STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: *[Signature]* 7/1/02  
 Verne Stangor, Transportation Planner  
 for Andy Hughes, Chief of Planning

 Architecture • Engineering Land Surveying • Planning		
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES		
KETCHIKAN INTERNATIONAL AIRPORT ULTIMATE FLOAT PLANE TERMINAL AREA DRAWING KETCHIKAN, ALASKA		
PLANNED BY: K.L.L.	DETAILED BY: C.W.B.	CHECKED BY: D.L.M.
DATE: JULY 2002		SHEET 19 of 22

A:\5741\00A\DWG\JUL02\5741190\_187R.P.DWG

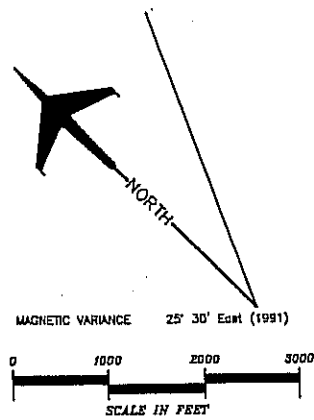
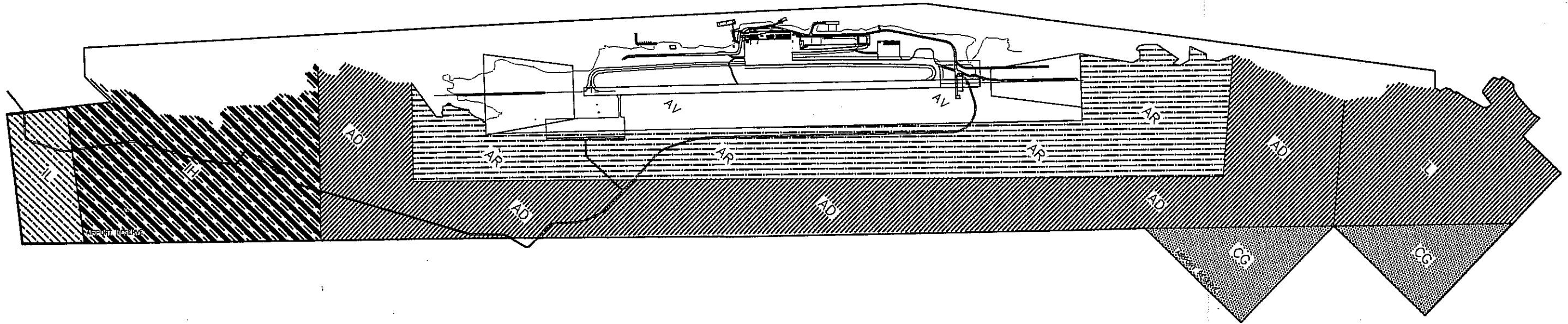
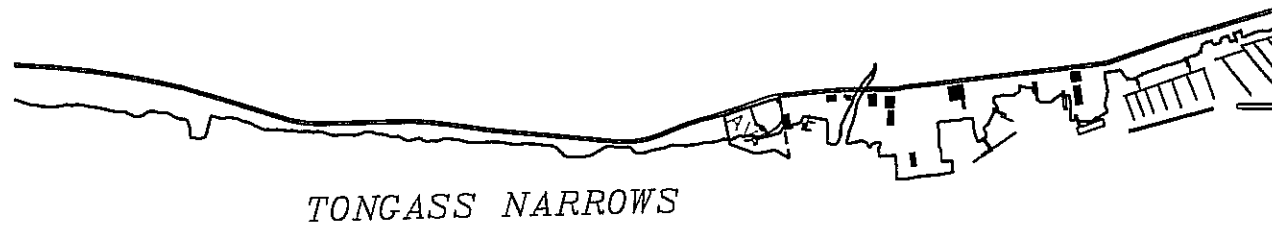


LAND USE LEGEND

-  AVIATION
-  AIRPORT RESERVE
-  AIRPORT DEVELOPMENT
-  HEAVY INDUSTRIAL
-  LIGHT INDUSTRIAL
-  GENERAL COMMERCIAL

GENERAL NOTES:

1. ALL PROPERTY WITHIN THE AIRPORT RESERVE SHOULD BE ZONED MBR (MOBILE HOME RESTRICTED).
2. ALL ZONING REQUESTS WITHIN THE AIRPORT RESERVE SHOULD COMPLY WITH THE KETCHIKAN INTERNATIONAL AIRPORT F. A. R. PART 150 NOISE COMPATIBILITY PLAN AND HEIGHT ZONING REQUIREMENTS IN ACCORDANCE WITH F. A. R. PART 77.



FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 4/10/02  
 BY: *Paul L. Os*  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-800  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/87

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: *[Signature]*  
 Versa Skelton, Transportation Planner Date  
 for Andy Hughes, Chief of Planning

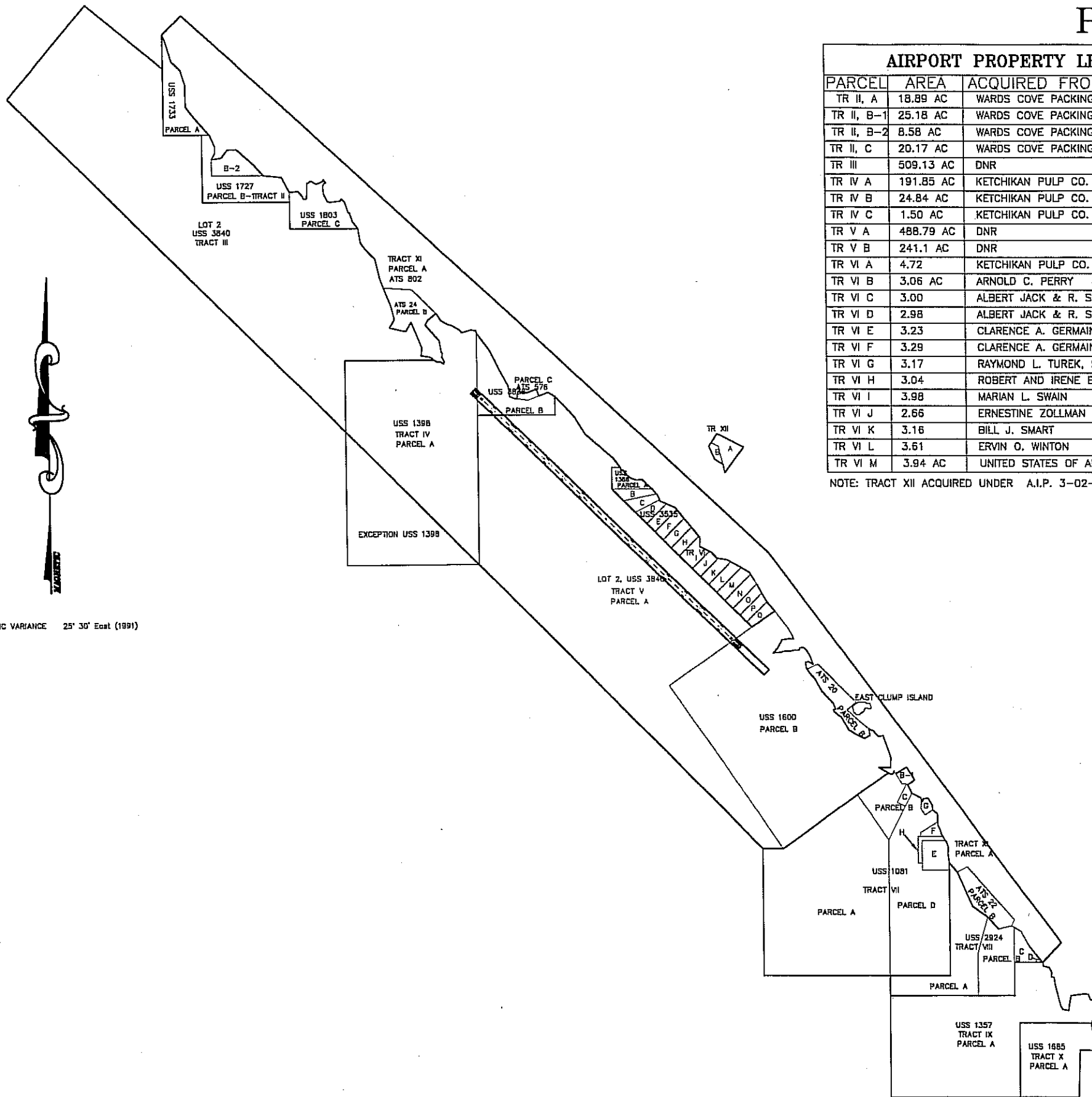
<b>USKH</b> Architecture • Engineering Land Surveying • Planning		
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES		
KETCHIKAN INTERNATIONAL AIRPORT		
AIRPORT RESERVE LAND USE DRAWING KETCHIKAN, ALASKA		
PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002	SHEET 21 of 22	

