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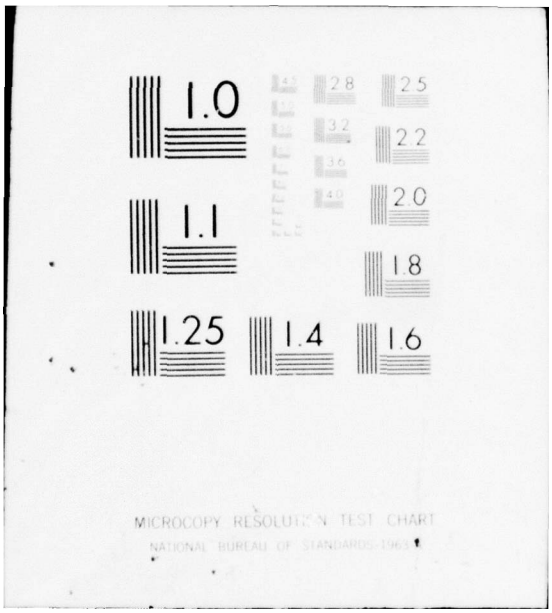
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Report No. FAA-RD-76-27, II
Part 2

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ALASKAN AIR NAVIGATION REQUIREMENTS

Volume II, Part 2 -- Appendices

H.L. Solomon A.R. Stephenson
W. Heine E. McConkey

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Final Report

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16. Abstract

This Volume (II) presents an analysis of the problems and near-term solutions related to Alaska's Air Navigation System. The needs of the air taxi operators and major intra-state scheduled air carriers are considered based on such figures of merit as enroute navigation gaps, traffic volume, landing probabilities and candidate navigation system characteristics. The study concludes that 6 VOR/DME's and 6 NDB/DME's would be adequate to satisfy most of Alaska's near-term enroute and terminal air navigation requirements, respectively. Recommended implementation sequences are provided for each combination of candidate NAVAID (NDB, NDB/DME, VOR, VOR/DME and TACAN) and application (enroute, approach and dual--enroute/approach).

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METRIC CONVERSION FACTORS

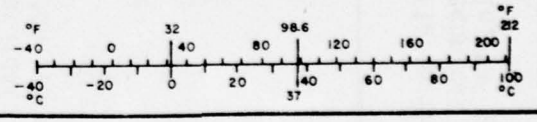
Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

*1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price $2.25, SD Catalog No. C13.10:286.

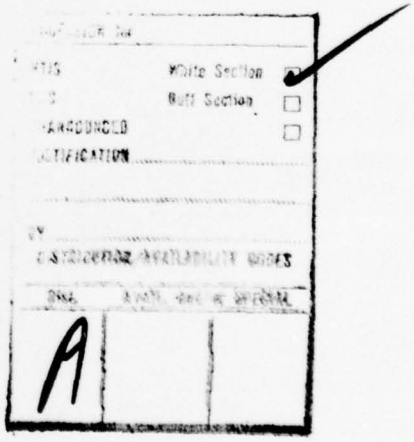
Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



CONTENTS

APPENDIX		PAGE
A	ESTIMATES OF POTENTIAL USER BENEFITS	1
B	UPDATED FAA ALASKA REGION VORTAC SITE RECOMMENDATIONS	7
C	COMPARISON OF ALASKA'S AIR TRANSPORTATION SYSTEM SAFETY AND SCHEDULED DEPARTURE PERFORMANCE	11
D	ALASKA AIRPORT DATA BASE	17
E	ESTIMATED ALASKA AIR TAXI ORIGIN-DESTINATION STATISTICS	77
F	CEILING AND VISIBILITY MINIMUMS	123
G	ESTIMATED LANDING PROBABILITIES	147
H	DISTRIBUTION OF AIR CARRIER TRAFFIC	169
I	COMMUNITY DEPENDENCY ON AIR TRANSPORTATION RANKING MODEL	181
J	DESCRIPTIONS OF CANDIDATE NAVIGATION AID LOCATIONS	189
K	SUMMARY OF ALASKA-BASED AIRCRAFT AVIONICS EQUIPMENT	259



FIGURES

FIGURE NO.		PAGE
D.1	FAA Form 5010 for Anchorage International	20
D.2	Per Cent of Operations Accounted for By the Busiest Airports	22
E.1	Alaska Airway Structure	79
F.1	Procedure Turn Area	125
F.2	NDB Final Approach Area	125
F.3	Straight Missed Approach Area	126
F.4	180° Turn Missed Approach	126
F.5	VOR Final Approach Area	128
F.6	NDB/DME Final Approach Area	130
F.7	VOR/DME-TACAN Final Approach Area	132
F.8	MOCA at Akutan	137
F.9	Procedure Turn at Akutan	138
F.10	Final and Missed Approach Areas for NDB and VOR Approach at Akutan	139
F.11	Initial, Intermediate, Final and Missed Approach Areas for NDB/DME and VOR/DME Approaches at Akutan	140
G.1	Alaska Weather Stations	148
G.2	Alaska Weather Regions	153
H.1	Bi-directional Airport Pairs with Scheduled Service	170

TABLES

TABLE NO.		PAGE
A.1	Air Carrier Quarterly Operating Report Totals . . .	3
B.1	FAA Alaska Region Proposed VORTAC Locations	8
C.1	Accidents, Accident Rates and Fatalities - Certificated Route Carriers (All Operations)	12
C.2	Accidents, Accident Rates - Certificated Route Air Carriers - All Scheduled Service	13
C.3	Accidents, Accident Rates and Fatalities - Air Taxi (All Operations)	14
C.4	Measure of Alaska Certificated Route Air Carrier Schedule Performance	15
D.1	Community Listing Based Upon the FAA Airport Directory Tape	23
D.2	Airport Physical Characteristics	26
D.3	Airport Operations Data	47
D.4	Airport Equipment Summary	69
D.5	Airport Operations and Based-Aircraft Summary . . .	70
D.6	Number of Airports Vs. Annual Military Operations .	71
D.7	Number of Airports Vs. Annual Air Taxi Operations .	72
D.8	Number of Airports Vs. Annual Local GA Operations .	73
D.9	Number of Airports Vs. Annual ITRNT GA Operations .	74
D.10	Number of Airports Vs. Annual Total Operations . .	75
E.1	Raw Air Taxi Data	81
E.2	Alaska Air Taxi Operations and Revenue Data by Community	82
E.3	Air Taxi Operating Regions	97
E.4	Estimated Distribution of Individual Air Taxi Operators	98
E.5	Alaska Air Taxi Operations and Revenue Data by Region	116
E.6	Traffic Flow Ranking	120
E.7	Questionnaire - Air Taxi and Charter Carriers . . .	121
F.1	Straight-In Visibilities	127
F.2	Standard Circling Minimums	127
F.3	Projected Ceiling (AGL) and Visibility Minimums . .	141
G.1	Weather Station/Zone Correlation	154
G.2	Alaska Airport Weather Analysis	155
G.3	Estimated Landing Probability and Associated Ranking Based on Available NAVAIDs	156
G.4	Incremental Landing Probability Relative to Baseline Case (MOCA) and Associated Ranking	162
H.1	Flight and Available Seat Data for Bi-directional Airport Pairs with Scheduled Service	171
H.2	Arrivals and Available Seat Data by Airport	173
H.3	Estimated Flight and Seat Completion for Scheduled Carriers	175
I.1	Community Dependency on Aviation Factors	182
K.1	Distribution of Navigation Avionics Equipment by Aircraft Primary Use and Type	261

APPENDIX A

ESTIMATES OF POTENTIAL USER BENEFITS

As mentioned in Section III, the schedule resource and user statistical data unavailability constraints precluded the derivation of benefit estimates by obtaining, analyzing and evaluating basic data such as air carrier operating cost parameters, traveler and shipper requirements and habit patterns, and community socio-economic factors related to transportation schedules, costs and dependability. In lieu of this desired approach, relevant user groups were requested to provide their estimates of the benefits that would be derived if their recommendations for new or improved navaids were implemented. The following paragraphs summarize their response to that inquiry.

Air Taxi Operators

Adequate statistics are not available to permit computations of how many or what per cent of total flights are aborted, either enroute or prior to scheduled takeoff, or otherwise adversely impacted due to the lack of enroute navaids. This type of information is just starting to be accumulated by the air taxi operators under the auspices of The Alaska Air Carriers Association. The first meaningful results will be available for future studies.

Table A-1 presents the operating statistics of Alaska's Air Taxi Industry for the calendar year 1974. The user benefits that could be realized by operating in a "perfect" air navigation system could be assumed to be somewhere between 5 and 10 per cent of revenue or between $3,862,000 and $7,724,000.

The following comments on air taxi operations within Alaska, obtained during visits by Contractor personnel to that state, are presented to help the reader in assessing the validity of the aforementioned potential benefit percentages.

(1) In virtually every flight of a particular air taxi operator in his Twin Otter, originating from Anchorage and flying IFR, there is a portion of that flight where navigation is lost and, in essence, dead reckoning is required until the next signal is picked up. Depending upon the particular circumstances, the weather of a given day, there are certainly areas where, because of the prevailing conditions, the flight cannot be completed, and this results in a disbenefit associated with the existing system because total IFR coverage was not provided for the entire route.

(2) Addressing the impact of navigation gaps again, under what circumstances would you have an adverse impact? The answer was that severe icing and wind conditions would prohibit getting up to the required altitude to clear the terrain in a situation without navigation aids. Whereas, the jets can fly over at higher altitudes with no problem whatsoever under those conditions. There are situations where, due to head winds, for example, which cannot be perceived without DME information, that pilots end up running out of fuel before they reach their intended destination; and with minimums that are virtually unacceptable, you can get some very nasty situations. Whereas if the individual had a DME readout, he would know either to attempt a landing at an appropriate place and appropriate time or to return to the point of origin and abort the trip. Anchorage to Bethel example: Currently between Sparrevohn and Anchorage, you have a MEA of 13,000 ft, and that's giving you a clearance of 20 miles on either side of center line. You have VOR coverage about 80 miles on this 163 mile leg to Sparrevohn. Eastbound from Sparrevohn, there have been many times when air taxi flights have been 20 miles off course due to winds and its not healthy.

Table A-1

Air Carrier Quarterly Operating Report Totals
Summary of Calendar Year 1974 (1st, 2nd, 3rd & 4th Quarters)

	PILOTS	FLIGHTS	PASSENGERS	LBS FREIGHT	LBS MAIL	PASSENGER REVENUE	FREIGHT REVENUE	MAIL REVENUE	TOTAL REVENUE	DAYS-AIR COMMERCE	HOURS-AIR COMMERCE
SC	NA	222,930	370,602	83,377,971	3,001,294	$19,242,800	$10,344,721	$ 40,979	$29,628,500	38,268	137,462.5
NW	NA	18,756	39,895	3,354,295	729,953	2,050,834	384,510	58,279	2,493,623	8,200	23,585.4
SE	NA	69,579	205,749	50,131,733	719,640	6,050,773	942,034	81,345	7,074,152	21,482	67,870.2
INT	NA	40,674	69,401	285,198,734	318,989	6,041,311	29,350,110	47,411	35,438,832	24,207	84,188,1
SW	NA	35,008	94,935	4,646,694	1,199,989	2,214,521	250,619	141,563	2,606,703	10,517	25,768.9
TOTAL	NA	386,947	780,582	426,709,427	5,969,865	$35,600,239	$41,271,994	$369,577	$77,241,810	102,674	338,875.1

Southcentral - SC; Northwest - NW; Southeast - SE; Interior - INT; Southwest - SW

(3) On the North Slope, the road system is nil and there is virutally no coverage there at the present time toward Pt. Barrow, where the exploration is moving. In the winter time, there is virutally no daylight. The weather up there is damn poor. You have an ice-fog situation where you can see virutally straight down and nothing horizontally. Everything is white. There is nothing to navigate by. It is all DR navigation. There is no visual navigation used. You take off from a point and aim, time it, and then look for lights, and set yourself down. The installation of the VOR facility at Deadhorse has increased the percentage of completed flights from 50% to 70% in that immediate area.

The same thing would happen between Anchorage and Bethel. There is also a lot of commerce back and forth between Dillingham and Bethel and maybe Aniak and Bethel, too. A higher percentage of completion would be achieved if there was something in this area that the air taxi operators could navigate by. That would result in an upgrading of air taxi operations to where they would have IFR capabilities. Right now, they don't have the IFR capabilities, so it's strictly VFR. In other words, it's a go when you can see, and fight the weather, rather than having pilots that are instrument current. They may have an instrument ticket, but they are not current at all. So, an upgrading in the air taxi level of service, personnel and aircraft would result because they would develop that capability and use it. Besides the completion of trips, improved navaids would upgrade the professional level of the air taxi pilots.