# PROPERTY STATUS

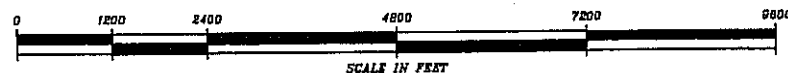
AIRPORT PROPERTY LEGEND			
PARCEL	AREA	ACQUIRED FROM	DATE
TR II, A	18.89 AC	WARDS COVE PACKING CO.	1/7/70
TR II, B-1	25.18 AC	WARDS COVE PACKING CO.	1/7/70
TR II, B-2	8.58 AC	WARDS COVE PACKING CO.	1/7/70
TR II, C	20.17 AC	WARDS COVE PACKING CO.	1/7/70
TR III	509.13 AC	DNR	7/19/68
TR IV A	191.85 AC	KETCHIKAN PULP CO.	5/18/69
TR IV B	24.84 AC	KETCHIKAN PULP CO.	5/18/69
TR IV C	1.50 AC	KETCHIKAN PULP CO.	5/18/69
TR V A	488.79 AC	DNR	7/19/68
TR V B	241.1 AC	DNR	7/19/68
TR VI A	4.72	KETCHIKAN PULP CO.	5/18/69
TR VI B	3.06 AC	ARNOLD C. PERRY	2/7/69
TR VI C	3.00	ALBERT JACK & R. SPROMBERG	10/24/68
TR VI D	2.98	ALBERT JACK & R. SPROMBERG	10/24/68
TR VI E	3.23	CLARENCE A. GERMAIN	10/30/68
TR VI F	3.29	CLARENCE A. GERMAIN	10/30/68
TR VI G	3.17	RAYMOND L. TUREK, SR.	2/17/69
TR VI H	3.04	ROBERT AND IRENE E. DOTSON	10/28/68
TR VI I	3.98	MARIAN L. SWAIN	10/27/68
TR VI J	2.66	ERNESTINE ZOLLMAN	10/29/68
TR VI K	3.16	BILL J. SMART	2/17/69
TR VI L	3.61	ERVIN O. WINTON	11/4/68
TR VI M	3.94 AC	UNITED STATES OF AMERICA	4/23/69

AIRPORT PROPERTY LEGEND			
PARCEL	AREA	ACQUIRED FROM	DATE
TR VI N	3.84	PAUL J. AND FLOY E. WINGREN	10/25/68
TR VI O	3.02	ERVIN O. WINTON	11/4/68
TR VI P	2.77	NORMAN P. AND ELLEN OLSEN	11/11/68
TR VI Q	2.60	LEONARD O. AND OSIE OLSEN	11/20/68
TR VII A	180.66	CLARENCE M. KRUEGER	6/9/72
TR VII B	16.12	DAVID B. PERRY	6/12/74
TR VII B-1	1.73	DAVID B. PERRY	6/12/74
TR VII C	1.49	JESSE GALLOWAY & D. GALLOWAY	2/10/71
TR VII D	79.22	VINCENT BOUCHER & H. BOUCHER	1/6/72
TR VII E	7.34	RONALD FULLER & A. FULLER	7/6/71
TR VII F	1.74	LEONA I. STENSLAND	5/26/72
TR VII G	1.27	GILBERT MCLEOD & C. MCLEOD	3/15/72
TR VII H	1.82	JAMES M. HARRIS	6/6/72
TR VIII A	42.69	HARRIET POND & H. STENSLAND	1/8/71
TR VIII B	23.36	HARRIET POND & H. STENSLAND	1/8/71
TR VIII C	4.66	HARRIET POND & H. STENSLAND	1/8/71
TR VIII D	0.09	HARRIET POND	5/27/70
TR IX	153.52 AC	J. SEABOLT, E. & H. FURUSETH	1/8/71
TR X	42.49 AC	ILMT / STATE OF ALASKA DNR	7/19/68
TR XI A	518 AC	ILMT / STATE OF ALASKA DNR	8/4/70
TR XI B	20.3 AC	ILMT / STATE OF ALASKA DNR	8/4/70
TR XII A	5.14	WAYNE CONSTRUCTION INC.	8/30/90
TR XII B	1.33	ILMT / STATE OF ALASKA DNR	1/15/93