(4) Technically, to fly IFR you have to have a NAVAID facility on either end of the flight, and in terms of servicing the North Slope, for example, one might envision the following scenario where you can take off from Anchorage with the facility available and when you lose that facility you dead reckon; get to a point where you don't have a facility but you know that the terrain is such that it's a safe altitude at 2,000 ft. So, you drop down to 2,000 ft and look for lights. If you find them, fine. If you don't, you turn around and go back, aborting the whole trip. You can't file IFR up there.

(5) Examining the economics in taking off with Twin Otter or Metroliner, something in this category: You're going from Anchorage to the Slope. You have to have fuel to get to an alternate. Where is your nearest alternate? The nearest alternate is Bettles, Fort Yukon or Fairbanks. You are 320 some-odd-miles from an alternate. The figures that were coming up with the southeastern for missed trips, in the air--in other words, they were initiated, but turned back--we're getting into the 30% range. That's

southeast alone. Figures for the rest of Alaska--these are the figures the Alaska Air Carriers Association is starting to come up with. But they are a year away from getting any valuable statistics because they never kept that sort of statistic before. The air taxi operators would like the FAA to change the rationale used to rank airstrips to criteria like number of missed approaches, rather than the number of aircraft based data, or the number of operations and this sort of thing.

Alaska Airlines

Alaska Airlines estimates a possible $200,000 per year saving if they could convert to an all B-727 fleet. This implies dropping Twin Otter service to Petersburg and Wrangell and obtaining approach minimums perhaps below 1000 ft into those airports to make B-727 operations economically viable. The communities of Petersburg and Wrangell would also benefit from direct (one plane) passenger and freight service from Seattle, thereby reducing travel time and freight handling costs.

Reeve Aleutian Airlines

Several in-house memorandum cite examples of cost incurred by Reeve directly attributable to the inadequacies of the existing air navigation system. The contents of the aforementioned memorandum are presented below:

(1) October 6, 1975

SUBJECT: Estimated Cost of Weather Overflies and Delays at Sand Point

Between May and the end of August, RV experienced 11 overflies at Sand Point due to weather. Estimated cost $100,000 because of extra flights and board and room at Cold Bay and Anchorage.

(2) September 29, 1975

TO: Vice President of Operations

FROM: Vice President of Administration

SUBJECT: The Cost of Inadequate Navaids at St. Paul Island for the Period June 26-August 31, 1975

A. Of 29 scheduled flights, 8 were unable to operate into St. Paul because of weather.

B. Reeve Aleutian had to operate 7 flights in addition to the 29 scheduled flights during the period, or an additional 24% of scheduled miles. Additional cost = $46,100.

C. The aircraft used was in strong demand for charters this summer and could have generated an additional $32,200 in charter revenues on the 7 days it had to operate the additioanl flights into St. Paul.

D. 583 tourists and 374 regular passengers boarded 29 scheduled flights between Anchorage and St. Paul Island, a total of 957.

E. Of the 957 people who originated travel, 100 tourists and 40 regular passengers cancelled their trips. Lost revenue - $41,500.

F. Of the 817 passengers who did travel, 184 tourists and 100 regular passengers were delayed 1 or more days. Cost of accommodations @ $25/day = $9,800.

G. Recap:

(A) Passengers cancelled = 14.6%
(B) Passengers delayed = 34.8%
(C) Man-days of delay = 393
(D) Total cost = $129,600
(E) U.S. Mail delayed = 30,600 lb.
(F) Air Freight delayed = 12,400 lb.

These memoranda represent the most quantitative cost information received to date. The adverse impact of the existing navaid system portrayed in these memoranda is believed to be representative of other Alaskan operations. However, the lack of comprehensive data collection and retention procedures prevents verification of this assessment.

APPENDIX B

UPDATED FAA ALASKA REGION VORTAC SITE RECOMMENDATIONS

The locations proposed for VORTAC installations from the "VORTAC Review - Phase Three," September 1972, and the "FAA Alaska Regional Operations Plan," July 27, 1973 and the degree of overlap is presented in Table B.1. The justifications for the change between the "Phase Three" recommended sites and those of the aforementioned "operations plan" as defined by the Alaska Region FAA, are presented below:

LOCATIONS APPEARING IN THE REGION'S TEN YEAR PLAN IN ADDITION TO THOSE LISTED IN THE "VORTAC REVIEW - PHASE THREE" AND SUPPORTING RATIONALE

Cairn Mountain	- Replaces Sparrevohn
Lincoln Island	- Replaces Haines
Yakataga	- Replaces Yakataga
Icy Point	- Replaces Cape Spencer
Onslow Island and Kupreanof Island	- Reference Juneau (JNU)-Duncan (DNC) and Duncan Canal-Ketchikan (ECH) routes. Present VHF navigation coverage is above 9,000 feet JNU-DNC and above 7,000 feet DNC-ECH. These two facilities will provide coverage at MOCA and above. Also, would serve other routes at MOCA and above such as JNU-Sitka and JNU-Petersburg.
Graham Island	- This facility would be in Canadian territory and would have to be a joint venture. Reference Biorka Island/Sandspit segment of V440, MOCA is about 4,000 feet. Coverage available at approximately 14,000 feet, MEA established at 12,000 feet with a gap. Graham Island VOR/DME at Tow Hill will give coverage at 7,000 feet and above.

Table B.1

FAA Alaska Region Proposed VORTAC Locations

PRIORITY RANKING ALASKA REGIONAL OPERATIONS PLAN JULY '73	PROPOSED VORTAC SITE LOCATION	PRIORITY RANKING VORTAC REVIEW - PHASE THREE SEPTEMBER '72
1	St. Marys	1
2	Cairn Mountain	*
3	Chandalar	6
4	Barter Islands	5
5	St. Paul	3
6	Umiat	16
7	Minchumina	20
8	Cape Newenham	7
9	Adak Islands	24
10	Lonely	21
11	Port Heiden	27
12	Lincoln Islands	*
13	Yakataga	*
14	Icy Point	*
15	Cape Sarichef	28
16	Nikolski	*
17	Onslow Island	*
18	Kupreawof	*
19	Graham Island	*
20	Hooper Bay	*
21	Ambler River	*
22	Point Lay	*
23	Buckland River	*
24	Upper Noatak River	*
25	Savoonga	*
26	Aniak	18
27	Sitkanak	*
28	Tanawa (Add DME)	*
29	Summit	19
30	Nondoltan	*
31	Skwentna	*
32	Murphy Dome	*
*	Sparrevohn	2
*	Haines	4
*	Cape Spencer	8
*	Cordova	10
*	Iliamna	11
*	Puntilla Lake	12
*	Sagwon	13
*	Wien Arctic Village	14
*	Bornita	15
*	Wainwright	17
*	Stevens Village	22
*	Cape Lisburne	23
*	Amchitka	25
*	Nikolski	26

Hooper Bay	-	Would satisfy a projected requirement for an airway between Bethel and Hooper Bay. This facility would also serve other villages in this portion of the Kuskovwim/Yukon delta.
Ambler River	-	Replaces Bornite
Point Lay	-	Replaces Cape Lisburne and Wainwright.
Buckland River	-	Reference Kotzebue - Galena route V498, MEA now 8,000 feet: This facility would lower MEA to 5,000 feet.
Upper Noatak River	-	Assumes establishment of an airway Kotzebue (OTZ)/Umiat (UMT). Facilities at OTZ and UMT would provide coverage at 13,000 feet and above. VOR/DME on Upper Noatak River would provide coverage at 8,000 feet and above.
Savoonga	-	Would provide for establishment of a Victor airway between Nome and St. Lawrence Island.
Sitkinak	-	Reference route Kodiak-Port Heiden-Cold Bay. Coverage at 7,000 feet and above could be provided using Sitkinak and Port Heiden VOR/DME's.
Tanana	-	DME add to existing VOR. Provide DME coverage on V488.
Nondalton	-	Replaces Iliamna
Skwetna	-	Replaces Puntilla Lake
Murphy Dome	-	Reference Fairbanks/Bettles route V444. Coverage presently 9,000 feet and above. This facility could lower floor to MOCA. Operation of VOR at this location is questionable.

LOCATIONS DROPPED FROM "VORTAC REVIEW - PHASE THREE" AND SUPPORTING RATIONALE

Cordova	-	Not justifiable as a terminal aid since we have Localizer/DME currently installed and Glide Slope planned.

However, project currently under consideration for installation of a VORTAC in the vicinity of the Cordova Airport as a replacement of the one currently on Middleton Island (in effect a relocation of the Middleton facility). A test of the site at Cordova has been completed and the results are being evaluated.

Sagwon - The currently installed VOR/DME at Deadhorse coupled with the proposed facility at Umiat will provide the required coverage in this area of the North Slope. In addition, the terminal requirement of Sagwon has essentially not materialized.

Wien Arctic Village and Stevens Village - An adequate route structure with reasonable MEA's can be established based upon the facilities currently installed at Fairbanks, Bettles, Fort Yukon and Deadhorse, along with the VOR/DME proposed for Umiat.

Amchitka - Since the military has vacated the island, there is no longer a requirement for a Victor airway to serve this location or a terminal service requirement. Only limited coverage would be provided on the North Pacific routes as Amchitka is 60 NMI south of the direct Adak/Shemya route.

The completed SCI (Vt) analysis was based upon the original list and the results presented in these documents reflect that list. Analysis and evaluation of the 17 additional sites is recommended.

APPENDIX C

COMPARISON OF ALASKA'S AIR TRANSPORTATION SYSTEM SAFETY AND SCHEDULED DEPARTURE PERFORMANCE

The statistics presented in this appendix compare Alaska's air safety and scheduled departure performance with that of the entire U.S. air transportation industry. It is felt that the differences in both coverage and sophistication of the air navigation systems presently being used in Alaska and the CONUS are contributing factors (of unknown magnitude) in Alaska's relatively poor performance in both of these important areas.

SAFETY

Tables C.1 through C.3 present both U.S. and Alaskan statistics with respect to air transportation accidents, accident rates and fatalities during the decade 1964-1974 for all operatons, all scheduled service and air taxi operations, respectively.

SCHEDULED DEPARTURE PERFORMANCE

Table C.4 presents the number of scheduled departures, scheduled departures performed, and per cent scheduled departures not performed by each of Alaska's CAB certificated scheduled air carriers, the total of the Alaska carriers and the total of the U.S. local service carriers (for comparison purposes) for the period 1962-1974. The variation of the air carriers comprising Alaska's (CAB certificated) air transportation system reflects the growth and competition of a relatively young industry.

Table C-1

ACCIDENTS, ACCIDENT RATES AND FATALITIES
CERTIFICATED ROUTE CARRIERS
(ALL OPERATIONS)
1964 - 1974

	U.S.							ALASKA							ACCIDENT RATE PER MILLION AIRCRAFT MILES FLOWN			
	ACCIDENTS		FATALITIES				AIRCRAFT MILES FLOWN (000)	ACCIDENTS		FATALITIES				AIRCRAFT ** MILES FLOWN (000)	TOTAL ACCIDENTS		FATAL ACCIDENTS	
YEAR	TOTAL	FATAL	PASSG	CREW	OTH	TOTAL		TOTAL	FATAL	PASSG	CREW	OTH	TOTAL		U.S.	ALASKA	U.S.	ALASKA
1964	70	12	200	33	1	234	1,286,029	13	2				3	10,610	0.054	1.23	0.009	0.189
1965	73	8	226	30	0	256	1,473,744	8	1				4	9,986	0.050	0.801	0.005	0.100
1966	69	6	59	20	107	186	1,683,547	6	1				9	9,971	0.041	0.602	0.004	0.100
1967	66	11	229	36	18	283	2,083,668	5	0				0	10,291	0.032	0.486	0.005	0
1968	62	14*	205	37	6	348	2,385,309	4	2				42	8,695	0.026	0.460	0.005	0.115
1969	61	10*	132	22	4	158	2,620,803	3	1				1	8,807	0.023	0.341	0.003	1.114
1970	49	5	72	9	4	85	2,591,706	7	0				0	8,834	0.019	0.792	0.002	0
1971	47	8*	174	23	6	203	2,557,968	5	1				111	8,860	0.018	0.564	0.002	0.113
1972	48	8	160	17	13	190	2,526,021	1	0				0	8,794	0.019	0.114	0.003	0
1973	40	8	197	23	1	221	2,555,732	4	0				0	9,183	0.016	0.436	0.003	0
1974PREL	45	8	420	43	0	463	2,399,000	4	0				0	11,309	0.019	0.088	0.003	0

* INCLUDES MIDAIR COLLISIONS NONFATAL TO AIR CARRIER OCCUPANTS, EXCLUDED IN FATAL ACCIDENT RATES (1968--2, 1969--1, 1971--2)

** DATA SUPPLIED BY FAA - ALASKA REGION

NOTE--A SABOTAGE ACCIDENT OCCURRING 5/7/64 IS INCLUDED IN ALL COMPUTATIONS EXCEPT RATES

Table C-2

ACCIDENTS, ACCIDENT RATES
CERTIFICATED ROUTE AIR CARRIERS
ALL SCHEDULED SERVICE
1964 - 1974

YEAR	U.S. ACCIDENTS TOTAL	U.S. ACCIDENTS FATAL	U.S. AIRCRAFT MILES FLOWN (000)	U.S. AIRCRAFT HOURS FLOWN	ALASKA ACCIDENTS TOTAL	ALASKA ACCIDENTS FATAL	ALASKA AIRCRAFT MILES FLOWN** (000)	ALASKA AIRCRAFT HOURS FLOWN**	PER MILLION AIRCRAFT MILES: TOTAL ACCIDENTS U.S.	PER MILLION AIRCRAFT MILES: TOTAL ACCIDENTS ALASKA	PER MILLION AIRCRAFT MILES: FATAL ACCIDENTS U.S.	PER MILLION AIRCRAFT MILES: FATAL ACCIDENTS ALASKA	PER 100,000 AIRCRAFT HOURS: TOTAL ACCIDENTS U.S.	PER 100,000 AIRCRAFT HOURS: TOTAL ACCIDENTS ALASKA	PER 100,000 AIRCRAFT HOURS: FATAL ACCIDENTS U.S.	PER 100,000 AIRCRAFT HOURS: FATAL ACCIDENTS ALASKA
1964	59	11	1,189,135	3,774,771	7	1	7718	55,215	0.049	0.906	0.008	0.130	1.537	12.68	0.265	1.811
1965	65	8	1,353,499	4,071,987	7	1	7923	55,604	0.048	0.884	0.006	0.126	1.596	12.589	0.166	1.798
1966	56	5	1,482,273	4,232,982	4	1	7986	54,498	0.038	0.501	0.003	0.125	1.323	7.340	0.118	1.835
1967	54	8	1,833,563	4,924,080	4	0	8541	55,332	0.029	0.468	0.004	0	1.097	7.229	0.162	0
1968	56	13*	2,146,038	5,521,931	2	1	7155	41,063	0.026	0.279	0.005	0.140	1.014	4.871	0.193	2.435
1969	51	8	2,385,082	5,892,254	3	1	7438	38,871	0.021	0.403	0.003	0.134	0.866	7.718	0.136	2.573
1970	43	4	2,417,550	5,780,503	7	0	7603	38,485	0.018	0.921	0.002	0	0.744	18.109	0.069	0
1971	43	7*	2,380,664	5,706,270	4	1	7823	38,784	0.018	0.511	0.002	0.128	0.754	10.313	0.088	2.578
1972	46	7	2,347,864	5,659,485	1	0	7753	38,123	0.020	0.129	0.003	0	0.813	2.623	0.124	0
1973	36	8	2,448,114	5,898,575	2	0	8126	39,723	0.015	0.246	0.003	0	0.610	5.035	0.136	0
1974PREL	42	7	2,224,000	5,388,000	3	0	9944	47,360	0.019	0.302	0.003	0	0.780	6.334	0.130	0

* INCLUDES 2 MIDAIR COLLISIONS NONFATAL TO AIR CARRIER OCCUPANTS, EXCLUDED IN FATAL ACCIDENT RATES

** DATA SUPPLIED BY FAA - ALASKA REGION

NOTE-A SABOTAGE ACCIDENT OCCURING 5/7/64 IS INCLUDED IN ALL COMPUTATIONS EXCEPT RATES

Table C-3

ACCIDENTS, ACCIDENT RATES AND FATALITIES
AIR TAXI
(ALL OPERATIONS)
1964 - 1974

	U.S.							ALASKA							ACCIDENT RATE PER 100,000 AIRCRAFT HOURS FLOWN			
	ACCIDENTS		FATALITIES				AIRCRAFT * HOURS FLOWN	ACCIDENTS		FATALITIES				AIRCRAFT * HOURS FLOWN	TOTAL ACCIDENTS		FATAL ACCIDENTS	
YEAR	TOTAL	FATAL	PASSG	CREW	OTH	TOTAL		TOTAL	FATAL	PASSG	CREW	OTH	TOTAL		U.S.	ALASKA	U.S.	ALASKA
1964	169	23	39	23	0	62	1,659,000	30	3				5		10.19		1.39	
1965	192	25	32	19	2	53	1,802,000	29	3				4		10.65		1.39	
1966	217	25	35	25	2	62	1,744,000	28	1				4		12.44		1.43	
1967	237	33	60	31	3	94	1,766,000	31	4				10		13.42		1.87	
1968**	179	46	59	48	4	111	1,999,000	31	10				24		8.95		2.30	
1969	207	29	105	36	1	142	2,238,000	53	7				27	198,061	9.25	26.75	1.30	3.53
1970	190	38	53	42	5	100	2,481,000	49	5				8	183,686	7.66	26.68	1.53	2.72
1971	148	32	70	36	3	109	2,225,000	35	6				11	201,116	6.65	17.40	1.44	2.98
1972	147	42	72	43	6	121	2,555,000	24	4				5	207,000	5.75	11.59	1.64	1.93
1973	163	42	62	43	4	109	3,066,000	35	4				10	292,757	5.32	11.96	1.37	1.37
1974PREL	158	28	90	21	4	115	3,189,000***	53	9				29	274,876	4.95	19.28	0.88	3.27

* AIRCRAFT HOURS ESTIMATED BY FAA
** DEFINITION OF ACCIDENT CHANGED
*** AIRCRAFT HOURS ESTIMATED BY NTSB

Table C.4

MEASURE OF ALASKA CERTIFICATED ROUTE AIR CARRIER SCHEDULE PERFORMANCE
(SCHEDULED DEPARTURES, SCHEDULED DEPARTURES PERFORMED AND PER CENT SCHEDULED DEPARTURES NOT PERFORMED)

AIR CARRIER OR AIR CARRIER GROUP		12 MONTHS ENDED									
		6-30-62	12-31-63	6-30-64	12-31-64	6-30-65	12-31-65	6-30-66	12-31-66	6-30-67	12-31-67
Alaska Airlines	Sched. Dep.	7612	4580	5392	5561	5115	4666	4559	4706	5340	6318
	Dep. Perf.	4955	4150	5046	5043	4577	4281	4226	4423	4735	5567
	% Not Perf.	34.91	9.39	6.42	9.31	10.52	8.25	7.30	6.01	11.33	11.89
Alaska Coastal	Sched. Dep.	9527						29298	29257	29217	28622
	Dep. Perf.	7804						23884	23666	23874	22910
	% Not Perf.	18.09						18.48	19.11	18.29	19.96
Alaska Coastal-Ellis	Sched. Dep.	5679	24368	26167	26619	27557	28873				
	Dep. Perf.	5558	21514	22639	22388	22980	23898				
	% Not Perf.	2.13	11.71	13.48	15.89	16.61	17.23				
Cordova	Sched. Dep.	4854	9854	9874	9731	10806	9840	7038	5811	5198	4608
	Dep. Perf.	4331	8875	8927	8685	9712	8744	6142	5001	4596	3984
	% Not Perf.	10.77	9.94	9.59	10.75	10.12	11.14	12.73	13.94	11.58	13.54
Ellis	Sched. Dep.	8975									
	Dep. Perf.	8709									
	% Not Perf.	2.96									
Kodiak	Sched. Dep.	4751	4029	2737	2533	4069	4608	4446	5019	5145	5162
	Dep. Perf.	4081	3213	2251	2118	3361	3964	4109	4574	4598	4607
	% Not Perf.	14.10	20.25	17.76	16.38	17.40	13.98	7.58	8.87	10.63	10.75
Kokiak Western Alaska	Sched. Dep.										
	Dep. Perf.										
	% Not Perf.										
Northern Consolidated	Sched. Dep.	6265	8567	12947	15254	15120	15463	16480	16467	15967	16655
	Dep. Perf.	5951	8259	12705	14906	14822	15034	15495	14986	14302	15093
	% Not Perf.	5.01	3.60	1.87	2.28	1.97	2.68	5.98	8.99	10.43	9.38
Reeve Aleutian	Sched. Dep.	4022	4493	4126	4288	4661	4864	4884	4762	4746	4549
	Dep. Perf.	3248	3262	3157	3280	3487	3577	3658	3544	3396	3307
	% Not Perf.	19.24	27.40	23.49	23.51	25.19	26.96	25.10	25.58	28.45	27.30
Western Alaska	Sched. Dep.	4611	5043	5225	5270	5269	5426	5369	5426	5500	5450
	Dep. Perf.	4371	4854	4993	5038	4991	5099	5030	5016	5059	5002
	% Not Perf.	5.20	3.75	4.44	4.40	5.28	6.03	6.31	7.56	8.02	8.22
Wien	Sched. Dep.	16748	20616	22187	23938	24243	23822	25338	25581	24189	24250
	Dep. Perf.	13635	15929	16938	17297	16934	17668	19385	19221	18082	17773
	% Not Perf.	18.59	22.73	23.66	27.74	30.15	25.83	23.49	24.86	25.25	26.71
Wien Air Alaska	Sched. Dep.										
	Dep. Perf.										
	% Not Perf.										
Wien Consolidated	Sched. Dep.										
	Dep. Perf.										
	% Not Perf.										
Total Alaska Carriers	Sched. Dep.	73044	81550	88655	93194	96840	97562	97412	97029	95302	95614
	Dep. Perf.	62643	70056	76656	78755	80864	82265	81929	80431	78642	78243
	% Not Perf.	14.24	14.09	13.53	15.49	16.50	15.68	15.89	17.11	17.48	18.17
Total U.S. Local Service Carriers	Sched. Dep.	1219994	1292847	1320845	1358842	1383840	1424806	1478794	1534679	1580863	1626575
	Dep. Perf.	1152216	1234974	1263110	1298952	1321533	1367158	1423033	1464198	1504949	1553494
	% Not Perf.	5.56	4.55	4.37	4.41	4.50	4.04	3.77	4.59	4.80	4.49

Table C.4
(Continued)

MEASURE OF ALASKA CERTIFICATED ROUTE AIR CARRIER SCHEDULE PERFORMANCE
(SCHEDULED DEPARTURES, SCHEDULED DEPARTURES PERFORMED AND PER CENT SCHEDULED DEPARTURES NOT PERFORMED)

AIR CARRIER OR AIR CARRIER GROUP		12 MONTHS ENDED								
		12-31-68	6-30-69	12-31-69	6-30-70	6-30-71	12-31-72	12-31-73	6-30-74	12-31-74
Alaska Airlines	Sched. Dep.	35243	37813	34700	34323	28832	31868	24912	22630	21202
	Dep. Perf.	28211	29358	27235	27480	22827	26616	19686	19471	20546
	% Not Perf.	19.95	22.36	21.51	19.94	20.83	16.48	20.98	13.96	3.09
Alaska-Coastal	Sched. Dep.	5459								
	Dep. Perf.	4085								
	% Not Perf.	15.17								
Alaska-Coastal-Ellis	Sched. Dep.									
	Dep. Perf.									
	% Not Perf.									
Cordova	Sched. Dep.	499								
	Dep. Perf.	308								
	% Not Perf.	38.28								
Ellis	Sched. Dep.									
	Dep. Perf.									
	% Not Perf.									
Kodiak	Sched. Dep.	6444	5956	6365	6983	5214	5311	12692		
	Dep. Perf.	5189	5316	5934	6237	4227	4600	10910		
	% Not Perf.	19.48	10.75	6.77	10.68	18.93	13.39	14.04		
Kodiak western Alaska	Sched. Dep.								16581	17008
	Dep. Perf.								13746	14094
	% Not Perf.								17.10	17.13
Northern Consolidated	Sched. Dep.	31503	35858							
	Dep. Perf.	28675	31549							
	% Not Perf.	8.98	12.00							
Reeve Aleutian	Sched. Dep.	4645	4579	4754	4747	4581	4777	4408	4291	4255
	Dep. Perf.	3401	3397	3648	3750	3653	3878	3741	3657	3450
	% Not Perf.	26.78	25.81	23.26	21.00	20.26	18.82	15.13	14.78	18.92
Western Alaska	Sched. Dep.	5758	5586	5306	5187	5183	5944	1405		
	Dep. Perf.	5335	5302	4834	4824	4335	5065	1220		
	% Not Perf.	7.35	5.08	8.90	7.00	16.36	14.79	13.17		
Wien	Sched. Dep.	5702								
	Dep. Perf.	3847								
	% Not Perf.	32.53								
Wien Air Alaska	Sched. Dep.								43712	49413
	Dep. Perf.								38296	40698
	% Not Perf.								12.39	17.64
Wien Consolidated	Sched. Dep.			38204	38178	40890	41048	41030		
	Dep. Perf.			33823	34445	36441	35251	36864		
	% Not Perf.			11.47	9.78	10.88	14.12	10.15		
Total Alaska Carriers	Sched. Dep.	95253	89792	89329	89418	84700	88948	84447	87214	91878
	Dep. Perf.	79051	74922	75474	76736	71483	75410	72421	75170	78788
	% Not Perf.	17.01	16.56	15.51	14.18	15.60	15.22	14.24	13.81	14.25
Total U.S. Local Service Carriers	Sched. Dep.	1692983	1691385	1663953	1628896	1560175	1560910	1599921	1518132	1474183
	Dep. Perf.	1616090	1603553	1578171	1559571	1494110	1501045	1514229	1468347	1433543
	% Not Perf.	4.54	5.19	5.16	4.29	4.23	3.84	5.36	3.28	2.76