NOTE: TRACT XII ACQUIRED UNDER A.I.P. 3-02-0114-0286.



MAGNETIC VARIANCE 25° 30' East (1991)



FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
 SUBJECT TO FAA APPROVAL LETTER  
 FAA APPROVAL/LETTER DATE 11/12/02  
 BY [Signature]  
 FAA AIRPORT DIVISION  
 ALASKAN REGION, AAL-800  
 PREVIOUS ALP FAA APPROVAL DATE 7/1/97

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 APPROVED BY: [Signature]  
 Verne Scherberg, Transportation Planner  
 for Andy Hughes, Chief of Planning

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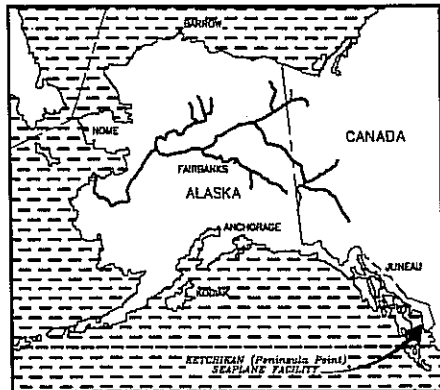
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT

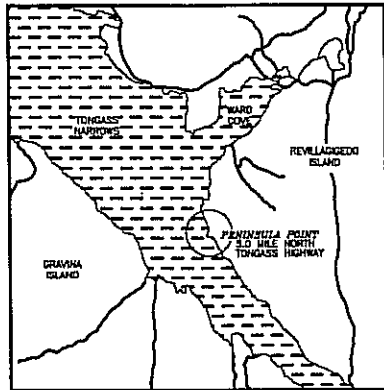
**PROPERTY MAP**  
 KETCHIKAN, ALASKA

PLANNED BY: K.L.L.	DETAILED BY: C.M.B.	CHECKED BY: D.L.M.
DATE: JULY 2002		SHEET 22 OF 22

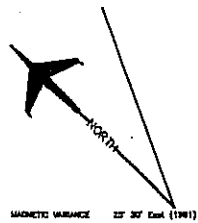
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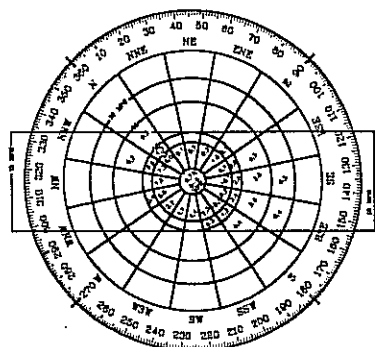
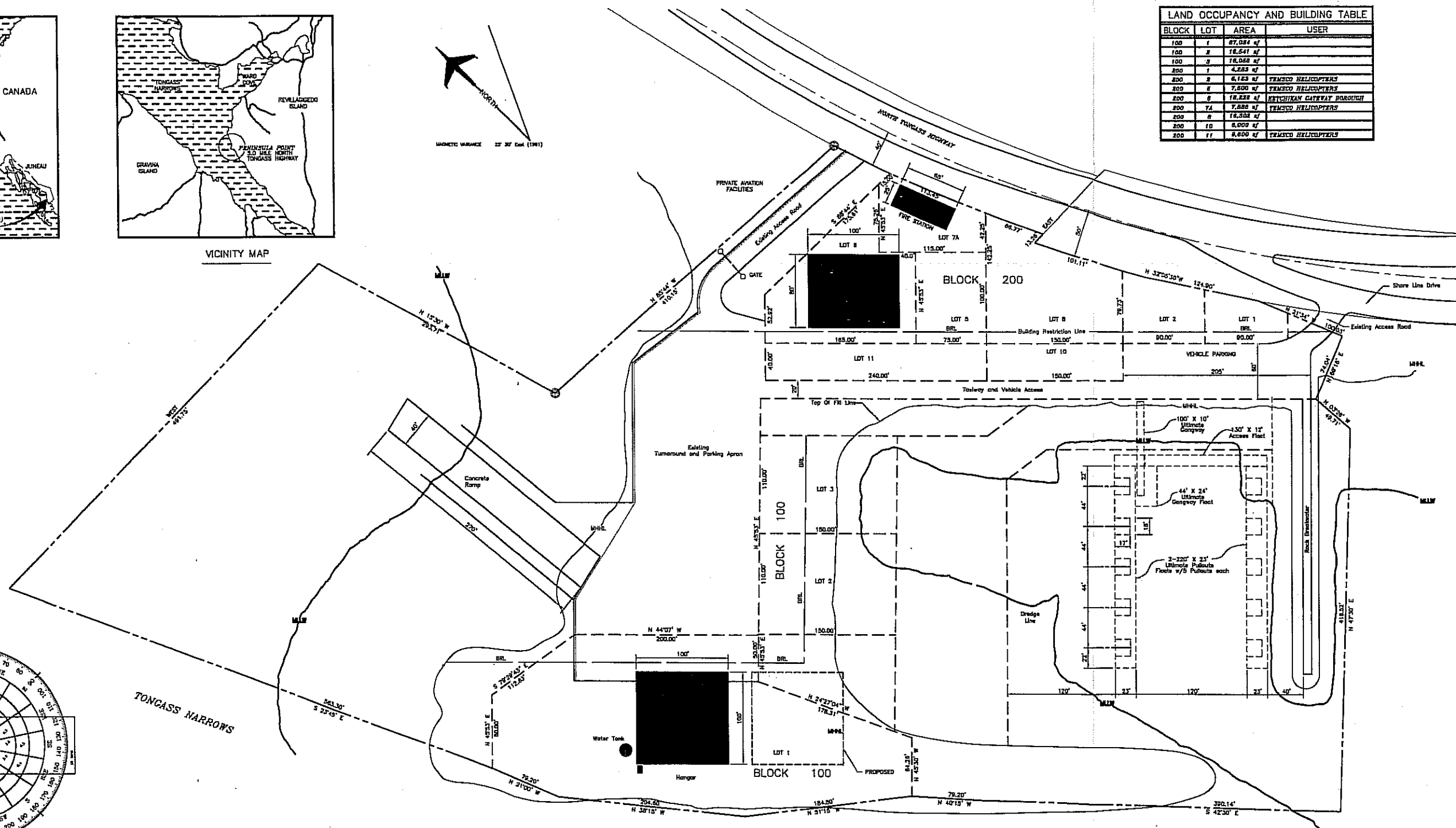
LOCATION MAP



VICINITY MAP



BLOCK	LOT	AREA	USER
100	1	87,026 sq	
100	2	16,541 sq	
100	3	16,048 sq	
200	1	4,283 sq	
200	2	6,123 sq	TEMSCO HELICOPTERS
200	3	7,800 sq	TEMSCO HELICOPTERS
200	4	18,288 sq	KETCHIKAN GATEWAY BOROUGH
200	7A	7,888 sq	TEMSCO HELICOPTERS
200	8	18,302 sq	TEMSCO HELICOPTERS
200	10	8,000 sq	TEMSCO HELICOPTERS
200	11	8,000 sq	TEMSCO HELICOPTERS