APPENDIX D

ALASKA AIRPORT DATA BASE

The development of an extensive computerized data base was one of the fundamental tasks of this study. Commensurate with the study objectives, it was necessary that the data base contain the information required to estimate the current demand for air travel, to characterize the existing navigation system, to determine the adequacy of the current as well as postulated improved systems, and to evaluate the adverse impact of various levels of navigation system efficiency. The postulated navigation improvements were analyzed on a site-by-site basis, frequently utilizing different navigation aids. Thus, it was necessary to develop a community-oriented data base with sufficient detail to facilitate distinguishing the characteristics, requirements and potential benefits of each.

Since the data requirements were highly diversified, many different sources of information were utilizied. To facilitate efficient analysis, most of the data was computerized and cross-correlated. These data include the following:

a. Airport facilities, operations and based aircraft data, from the FAA Airport Directory Tape.

b. Scheduled service information, in terms of aircraft types, available seats and numbers of flights per week, taken from the OAG.

c. Air taxi flight and revenue data, supplied by the Alaska Air Transportation Division.

d. Projected ceiling and visibility minimums and estimated landing probabilities on an airport-by-airport basis, for various potential approach aids.

Of the data sources utilized, the FAA Airport Directory Tape contained the most comprehensive listing of Alaskan communities (and airports). This tape was therefore used as the foundation

of the aggregate data base. The tape was processed in order to construct a listing of Alaskan communities. The airport-related data from the tape as well as data from the other primary data cources (listed above) were correlated to this basic community set.

The purpose of this Appendix is to present relevant listings and summaries of the Airport Directory Tape information. The other data sources are described and presented in subsequent Appendices; the OAG data is found in Appendix H, air taxi data in Appendix E and ceiling/visibility/ landing probability data in Appendices F and G.

In addition to establishing an all-encompassing community and airport list, the 1974 FAA Airport Directory Tape was the source of much of the airport characteristics data, including the following:

(1) airport ID and name;

(2) associated city;

(3) latitude, longitude, elevation;

(4) estimated annual operations for military, air taxi, local and itinerant GA, and peak month GA operations;

(5) number of based GA aircraft by type (single engine less than four place, four place and over, multi-engine, helicopter and seaplanes);

(6) runway composition, length and width;

(7) airport facilities (such as weather station, emergency medical facilities, snow removal, fire and rescue service, tower, unicom radar, FSS, etc.); and

(8) approach aids (ILS, lights, VASI).

To visually complement the airport directory tape, the Alaska region FAA provided the complete set of FAA Form 5010's for Alaska. These forms display the same airport information as the tape, but also include an area map. A sample form is presented in Figure D.1.

The data base resulting from the processing of the airport tape is presented in Tables D.1, D.2 and D.3. Table D.1 presents the basic community listing. Table D.2 presents, for each community, the associated airports and their physical characteristics. Table D.3 provides the operations and based aircraft data. While the scope of this phase of the Alaska NAVAID study did not permit the analysis of all of these communities, the complete listing is presented here for further use and reference purposes.

Tables D.4 and D.5 provide summaries of the characteristics and operations data. Tables D.6 through D.10 present histograms of the numbers of airports and annual operations. These histograms illustrate, with clarity, that Alaska has a large number of airports, many with extremely limited operations and, consequently, limited facilities. These facts are further illustrated in Figure D.2. This figure presents curves defining the number of airports which must be considered in order to encompass various percentages of total operations.

Figure D.2 can be used to establish that the selection of airports for detailed analysis cannot be based upon annual operations data. Approximately 80% of the total Alaska operations (excluding scheduled air carriers) take place among the 50 busiest airports. Many of these airports are sufficiently well instrumented as to be above the threshold established in this study for NAVAID improvements. Specifically, airports currently having VOR/DME capability or better were not addressed. As can be seen, all of the curves of Figure D.2 become virtually level after reaching the 50 airport level. No noticeable percentage of the additional traffic can be considered unless a great many airports are analyzed. In this study the actual airport selection for subsequent analysis was based upon user group and FAA recommendations as to where the most severe problems currently exist (Appendices A and B). Thus, while the analyzed airports do not include the majority of traffic, they are believed to include the most critical NAVAID problem areas (i.e., those problems that could be alleviated through the use of non-precision approach aids.

Figure D.1 FAA Form 5010 for Anchorage International

FORM APPROVED BUDGET BUREAU NO. 04-R0063

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

FAA AIRPORT MASTER RECORD

2 ADVISE: ANCHORAGE — FSS OF CHANGES PRECEDED BY A DOT •
3 FOREIGN EXCHANGE NO TOLL NO: DL OR AREA CODE 907 NO 279-8491
INTERPHONE BETWEEN FSS & AIRPORT: YES
4 FSS ON AIRPORT: NO
DATE OF PRINT: 01/18/75
1 SITE NUMBER: 50034A
5 REGION & AREA: AL
6 ARPT OPEN TO PUBLIC: Y
7 ARPT LOCATION ID: ANC

• 8 ASSOCIATED CITY	ANCHORAGE	• 9 STATE: AK	• 21 DSTC & DRCTN TO ARPT FM ASSOCD CITY: 05SW
• 10 OFFICIAL AIRPORT NAME	ANCHORAGE INTERNATIONAL		• 23 ARPT LAT: 61 10 11N
11 NEAREST CITY	ANCHORAGE	12 STATE: AK	27 HUB TYPE: M
13 COUNTY (Arpt located in)	ANCHORAGE	14 STATE: AK	30 RESERVED
• 15 OWNER: NAME	ST OF ALAS DIV OF AVN	• 16 ADDRESS: 4510 INTL ARPT RD ANCHORAGE, AK 99502	
• 18 MANAGER: NAME	RICHARD JENSEN	• 19 ADDRESS: BOX 6204 ANCHORAGE, AK 99502	

22 NAP/FEDERAL AGREEMENTS: NGST
• 24 LONG: 149 59 20W SRVD
• 25 ARP: Y
• 26 ELEVATION: 1245
28 MAGNETIC VARIATION: 25 12E
29 NORMAL MAX TEMP: 65
31 SMSA
32 AERONAUTICAL CHART: ANCHORAGE
17 OWNERSHIP CLASS: PU
• 20 PHONE: 907-279-3486

33 RUNWAY	34 PHYS LENGTH	35 WIDTH	36 SURFACE COMPOSITION	FAA GROSS WT STRENGTH (1000 lbs.) 37 SNGL WHL	38 DUAL WHL	39 DUAL TAND	40 % EFF GRADIENT	41 % WIND COVERAGE	42 MARKING TYPE-CONDITION	43 CL LGTS	RUNWAY LGTS 44 TYPE	45 INTST
05L/24R	10600	200	ASPH	100	142	225	.37	95.5	PIR-G	N	L819	H
06R/24L	10897	150	ASPH	100	200	400	.28	99.6	PIR-G	Y	L819	H
13/31	4742	150	ASPH	69	85	132	.65	99.6	NPI-G	N	L819	H

71 STANDARD TIME ZONE: •10
72 DAYLIGHT SAVING TIME: Y
73 RNWY LGT OPER SKED: • DUSK-DAWN
74 AIRPORT ATTENDANCE SCHEDULE

	MONTHS	DAYS	HOURS
• 75 ARPT BEACON LGT C-G	ALL	ALL	ALL
• 76 OPERATING SCHEDULE	DUSK-DAWN		

• 77 LANDING FEES FOR NON-COMMERCIAL USERS: Y
• 78 STATE LICENSING CLASSIFICATION
• 81 TAXIWAY LIGHTS: Y
• 82 WIND INDICATOR: Y
79 CUSTOMS AIRPORT OF ENTRY: N
83 SEGMENTED CIRCLE: N
80 CUSTOMS LANDING RIGHTS AIRPORT: Y
84 AC 150/5210-6 INDEX: B
85 FIRE & RESCUE EQPMT AS SUGGESTED BY AC 150/5210-6A: Y — IF NOT:
86 38600 GAL WATER & 2800 LBS CHEMICAL IMMEDIATELY AVBL
87 EMERG MED FACILITIES AS SUGGESTED BY AC150/5210-2: N
• 88 SNOW REMOVAL PLAN: Y
89 OPERATIONS AREA SWEPT: Y
90 WRECKAGE REMOVAL PLAN: Y
91 EMERG READINESS PLAN: Y
92 DESIGNATED CD SHELTER: N
• 93 HELIPAD ON AIRPORT: N
94 WEATHER STN ON ARPT: Y
95 ADMIN/TRML BLDG: Y
96 ARPT INFO DESK: N
97 CARGO HANDLING: Y
98 NO. T-TYPE HANGARS: 2
99 NO. CONVENTIONAL HNGRS: 5
100 PISTON: Y
101 TURBINE: Y
REPAIRS: MAJOR — MINOR
102 AIRFRAME: Y — 103: Y
104 POWER PLANT: Y — 105: Y
106 OXYGEN HI PRESSURE: Y
107 OXYGEN LO PRESSURE: Y
108 OXYGEN REPL BOTTLES HI PRESSURE: Y
109 OXYGEN REPL BOTTLES LO PRESSURE: Y
110 AUX POWER FOR OPRNL FAC: Y
111 ARPT AIRSPACE ANALYSIS DTRMN: NO OBJECTION
112 NUMBER OF FIXED BASE OPERATORS: 1
113 TYPES OF FIXED BASE OPERATORS: CHRTR/INSTRN/AIR TAXI/ SA
114 FUEL AVAILABLE FOR PUBLIC SALE

	TYPE	UNDERGROUND (100 GAL)	ABOVE GROUND (100 GAL)
	F-12	118	100
	F-15		
	F-18	202	550
	F-22		385
	F-30		
	F-34		49699
	F-40		
	F-45		4500

115 MILITARY JOINT USE AGREEMENT: N
116 MILITARY LANDING RIGHTS: Y
117 BASED MILITARY & TYPE OPERATIONS: AF-4G
118 TYPE & NO. MILITARY ACFT: 13-C123/1-C54

RUNWAY END	46 ALNMT TO DEG TR	LIGHTING 47 HI SPEED EXIT	48 APPROACH	49 TD ZONE	50 REIL	51 APCH SLOPE INDCR	52 RVR	53 RVV	APPROACH SURFACE DATA 54 CTLG OBSTRUCTION (Marked-Lighted)	55 DSTC FM THRESH	56 APCH RATIO	57 CLOSE IN OBSTN	58 RGT TFC	59 BLAST FENCE	60 TYPE ARRESTING DEVICE (For end)
06L		N	ALSF1	N	N	•V6-L	N	N	CLEAR		50+1	N	Y	N	
24R		N		N	N	•V4-L	N	N	CLEAR		50+1	N	N	N	
06R		Y	ALSF2	Y	N	NONE	2	N	CLEAR		50-1	N	Y	N	
24L		N		N	N	•V4-L	2	N	CLEAR		50-1	N	N	N	
13		N		N	N	•V4-L	N	N	TREES	5100	31-1	N	Y	N	
31		N		N	N	NONE	N	N	TREES HILL	2100	32-1	N	N	N	

RUNWAY END	61 THRESHOLD DISPLACED	LANDING LENGTH 62 DAY	63 NIGHT	TAKEOFF LENGTH 64 DAY	65 NIGHT	PART 121 EFCTV LENGTH 66 LANDING	67 TAKEOFF	68 LATITUDE	69 LONGITUDE	70 ELEVATION
06L										1215
24R										81S
06R										1245
24L										94S
13										92S
31										113S

• 137 RE E-051 RWY 06L <VASI RWY 06L UPPER TCH 85.18', LOWER TCH 52.4'; UPPER RRP 1500', LOWER RRP 1000'; UPPER ANGLE 3.25 DEG, LOWER ANGLE 3 DEG. RE E-051 RWY 13 <VASI RWY 13 TCH 47', RRP 900'. RE E-051 RWY 24L <VASI RWY 24L TCH 52.4', RRP 948', GLIDE ANGLE 3 DEG. RE E-051 RWY 24R <VASI RWY 24R TCH 52.4', RRP 1190', GLIDE ANGLE 3 DEG. RE E-134 CERT FAR 139 03/21/73 CFR INDEX E. 01. DIPS IN E END RWY 06L-24R. 02. ROTG BCN LCTD LAT 51-09-41 LONG 149-58-08. 03. ROADWAY FM RAMP ARND S & W SHORE OF LAKE HOOD TO INTERIOR HNGR IS JOINT USE VEHICLES & ACFT. TAXI AT PILOTS DISCRETION. TWR WILL NOT CTL THIS AREA. 04. MTNJS BACKGROUND RESTRS CONTROLLER VSBY OF APCH TO RWY 24L. 05. MIGRATORY BIRDS 1 1/2 MI E OF THLD RWY 24R APR-OCT. 06. MIL ACFT MAY OBTAIN RWY CONDITION INFO FM AIR GUARD OPERATIONS MON-SAT 1730 0200Z/DT 1630 0100Z.