ALL WEATHER WIND ROSE

WIND DATA	
WIND DATA	15 MPH
NW-SE Waterlane	99.32%

SOURCE: U.S. WEATHER BUREAU  
KETCHIKAN INTERNATIONAL AIRPORT  
KETCHIKAN, ALASKA  
AUGUST - APRIL 1941

AIRPORT DATA	EXISTING	ULTIMATE
	GENERAL UTILITY	GENERAL UTILITY
AIRPORT TYPE	B-II	B-II
AIRPORT REFERENCE CODE	75	75
MAXIMUM WING SPAN	75'	75'
AIRPORT ELEVATION	SEA LEVEL	SEA LEVEL
MEAN MAXIMUM TEMPERATURE OF HOTTEST MONTH	84° F	84° F
SURFACE	WATERLANE	WATERLANE
AIRPORT and TERMINAL NAVIGATIONAL AIDS	Channel Light On Breakwater	
PULL-UP RAMP WIDTH	40'	40'
PULL-UP RAMP GRADIENT	12%	12%
FLYING DIMENSIONS	N/A	N/A
GANGWAY WIDTH	N/A	N/A
GRADIENT AT MEI	N/A	N/A
GRADIENT AT MEI	N/A	N/A
UTILITIES AVAILABLE	LIGHTS	LIGHTS

LEGEND		
EXISTING	ULTIMATE	DESCRIPTION
[Symbol]	[Symbol]	AIRPORT PROPERTY LINE
[Symbol]	[Symbol]	BUILDING CONSTRUCTION
[Symbol]	[Symbol]	BUILDING RESTRICTION LINE (BRL)
[Symbol]	[Symbol]	DRAINAGE
[Symbol]	[Symbol]	TOPOGRAPHIC CONTOURS
[Symbol]	[Symbol]	BRASS CAP SURVEY MONUMENT

FAA AIRSPACE REVIEW NO. 08AAL-001 NRA  
SUBJECT TO FAA APPROVAL LETTER  
FAA APPROVAL/LETTER DATE 4/12/02  
BY: [Signature]  
FAA AIRPORT DIVISION  
ALASKAN REGION, AAL-800  
PREVIOUS ALP FAA APPROVAL DATE 7/1/07

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
APPROVED BY: [Signature]  
Verne Seeger, Transportation Planner  
for Andy Hughes, Chief of Planning



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STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

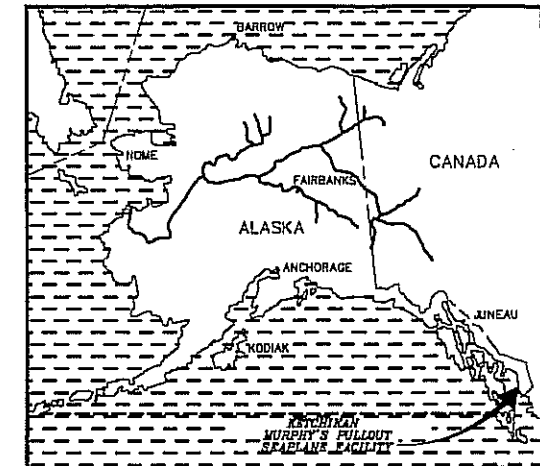
KETCHIKAN INTERNATIONAL AIRPORT  
PENINSULA POINT  
SEAPLANE FACILITY  
AIRPORT LAYOUT PLAN  
KETCHIKAN, ALASKA

PLANNED BY: K.L.L.    DETAILED BY: C.D.P.    CHECKED BY: D.L.M.

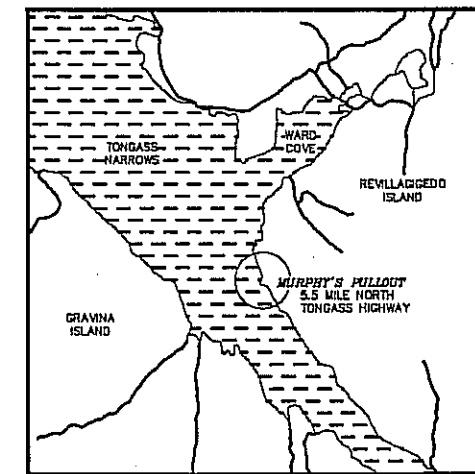
DATE: JULY 2002    SHEET 1 OF 1

AIRPORT DATA	WATERLANE	
	EXISTING	ULTIMATE
AIRPORT TYPE	GENERAL UTILITY	GENERAL UTILITY
AIRPORT REFERENCE CODE	B-II	B-II
AIRPORT ELEVATION	SEA LEVEL	SEA LEVEL
MEAN MAXIMUM TEMPERATURE OF HOTTEST MONTH	84° F	84° F
FIDAT ELEVATION	Varies W/Tide	Varies W/Tide
SURFACE	10,000' ± 1500' ±	10,000' ± 1500' ±
AIRPORT and TERMINAL NAVIGATIONAL AIDS	NONE	NONE
FIDAT DIMENSIONS	220' ± 45'	220' ± 45'
FULL-UP RAMP WIDTH	15'	15'
MAXIMUM WING SPAN	40'	40'
CANOPY WIDTH	8'	VARIES
GRADIENT AT MLT	0.418%	0.418%
GRADIENT AT MHT	0.185%	0.185%
UTILITIES AVAILABLE	LIGHTS	LIGHTS

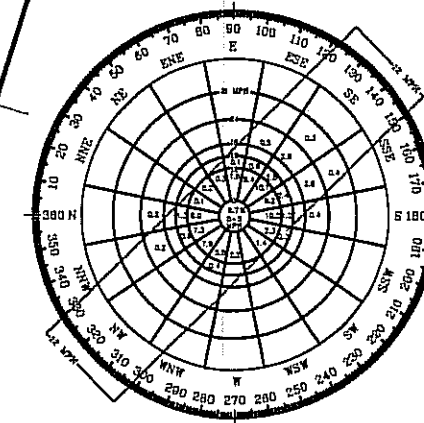
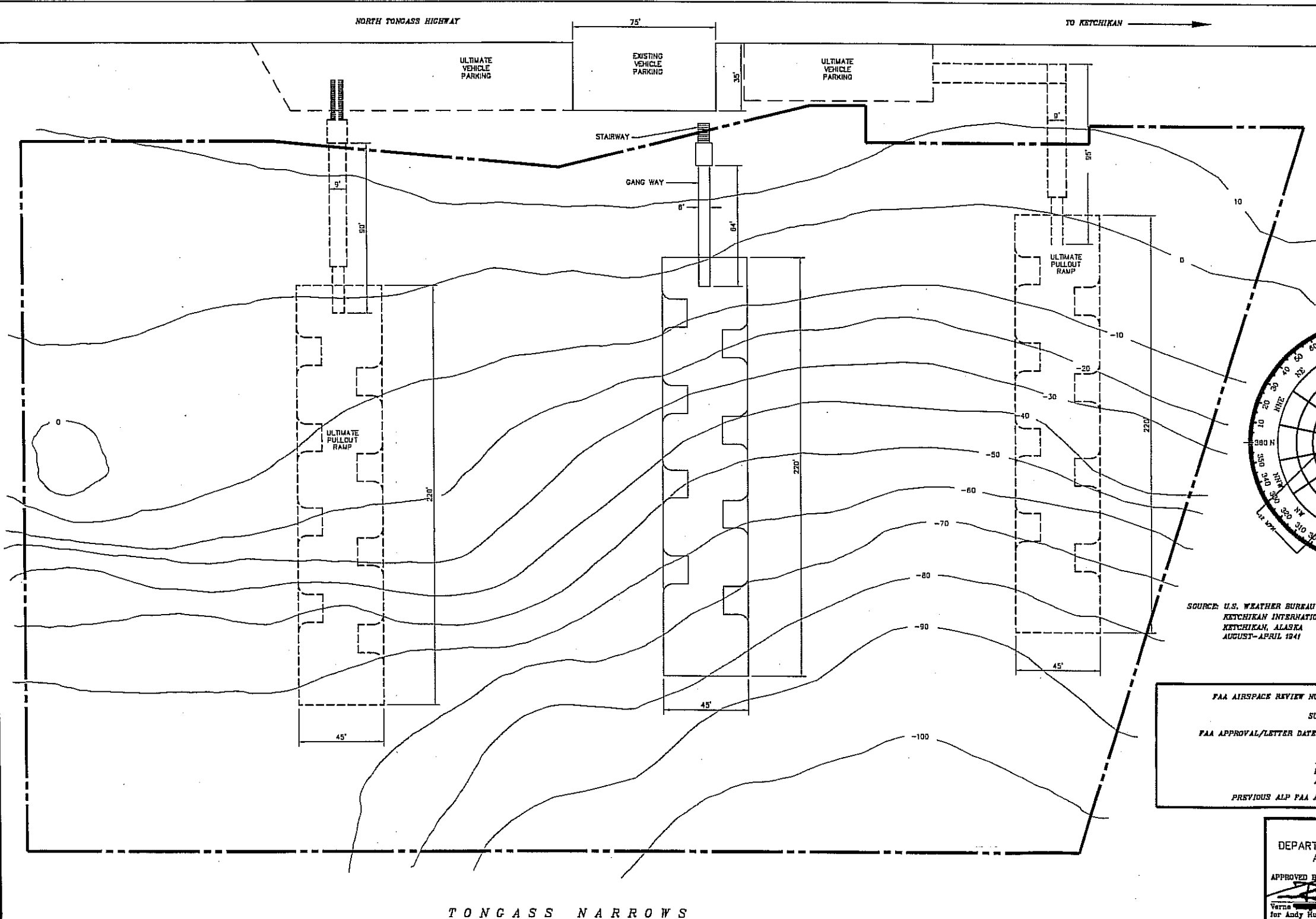
LEGEND		
EXISTING	ULTIMATE	DESCRIPTION
---	---	AIRPORT PROPERTY LINE
---	---	BUILDING CONSTRUCTION
---	---	TOPOGRAPHIC CONTOURS