RE E052 1=APPROACH, 2=APPROACH & ROLL OUT, 3=APPROACH, MID-POINT & ROLL OUT

119 ESTD TOTAL ANNUAL MILITARY OPERATIONS: 4200
120 ESTIMATED ANNUAL AIR TAXI OPERATIONS: 10000

ESTD GENERAL AVIATION OPERATIONS

121 ANNUAL LOCAL	122 ANNUAL ITNRNT	123 TOT PEAK MO.
70600	70100	15400

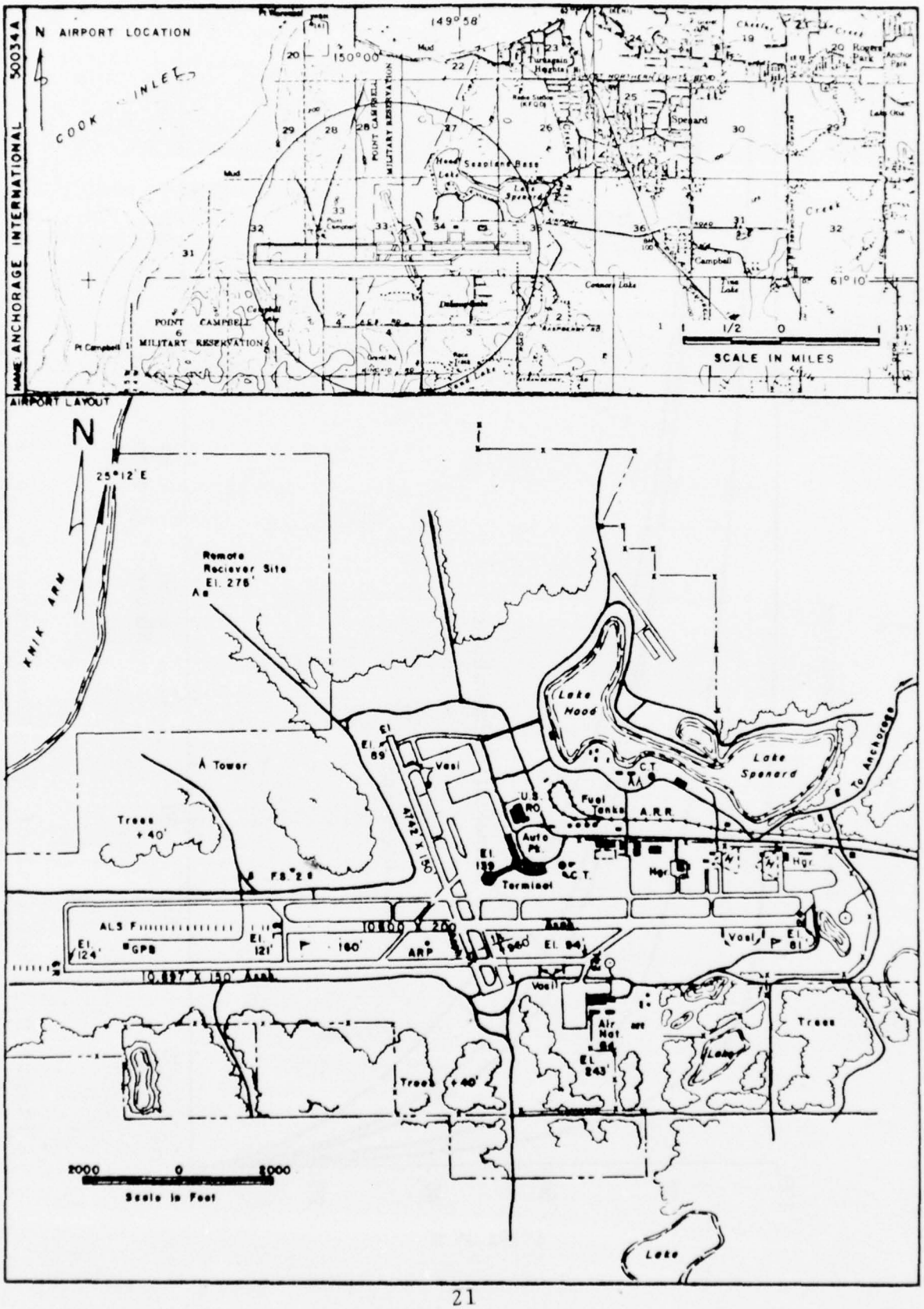
BASED GEN AVIATION ACFT		SEAPLANE BASE DATA
124 SINGLE ENG 4 PLACE & OVER	158	• 129 SHELTERED
125 SINGLE ENG UNDER 4 PLACE	123	• 130 MOORING BUOYS
126 MULTI ENG	029	• 131 DOCKS
127 HELICOPTER	000	• 132 RAMP
128 SEAPLANE	000	• 133 BEACHING GEAR
TOTAL	310	

134 AIRPORT SERVED BY SCHEDULED AIR CARRIER: • Y
135 LATEST INSP OR INFO REQ: 11/21/74 — 136 INSP: Y

FAA Form 5010-1 (7-70)

"•" = SEE REMARKS IN ITEM #137. EXCEPT IN #22 & #27 "Y" = YES, "N" = NO. ABBREVIATIONS ARE LISTED IN THE CONTRACTIONS HANDBOOK, ORDER 7340.1B

Figure D.1 (Continued)