LOCATION MAP



VICINITY MAP



ALL WEATHER WIND ROSE

SOURCE: U.S. WEATHER BUREAU  
KETCHIKAN INTERNATIONAL AIRPORT  
KETCHIKAN, ALASKA  
AUGUST-APRIL 1941

WIND DATA	
15 MPH	
NW-SE Waterlane	99.52%

FAA AIRSPACE REVIEW NO. 02AAL-001 NRA  
SUBJECT TO FAA APPROVAL LETTER  
FAA APPROVAL/LETTER DATE 11/12/02  
BY [Signature]  
FAA AIRPORT DIVISION  
ALASKAN REGION, AAL-600  
PREVIOUS ALP FAA APPROVAL DATE 7/1/87

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
APPROVED BY [Signature]  
Versa [Signature] Date  
for Andy Hughes, Chief of Planning

**USKH** Architecture • Engineering  
Land Surveying • Planning

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

KETCHIKAN INTERNATIONAL AIRPORT  
**MURPHY'S PULLOUT  
SEAPLANE FACILITY  
AIRPORT LAYOUT PLAN  
KETCHIKAN, ALASKA**

PLANNED BY: K.L.L.    DETAILED BY: C.M.B.    CHECKED BY: D.L.M.  
DATE: JULY 2002    SHEET 1 OF 1

TONGASS NARROWS

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## Appendix B

### Environmental Appendix

The Environmental Appendix, published under separate cover in February 2002, addresses all development projects anticipated for the airport at a Tier I level of detail. Issues associated with proposed actions for Tier I projects are identified, but the document does not describe levels of impact, resolve issues, or involve obtaining permits for those projects. Initial coordination with resource and regulating agencies has been incorporated into the document.

Development of individual projects will involve environmental documentation in accordance with FAA Order 5050.4A Airport Environmental Handbook. Tier II documentation for individual projects will include all required permits, authorizations, and clearances.

Interested persons may contact DOT&PF to obtain a copy of the Environmental Appendix at the following address:

DOT&PF Southeast Region  
6860 Glacier Highway  
Juneau, Alaska 99801-7999  
ATTN: Verne Skagerberg, Transportation Planner  
verne\_skagerberg@dot.state.ak.us  
907/465-4477