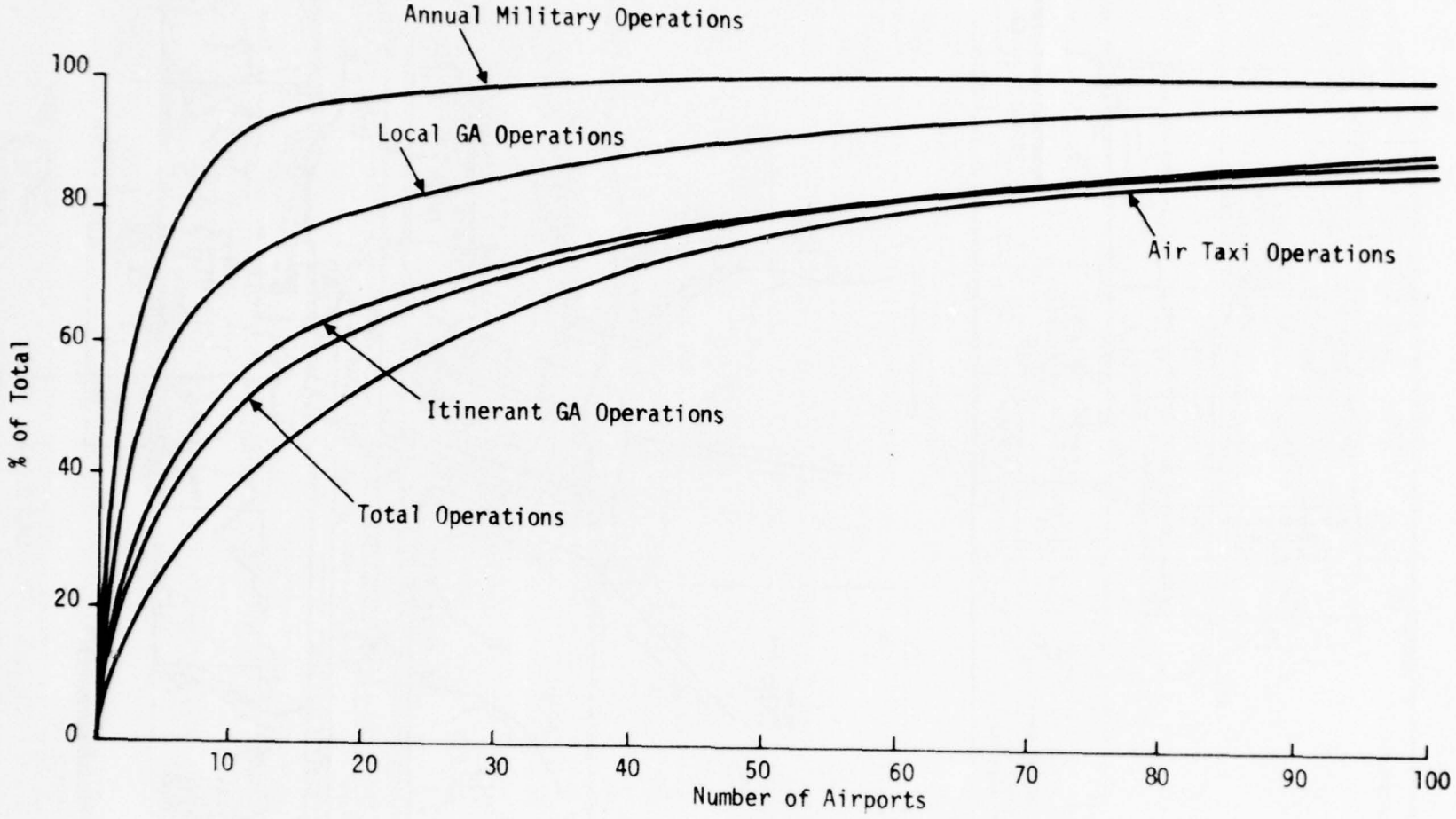


Figure D.2 Per Cent of Operations Accounted For By The Busiest Airports

Table D.1
Community Listing Based Upon the FAA Airport Directory Tape

IDX	COMMUNITY	IDX	COMMUNITY	IDX	COMMUNITY	IDX	COMMUNITY
1.	ADAK ISLAND	51.	BLUFF	101.	COASTAL	151.	ENTRANCE ISLAND
2.	AFOGNAK LAKE	52.	BORNITE	102.	COFFMAN COVE	152.	EUREKA
3.	AGGIE CREEK	53.	BOSWELL BAY	103.	COLD BAY	153.	EUREKA CREEK
4.	AKHIOK	54.	BOUNDARY	104.	COLDFOOT	154.	EVA CREEK
5.	AKIACHAK	55.	BUCK CREEK	105.	COLLEGE	155.	EXCURSION INLET
6.	AKIAK	56.	BUCKLAND	106.	COLORADO CREEK	156.	FAIRBANKS
7.	AKUTAN	57.	CACHE CREEK	107.	COLORADO STATION	157.	FAIRBANKS /FT WAINWRIGHT/
8.	ALAKANUK	58.	CAMDEN BAY	108.	COOPER LANDING	158.	FALSE ISLAND
9.	ALEKNAGIK	59.	CAMP CREEK	109.	COPPER CENTER	159.	FALSE PASS
10.	ALLAKAKET	60.	CANDLE	110.	CORDOVA	160.	FAREWELL
11.	AMBLER	61.	CANTWELL	111.	COUNCIL	161.	FAREWELL LAKE
12.	AMCHITKA	62.	CANYON CREEK	112.	CRAB BAY	162.	FEATHER RIVER
13.	AMERICAN CREEK	63.	CAPE DECISION	113.	CRAFTON ISLAND	163.	FIVE FINGER
14.	AMOOK BAY	64.	CAPE KRUSENSTERN	114.	CRAIG	164.	FIVE MILE
15.	ANAKTUVUK PASS	65.	CAPE LISBURNE	115.	CREVICE CREEK	165.	FLAT
16.	ANCHORAGE	66.	CAPE NEWENHAM	116.	CROOKED CREEK	166.	FLAXMAN ISLAND
17.	ANCHORAGE/FT RICHARDSON	67.	CAPE POLE	117.	CROSSWIND LAKE	167.	FOLGER
18.	ANDREAFSKY /ST MARYS/	68.	CAPE ROMANZOF	118.	CURRY	168.	FORT YUKON
19.	ANDON	69.	CAPE SARICHEF	119.	DAHL	169.	FRANCENS
20.	ANIAK	70.	CAPE SIMPSON	120.	DAHL CREEK	170.	FRANKLIN BLUFFS
21.	ANNETTE	71.	CAPE SPENCER	121.	DAVID RIVER	171.	FUNTER BAY
22.	ANVIK	72.	CAPE YAKATAGA	122.	DEADHORSE	172.	GAMBNA
23.	ARCTIC VILLAGE	73.	CATHEDRAL RAPIDS	123.	DECOURCY MOUNTAIN	173.	GALBRAITH LAKE
24.	ATKASUK	74.	CATHEDRAL RIVER	124.	DEERING	174.	GALENA
25.	ATTU	75.	CENTRAL	125.	DELTA JUNCTION/FT GREELY	175.	GAMBELL
26.	BARANOF	76.	CHAIX HILLS	126.	DENALI	176.	GANES CREEK
27.	BARROW	77.	CHALKYITSIK	127.	DIETRICH	177.	GIRDWOOD
28.	BARTER ISLAND	78.	CHANDALAR LAKE	128.	DILLINGHAM	178.	GLACIER CREEK
29.	BARTLETT COVE	79.	CHATHAM	129.	DOT LAKE LODGE	179.	GLACIER PARK
30.	BASIN CREEK	80.	CHEFORNAK	130.	DRIFTWOOD BAY	180.	GLENNALLEN
31.	BEAR CREEK	81.	CHELATNA LAKE	131.	DUNCAN CANAL	181.	GOLD BENCH
32.	BEAR LAKE	82.	CHENA HOT SPRINGS	132.	DUTCH HARBOR	182.	GOLD CREEK
33.	CAPE BEAUFORT	83.	CHERNOFSKI HARBOR	133.	EAGLE	183.	GOLDEN HORN LODGE
34.	BEAVER	84.	CHEVAK	134.	EAGLE CREEK	184.	GOLD KING CREEK
35.	BEDDOCK CREEK	85.	CHICKEN	135.	EAGLE RIVER	185.	GOLOVIN
36.	BELKOFSKI	86.	CHIEF POINT	136.	EAK MOUNTAIN	186.	GOODNEWS
37.	BELL ISLAND	87.	CHIGNIK	137.	EAST FORK	187.	GOOSE BAY
38.	BELUGA	88.	CHIGNIK FLATS	138.	EDNA BAY	188.	GRANITE MOUNTAIN
39.	BEN CREEK	89.	CHIGNIK LAKE	139.	EEK	189.	GRAYLING
40.	BETHEL	90.	CHISANA	140.	EGEGIK	190.	GULKANA
41.	BETTLES	91.	CHISTOCHINA	141.	EKLUTNA LAKE	191.	GUNSIGHT MOUNTAIN LODGE
42.	BETTLES RIVER	92.	CHITINA	142.	EKUK	192.	GUSTAVUS
43.	BIG HORN	93.	CHOKOSNA	143.	EKWOK	193.	HAINES
44.	BIG MURRAH CREEK	94.	CHUGIAK	144.	ELDRED ROCK	194.	HALIBUT COVE
45.	BIG INDIAN CREEK	95.	CIRCLE	145.	ELFIN COVE	195.	HAMILTON
46.	BIG LAKE	96.	CIRCLE HOT SPRINGS	146.	ELIM	196.	HANNUM CREEK
47.	BIG MOUNTAIN	97.	CLARKS POINT	147.	ELLAMAR	197.	HAPPY VALLEY
48.	BIRCHWOOD	98.	CLEAR	148.	EMMA CREEK	198.	HARRIS DOME
49.	BLACK DOME	99.	CLEARWATER	149.	EMMONAK	199.	HAWK INLET
50.	BLACK RAPIDS	100.	COAL CREEK	150.	ENGLISH BAY	200.	HAYCOCK

Table D.1

(Continued)

IDX	COMMUNITY
201.	HEALY
202.	HERENDEEN BAY
203.	HINCHINBROOK
204.	HOG RIVER
205.	HOLIKACHUK
206.	HOLLIS
207.	HOLY CROSS
208.	HOMER
209.	HOONAH
210.	HOOPER BAY
211.	HOPE
212.	HORSEFELD
213.	HUGHES
214.	HULL
215.	HUMPREY POINT
216.	HUSLIA
217.	HYDABURG
218.	HYDER
219.	ICY BAY
220.	ICY CAPE
221.	IGIUGIG
222.	ILIAMNA
223.	INDEPENDENCE CREEK
224.	INISKIN BAY
225.	ITKILLIK RIVER
226.	IVANOF BAY
227.	JAKOLOF BAY
228.	JENSENS
229.	JUNEAU
230.	KADLER
231.	KAD RIVER
232.	KAHTLTNA
233.	KAKE
234.	KAKHONAK
235.	KAKO
236.	KALAKAKET CREEK
237.	KALSKAG
238.	KALTAG
239.	KANAKANAK
240.	KANTISHNA
241.	KAPLUK
242.	KARLUK LAKE
243.	KASAAN
244.	KASTLOF
245.	KASTTSNA BAY
246.	KATALLA
247.	KATMAI NATIONAL PARK
248.	KAVYK RIVER
249.	KENAI
250.	KETCHIKAN
251.	KIANA
252.	KING COVE
253.	KING SALMON
254.	KIPNUK
255.	KITOI BAY
256.	KIVALINA
257.	KIWALIK
258.	KLAWAK
259.	KLAWOCK
260.	KNIFE BLADE RIDGE
261.	KOBUK
262.	KODIAK
263.	KUGGIUNG
264.	KOGHU RIVER
265.	KOTLIK
266.	KOTZEBUE
267.	KOYUK
268.	KOYUKUK
269.	KULIK LAKE
270.	KULIK LAKE LODGE
271.	KUPARUK
272.	KVICHAK
273.	KWETHLUK
274.	KWIGILLINGOK
275.	LAKE LOUISE
276.	LAKE NERKA
277.	LARSEN BAY
278.	LAWING
279.	LAZY BAY
280.	LEVELOCK
281.	LIGNITE
282.	LIVENGOOD
283.	LONELY
284.	LONG CREEK
285.	LONG LAKE
286.	LORING
287.	LOST RIVER
288.	MACLAREN GLACIER
289.	MCCARTHY
290.	MC CORD /SITKALIDAK ISLAND
291.	MCGRATH
292.	MCKINLEY NATIONAL PARK
293.	MCKINLEY PARK
294.	MANOMEN LAKE
295.	MANLEY HOT SPRINGS
296.	MANOKOTAK
297.	MARSHALL
298.	MARVEL CREEK
299.	MASCOT GULCH
300.	MAY CREEK
301.	MEDFRA
302.	MEKORYUK
303.	MENTASTA LODGE
304.	METLAKATLA
305.	MEYERS CHUCK
306.	MIDDLETON ISLAND
307.	MILE 46 RICHARDSON HWY
308.	MINCHUMINA
309.	MINERAL POINT
310.	MINTO
311.	MOORE CREEK
312.	MOOSE PASS
313.	MOSER BAY
314.	MOSES POINT
315.	MOUNTAIN VILLAGE
316.	MYRTLE CREEK
317.	NABESNA
318.	NAKEEN
319.	NAKNEK
320.	NANCY LAKE
321.	NAPAKIAK
322.	NAPAISKAK
323.	NENANA
324.	NEW KOLIGANEK
325.	NEW STUYAHOK
326.	NEWTOK
327.	NIGHTMUTE
328.	NIKISHKA
329.	NIKOLAI
330.	NIKOLSKI
331.	NINILCHIK
332.	NOATAK
333.	NOME
334.	NONDALTON
335.	NOORVIK
336.	NORTHEAST CAPE
337.	NORTH KUPARUK
338.	NORTH POLE
339.	NORTHWAY
340.	NORTH WHALE PASS
341.	NUGGET BENCH
342.	NULATO
343.	NUNAPITCHUK
344.	NYAC
345.	OGOTORUK CREEK
346.	OLD HARBOR
347.	OLD MAN
348.	OLGA BAY
349.	OLIKTOK POINT
350.	OPHIR
351.	OUZINKIE
352.	PAIMIUT
353.	PAINTER CREEK
354.	PALMER
355.	PARKS
356.	PASS CREEK
357.	PAULOFF HARBOR /SANAK IS/
358.	PAXSON
359.	PEAK ISLAND
360.	PEARD BAY
361.	PEDRO BAY
362.	PELICAN
363.	PERRY ISLAND
364.	PERRYVILLE
365.	PETERSBURG
366.	PETERSVILLE
367.	PETTYJOHN
368.	PILOT POINT
369.	PILOT STATION
370.	PINGO
371.	PLATINUM
372.	POINT BAKER
373.	POINT BARROW
374.	POINT HOPE
375.	POINT LAY
376.	POINT MACKENZIE
377.	POINT MCINTYRE
378.	POINT NOWELL
379.	POINT POSSESSION
380.	POINT RETREAT
381.	PORCUPINE CREEK
382.	PORTAGE
383.	PORTAGE CREEK
384.	PORT ALEXANDER
385.	PORT ALICE
386.	PORT ASHTON
387.	PORT BAILEY
388.	PORT CLARENCE
389.	PORT GRAHAM
390.	PORT HEIDEN
391.	PORT LIONS
392.	PORT MOLLER
393.	PORT NELLIE JUAN
394.	PORT PROTECTION
395.	PORT WALTER
396.	PORT WILLIAMS
397.	PRINCE CREEK
398.	PROSPECT CREEK
399.	PRUDHOE BAY
400.	PUNKEYVILLE

Table D.1
(Continued)

IDX	COMMUNITY
401.	QUARTZ CREEK
402.	QUARTZ CREEK
403.	QUEENS
404.	QUINHAGAK
405.	RAINY PASS LODGE
406.	RAINY PASS
407.	RAMPART
408.	RED DEVIL
409.	RIVERSIDE LODGE
410.	RUBY
411.	RUSSIAN MISSION
412.	SAGINAW BAY
413.	SAGWON
414.	ST GEORGE ISLAND
415.	ST MICHAEL
416.	ST PAUL ISLAND
417.	SALMON LAKE
418.	SAND POINT
419.	SANDY RIVER
420.	SAN JUAN
421.	SAPRUK /NELSON/ RIVER
422.	SAVONGA
423.	SCAMON BAY
424.	SELAWIK
425.	SELDOVIA
426.	SERPENTINE HOT SPRINGS
427.	SEWARD
428.	SHAGELUK
429.	SHAKTOOLIK
430.	SHEEP MOUNTAIN
431.	SHELDON POINT
432.	SHEMYA
433.	SHESHALIK
434.	SHISHMAREF
435.	SHUNGNAK
436.	SITKA
437.	SITKINAK ISLAND
438.	SKAGWAY
439.	SKILAK GUARD STATION
440.	SKWENTNA
441.	SLANA
442.	SLEETMUTE
443.	SNETTISHAM
444.	SNOWSHOE LAKE
445.	SOLDOTNA
446.	SOLOMON
447.	SOUTH NAKNEK
448.	SPARREVOHN
449.	SPRUCE POINT
450.	STUAN HARBOR
451.	SQUIRREL RIVER
452.	STAMPEDE
453.	STEAMBOAT BAY
454.	STEBBINS
455.	STERLING
456.	STEVENS VILLAGE
457.	STONY RIVER
458.	STRELNA
459.	SULLIVAN CITY
460.	SUMMIT
461.	SUMMIT LAKE
462.	SUSITNA STATION
463.	SUSITNA LODGE
464.	SUTTON
465.	SWANSON RIVER
466.	TAHNETA PASS LODGE
467.	TAKOTNA
468.	TAKU HARBOR
469.	TAKU LODGE
470.	TALKEETNA
471.	TANACROSS
472.	TANALIAN POINT
473.	TANANA
474.	TANUNAK
475.	TATITLEK
476.	TATITNA
477.	TAYLOR
478.	TAYLOR CREEK
479.	TAZLINA
480.	TERENKOF BAY
481.	TELIDA
482.	TELLER
483.	TELLER MISSION
484.	TENAKEE SPRINGS
485.	TERROR BAY
486.	TETLIN
487.	THOMPSON PASS
488.	THORNE RIVER
489.	TIKCHIK
490.	TIMBER CREEK
491.	TIN CITY
492.	TOGIAK VILLAGE
493.	TOK
494.	TOKEEN
495.	TOKSOOK BAY
496.	TOLSONA LAKE
497.	TONSINA
498.	TOOLIK
499.	TOTATLANIKA RIVER
500.	TRADING BAY
501.	TRAMWAY BAR
502.	TREE POINT
503.	TRINITY
504.	TULUKSAK
505.	TUNTATULIAG
506.	TUNTUTULIAG
507.	TUXEKAN ISLAND
508.	TWELVE MILE ARM
509.	TWIN MILLS
510.	TYONEK
511.	UGASHIK
512.	UMIAT
513.	UMNAK
514.	UNALAKLEET
515.	UTICA CREEK
516.	UTOPIA CREEK
517.	UYAK
518.	VALDEZ
519.	VENETIE
520.	VICTORY BIBLE CAMP
521.	WAINWRIGHT
522.	WALES
523.	WASILLA
524.	WATERFALL
525.	WATTAMUSE
526.	WEST KAVIK
527.	WEST KUPARUK
528.	WEST POINT
529.	WHITE MOUNTAIN
530.	WHITTIER
531.	WIDE BAY
532.	WILLOW LAKE
533.	WILLOW
534.	WISEMAN
535.	WOODCHOPPER
536.	WOOD RIVER LODGE
537.	WRANGELL
538.	YAKATAGA
539.	YAKUTAT
540.	YANKEE CREEK
541.	YES BAY
542.	ZACHAR BAY

Table D.2

Airport Physical Characteristics

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 1

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

CONN. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	SEMI-D	WEIGHT	UNICOM	MIDIRL	FOR SERV	SNOW REM	WIND IND	INSTR	RELIS	IL SS	VASI	RNWY LTS	TDZ LTS	RVR
1	ADAK NS /MITCHELL FLD/	ADK	51.88	176.65	00019	ASPH	7794	200				*	*			*	*	*	*				*	*		*
2	AEROMAR LAKE		58.10	152.88	00064	WATER	5000	1000	*																	
3	AGGIE CREEK		64.89	163.22	00045	GRAVEL	1200	30	*										*							
4	AKHIOK	AKK	56.94	154.17	00000	WATER	5000	400	*																	
5	AKIACHAK		60.91	161.42	00025	DIRT	1600	90	*									*	*							
5	AKIACHAK	KKI	60.91	161.43	18E	WATER	0	0	*																	
6	AKIAK	AKI	60.91	161.22	00022	TURF	2200	80	*										*							
7	AKUTAN	KQA	54.13	165.78	00000	WATER	10000	1000	*																	
8	ALAKANUK	AUK	62.69	164.61	00008	TURF	1500	60	*			*							*							
8	ALAKANUK	AUK	62.68	164.66	00010	DIRT	2500	100	*									*	*							
9	ALEKNAGIK	WKK	59.27	158.62	00075	GRAVEL	1800	50	*										*							
9	THIRD		59.26	158.56	00225	GRAVEL	900	75	*																	
9	ALEKNAGIK		59.27	158.62	00007	WATER	10000	1000	*										*							
9	ALEKNAGIK MISSION SCHOOL		59.28	158.59	150F	GRAVEL	1150	35	*										*							
10	ALIAKMIET	AET	66.56	152.66	00350	GRAVEL	3000	100	*										*							
11	ANDREW RIVER	AHL	67.09	157.86	00135	DIRT	1700	100	*									*	*							
12	ANCHITKA	AHT	51.38	180.73	00228	ASPH	9100	150		*		*	*			*	*	*	*	*	*			*		
13	AMERICAN CREEK		65.10	151.17	00500	DIRT	1300	30	*																	
14	AMOUK BAY		57.45	153.81	00000	WATER	8000	700																		
15	ANAKTUVUK PASS	AKP	68.14	151.74	02100	GRAVEL	4430	100	*										*							
16	CAMPBELL AIRSTRIP	CSP	61.16	149.78	00286	GRAVEL	5000	150					*			*	*		*							
16	PROVIDENCE HOSPITAL		61.19	149.82	00150	ASPH	85	85	*							*	*		*				*			
16	CAMPBELL HLM		61.16	149.79	00235	TRTD	100	90								*	*	*	*							
16	ANCHORAGE INTL	ANC	61.17	149.99	00124	ASPH	10400	200	*	*		*	*	*			*	*	*	*		*	*	*	*	*
16	ANCHORAGE INTL H		61.17	149.98	00090	GRAVEL	100	100	*				*				*	*	*					*		
16	MERRILL FIELD	MRI	61.22	149.84	00136	ASPH	4000	100	*	*	*		*	*	*	*	*	*	*	*			*	*		
16	MERRILL FIELD H		61.22	149.84	00136	GRAVEL	100	100	*		*		*			*	*	*	*							
16	CAMPBELL LAKE		61.13	149.95	00020	WATER	3500	400											*							
16	ELMENDORF AFB	EDF	61.25	149.79	00212	CONC	10000	200					*			*	*	*	*		*			*	*	*
16	ELMENDORF AFB/5000 HOSPITAL		61.24	149.75	00228	ASPH	50	50								*	*	*	*					*		
16	FIRE ISLAND	SFI	61.17	150.16	00055	GRAVEL	850	90										*	*							
16	RABBIT CREEK		61.08	149.82	00035	GRAVEL	1370	30											*							
16	FIRE ISLAND		61.12	150.22	00272	CONC	100	100									*	*	*							
16	SKY HARBOR		61.12	149.82	00340	GRAVEL	1800	70	*										*							
16	LAKE HOOD STRIP		61.19	149.95	00073	GRAVEL	2200	100	*						*				*							
16	SPENARD AIRSTRIP	LHD	61.18	149.97	00084	TURF-G	2100	100	*								*	*	*							
16	LAKE HOOD	LHD	61.18	149.97	00071	WATER	1300	200	*	*								*		*						
17	BRYANT AAF	FRN	61.26	149.65	00378	ASPH	1600	95					*			*	*	*	*					*		
17	BRYANT AAF H		61.26	149.65	00382	ASPH	100	100					*			*	*	*	*					*		
18	ST MARYS	KSM	62.06	163.30	00302	GRAVEL	1900	100	*			*							*	*							

Table D.2

(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 2

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MEDICAL	FSS+RSRV	SNOW REM	WIND IND	RBCN	ILS	VASI	PAVT LTS	TDZL LTS	RVR
19	ANGOON	AGN	57.50	134.58	00000	WATER	10000	900	*															
20	ANIAK	ANT	61.58	159.53	88S	GRAVEL	6000	150	*			*	*				*	*	*				*	
20	ANIAK		61.58	159.52	00070	WATER	3000	400	*									*						
21	ANNETTE ISLAND	ANN	55.04	131.57	00119	GRAVEL	5709	150	*		*		*		*	*	*	*	*				*	
21	TAMGAS HARBOR		55.07	131.56	00000	WATER	10560	1500	*															
22	ANVIK	ANV	62.65	160.19	325E	DIRT	2000	90	*									*						
22	ANVIK	ANV	62.64	160.20	00052	WATER	2000	500	*															
23	NIK. ARCTIC VILLAGE	AHC	68.12	145.57	2040E	GRAVEL	4450	125	*								*	*						
23	ARCTIC VILLAGE		68.14	145.52	02180	TURF	1400	60	*			*						*						
24	MEADE RIVER		70.47	157.39	00065	TURF	1250	20	*															
25	CASCO COVE CGS	ATU	52.43	186.42	00040	ASPH	6000	150				*					*	*		*				
26	WARM SPRING BAY	BNF	57.09	134.43	00000	WATER	10000	1000	*					*										
27	WILEY POST-WILL ROGERS MEM	BRW	71.20	156.76	00044	ASPH	6500	150	*		*	*					*	*	*		*	*	*	
27	WILEY POST-WILL ROGERS MEM H		71.20	156.77	00040	ASPH	50	50	*		*		*			*	*	*					*	
28	BARTER ISLAND DEW STATION	BTI	70.13	143.58	00005	GRAVEL	4817	150				*				*	*	*		*			*	
29	BARTLETT COVE	BGV	58.46	135.44	00000	WATER	10000	4000	*									*						
30	BASIN CREEK		64.58	165.30	00140	GRAVEL	1300	60	*															
31	BEAR CREEK 1	BCC	65.54	161.06	00575	GRAVEL	1400	65																
31	BEAR CREEK 3		63.57	156.14	00740	GRVL-D	1400	60	*									*						
31	BEAR CREEK 4		57.62	155.87	00375	GRAVEL	1200	85	*															
32	JOHNSONS LANDING		59.04	160.26	00130	GRAVEL	1300	75	*															
33	CAPE SABINE		69.02	163.45	00050	GRAVEL	3000	75	*									*					*	
34	BEAVER	WBQ	66.36	147.40	00365	GRAVEL	3650	40	*									*						
35	BEDROCK CREEK		63.04	156.60	01350	GRVL-D	1450	70	*															
36	BELARESKI		55.10	162.08	00000	WATER	5000	4000	*															
37	BELL ISLAND HOT SPRINGS	KHF	55.93	131.57	00000	WATER	10400	2600	*															
38	BELUGA	BLG	61.17	151.04	00130	GRAVEL	3500	110						*			*	*					*	
39	BEN CREEK		65.28	145.08	01750	GRAVEL	1500	80	*															
40	BETTLES LAKE		66.80	151.72	00017	WATER	2400	1500	*															
40	BETHEL		60.78	161.74	00015	WATER	3000	500	*									*						
40	ARTHUR DALL LAKE		60.79	161.77	00022	WATER	1000	300	*															
40	BETHEL H		60.79	161.77	00040	DIRT	700	100	*						*									
40	BETHEL	BET	60.78	161.83	00131	ASPH	6399	150	*		*	*	*				*	*	*		*	*	*	
41	BETTLES	BTT	66.92	151.53	00643	GRAVEL	5199	160	*			*	*					*	*				*	
41	EVANSVILLE		66.91	151.52	00640	WATER	2000	1200	*															
42	BETTLES RIVER		67.57	149.35	02300	GRVL-D	1300	75	*															
43	BIG [illegible]		64.73	147.32	00400	TURF	1200	70										*						
44	BIG [illegible]		64.64	164.25	00340	GRAVEL	1500	80																
45	BIG [illegible]		60.88	149.95	00150	GRAVEL	1200	50																
46	BIG LAKE STRIP NR 2	BGQ	61.58	149.81	00150	GRAVEL	2760	75	*									*	*					

Table D.2

(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 3

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

CONN. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MIDIRC	FSERV	SNOWIND	WINDIR	INSTR	RELIS	ILS	IVASI	RNWYLTS	TDZ LTS	RVR
47	BIG MOUNTAIN AFS	BMX	59.34	155.26	00663	GRAVEL	4200	145				*			*	*	*	*					*		
48	BIRCHWOOD	Z15	61.42	149.51	00075	GRAVEL	4035	120	*								*	*					*		
49	BLACK DUNE		65.63	164.72	01180	GRAVEL	1375	60	*																
50	BLACK RAPIDS	SHK	63.54	145.86	02125	GRAVEL	2250	80	*																
51	BLUFF		64.59	163.78	00317	GRAVEL	1150	80																	
52	BURNTTE		67.08	156.95	00960	GRAVEL	2300	60										*							
52	BURNTTE/UPPER/	BLU	67.10	156.93	01000	GRVL-D	1500	60										*							
53	BUSHELL BAY AFS		60.42	146.14	00230	GRAVEL	2600	100				*			*	*		*							
54	BUTTERBAY	BYA	64.08	141.11	02940	GRVL-D	1400	90	*									*							
55	BUCK CREEK		65.64	167.48	00560	GRAVEL	1220	70																	
56	BUCKLAND	BKC	65.98	161.13	00030	TURF-G	1820	50	*								*								
57	CACHE CREEK FIELD		62.48	151.00	01470	GRVL-D	1100	20	*																
58	CAMDEN BAY		69.98	144.83	00008	GRAVEL	2000	40																	
59	CAMP MINE		62.41	151.51	01680	GRVL-D	2000	120	*									*					*		
60	CANDLE 2	CDL	65.91	161.92	00015	GRAVEL	2625	60	*									*							
61	CANTWELL		63.39	148.95	02190	GRVL-D	2080	50	*									*							
61	CHAGVAN		63.37	148.84	02250	GRAVEL	2400	30	*									*					*		
61	CHILDEN NORTH AIRFIELD		63.37	148.85	02250	GRAVEL	2095	40	*								*	*							
62	CANYON CREEK		60.20	160.00	01400	GRAVEL	1200	60																	
63	CAPE DECISION C. G.	CDE	54.40	134.13	00038	WOOD		70	70						*	*	*	*							
64	CAPE ARGENSTERN		67.28	163.71	00500	GRAVEL	1350	90																	
65	CAPE LISBURNE AFS	LUR	68.88	166.11	00012	GRAVEL	5009	150				*					*	*					*		
66	CAPE NEARENHAM AFS	EHM	58.65	162.06	00581	GRAVEL	4100	190				*	*		*	*	*	*					*		
67	CAPE POLE		55.97	133.80	00000	WATER	10000	500	*																
68	CAPE ROMANZOF AFS	CZF	61.78	166.04	00457	GRAVEL	3990	150				*	*			*	*	*					*		
69	CAPE SARICHEF AFS	CSH	54.58	164.91	00292	GRAVEL	3500	120				*						*					*		
70	CAPE STARPSON		71.08	156.75	00011	GRAVEL	2500	80																	
71	CAPE SPENCER C.G.	CSP	58.20	136.64	00084	WOOD		50	50				*		*	*	*	*							
72	CAPE YAKATAGA		60.07	142.83	00012	GRAVEL		50	50	*															
73	CATHEDRAL RAPIDS		63.39	143.75	01550	GRAVEL	1055	35										*					*		
74	CATHEDRAL RIVER		55.78	162.13	30E	GRAVEL	4000	80	*									*					*		
75	CENTRAL	CEM	65.57	144.78	00932	TURF-G	3200	75	*									*							
76	CHAIX HILLS		60.02	141.19	00352	GRAVEL	4200	150	*																
77	CHALKYITSIK	CIK	66.65	143.73	00540	GRAVEL	2500	100	*								*	*							
78	CHANDALAR LAKE	WCR	67.50	148.49	1920E	GRAVEL	4500	100	*								*	*							
78	CHANDALAR LAKE		67.49	148.51	01800	WATER	4000	1000	*									*							
79	CHATHAM	CYM	57.52	134.94	00000	WATER	10000	1000	*																
80	CHEFORNAK	CYF	60.16	164.27	00005	WATER	4000	500	*																
80	CHEFORNAK		60.15	164.28	40E	DIRT	2600	100	*									*							
81	CHELATNA LAKE LODGE	Z24	62.43	151.42	01435	GRVL-D	1650	50	*									*							

Table D.2
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 4

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SEGMENTED	WEATHER	UNICOM	MEDICAL	FSS+RSRV	SNOW	WIND	INSTR	RELIL	IS	VASI	RWY LTS	TDZ LTS	RVR
82	CHENA HOT SPRINGS	CEX	65.05	146.05	01195	TURF-G	2700	100	*																
83	CHEVAK	KCN	53.40	167.55	00000	WATER	5000	2000	*														*		
84	CHEVAK	VAK	61.53	165.59	00078	DIRT	830	70	*			*						*							
85	CHEVAK		61.53	165.58	00000	WATER	2000	400	*									*							
86	CHEVAK		61.53	165.58	00075	DIRT	2300	70	*								*	*							
87	CHICKEN	CKX	64.07	141.95	01640	GRVL-D	2600	50	*									*							
88	CHIEF COVE		57.71	153.91	00000	WATER	3000	1000	*																
89	CHIGNIK BAY		56.30	158.40	00000	WATER	10000	4000	*														*		
90	CHIGNIK FISHERIES	KCG	56.32	158.59	25E	GRAVEL	1260	30	*														*		
91	CHIGNIK		56.31	158.37	50E	DIRT	2200	50	*																
92	CHIGNIK LAGOON	KCL	56.31	158.53	50E	GRAVEL	1800	80	*									*					*		
93	CHIGNIK LAKE		56.26	158.77	50E	GRAVEL	2600	100	*									*							
94	CHISANA	CZN	62.07	142.05	03318	TURF-G	4200	75	*									*							
95	CHISTOCHINA	CZO	62.56	144.47	01450	GRAVEL	2200	40	*								*	*					*		
96	CHITINA		62.59	144.46	01900	TURF-G	1330	30	*									*							
97	CHITINA		62.61	144.42	01930	DIRT	2000	60	*								*	*							
98	CHITINA	CXC	61.58	144.42	00556	GRAVEL	3550	150	*								*	*							
99	CHITINA		61.54	144.45	00750	WATER	2500	600	*																
100	CHOKOSNA		61.46	143.76	01500	GRVL-D	970	100																	
101	CHULTIP		61.42	149.44	00375	TURF	1300	80	*									*							
102	CHENA		61.41	149.46	00230	TURF	1300	50																	
103	CIRCLE CITY	CRC	65.48	144.07	00598	TURF-G	2900	100	*								*	*							
104	CIRCLE HOT SPRINGS	CHP	65.49	144.61	00956	GRAVEL	4050	150	*								*	*					*		
105	CLARKS POINT	CLP	58.84	158.54	00010	GRAVEL	2730	100	*								*	*							
106	CLEAR MEWS		64.30	149.12	00552	GRAVEL	4000	190							*	*	*	*					*		
107	CLEAR SKY LODGE	CLF	64.26	149.18	00650	GRAVEL	2400	60	*									*							
108	CLEAR		64.22	149.26	720F	GRAVEL	3500	50	*									*							
109	CLEARWATER		63.03	147.18	02900	GRVL-D	1050	80	*																
110	COAL CREEK		65.31	143.13	00850	GRAVEL	4000	100									*								
111	COASTAL		70.19	148.15	00045	GRAVEL	2360	80										*							
112	COFFMAN COVE	KCC	56.00	132.84	00000	WATER	5000	2000	*									*							
113	COLD BAY	CDB	55.21	162.72	00098	ASPH	10416	150	*		*	*	*			*	*	*	*	*			*		
114	COLD BAY		55.21	162.73	00095	CONC	20	15	*		*		*			*	*	*							
115	COLD BAY		55.25	162.75	00050	WATER	2500	1000	*																
116	COLEFOOT	CXF	67.25	150.21	01050	GRAVEL	5000	123					*		*	*	*	*					*	*	
117	GOLDSTREAM		64.93	147.88	01132	GRAVEL	2300	80	*								*	*							
118	COLORADO CREEK	KCR	63.57	155.99	00860	GRAVEL	3600	100										*							
119	COLORADO STATION		63.14	149.43	01910	GRAVEL	1975	105										*					*		
120	COLORADO/DUNKLE MINE/		63.27	149.53	02750	GRVL-D	1000	60	*																
121	QUARTZ CREEK	JLA	60.48	149.72	00450	GRAVEL	2450	65	*									*							

Table D.2

(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.,

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MIDIRL	FAR SERV	SNOW REM	WIND IR	INSTR	RILS	VASI	RNWY LTS	TDLTS	RVR
106	COPPER LANDING		60.48	149.73	00436	WATER	15000	1000	*															
108	KENAI LAKE		60.49	149.82	00436	WATER	5000	1500	*								*							
109	COPPER CENTER 1	CZC	61.96	145.31	01033	TURF	1800	180	*								*							
109	COPPER CENTER 2		61.94	145.29	01150	GRAVEL	2800	75	*								*							
110	CORDOVA-MILE 13	CDV	60.49	145.48	00042	ASPH	7499	150	*		*	*	*			*	*	*	*	*	*	*		
110	CORDOVA MUNI	CCV	60.54	145.72	00012	GRAVEL	1900	60	*							*	*							
110	EYAK LAKE		60.54	145.73	00005	WATER	10000	3000	*								*							
110	CORDOVA H		60.54	145.72	00012	GRAVEL	50	50	*							*	*					*		
111	COUNCIL 2		64.91	163.73	00095	GRAVEL	2100	70	*															
111	COUNCIL 1	CIL	64.90	163.66	00095	GRAVEL	1270	50	*															
112	CRAB BAY		60.07	148.01	00000	WATER	10000	4000	*															
113	CRAFTON ISLAND	CJI	60.50	147.95	00000	WATER	10000	2000	*															
114	CRAIG	CGA	55.48	133.15	00000	WATER	10000	2000	*															
114	CRAIG CG		55.48	133.14	00020	WOOD	70	70									*							
115	CRATER CREEK		67.37	152.01	00840	DIRT	1760	20									*	*						
116	CROOKED CREEK/KANTISHNA/	CKD	63.79	150.54	02650	GRVL-D	2000	48	*															
117	CROSSWIND LAKE		62.40	144.01	02125	TURF-G	1160	50																
118	CUSHY		62.62	150.01	00550	TURF	1100	50	*															
119	DAHL /SEWARD PENINSULA/		65.36	164.71	00250	GRAVEL	1210	40	*															
120	DAHL CREEK	DCK	66.94	156.90	00260	GRAVEL	3940	125	*								*	*						
121	DAVID RIVER		55.91	161.64	00085	GRAVEL	3400	85																
122	DEADHORSE	SCC	70.19	148.47	00055	GRAVEL	6500	150	*	*	*	*	*				*	*	*		*	*	*	
122	DEADHORSE		70.19	148.47	00050	GRAVEL	100	100	*				*				*	*						
123	DECOURCY MOUNTAIN MINE		62.06	158.45	01200	GRAVEL	1030	55	*															
124	DERRING	DRG	66.08	162.74	00008	TURF-G	2275	100	*									*						
124	DERRING /NEW/		66.07	162.76	00015	GRAVEL	3000	100	*															
125	ALLEN AAF	BIG	63.99	145.72	01266	ASPH	4675	150	*		*		*				*	*				*		
126	DENALI FIELD 2		63.17	147.47	02640	GRVL-D	900	60										*						
126	DENALI ROAD COMMISSION 2		63.07	147.52	02550	GRVL-D	1065	80	*															
126	DENALI ROAD COMMISSION NR 1		63.11	147.53	02525	GRVL-D	1190	30	*															
127	DIETRICH CAMP	DTK	67.68	149.73	01488	GRAVEL	5200	145					*		*	*	*	*					*	
128	DILLINGHAM	DLG	59.05	158.50	00083	GRAVEL	4850	85	*		*	*	*	*	*		*	*	*			*	*	
128	DILLINGHAM		59.06	158.57	00080	WATER	1200	100	*								*							
128	CITY FIELD		59.05	158.45	00080	GRAVEL	2100	50														*		
129	DUT LAKE		63.66	148.07	01350	TURF-D	1140	20																
130	DWYER/WOOD BAY AFS	DFB	53.97	166.85	00024	GRAVEL	3500	100				*						*				*		
131	DUNCAN CANAL AFS		56.76	133.22	00000	WATER	10000	4000																
132	DUTCH HARBOR	DUT	53.90	166.54	00012	GRAVEL	4300	200	*			*		*				*						
132	DUTCH HARBOR		53.91	166.54	00025	GRAVEL	1965	70	*															
132	DUTCH HARBOR		53.89	166.54	00000	WATER	5000	4000	*													*		

Table D.2
(Continued)

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	WIND INDICATOR	FSS/RSRV	RSRV RUNWAY	WIND INDICATOR	IN-RUNWAY LIGHTS	RELIEF	IVAS	RUNWAY LIGHTS	TDZ LIGHTS	RVR
133	EAGLE	EAA	64.78	141.15	00880	GRAVEL	3600	150	*								*	*						
133	EAGLE VILLAGE		64.79	141.21	01030	TURF	1800	125	*								*	*						
134	EAGLE CREEK		65.08	146.42	00580	GRAVEL	1000	45	*								*	*						
135	EAST FORK/EAGLE RIVER/	Z97	61.32	149.57	00350	GRAVEL	850	45	*									*						
135	EARHART FIELD		61.25	149.32	00660	DIRT	1350	75										*						
136	EAR MOUNTAIN		65.97	166.17	00810	GRAVEL	1000	100	*															
137	EAST FORK	EFO	70.20	147.93	00020	GRAVEL	6000	150									*	*						
138	EGNA BAY		55.95	133.66	00000	WATER	8000	500	*															
139	EEK	EEK	60.22	162.00	40E	DIRT	1650	100	*															
139	EEK		60.21	162.02	00000	WATER	5000	500	*									*						
140	EGEGIK /NEW/	Z03	58.21	157.38	00100	GRAVEL	1900	80	*								*	*						
141	EKLUTNA LAKE		61.41	149.15	00950	TURF-G	970	50	*															
142	EKUK	KKU	58.42	158.56	00030	GRVL-D	965	25	*									*						
143	EKWOK	KEK	59.35	157.47	00130	GRAVEL	2200	80	*									*						
144	ELDRED ROCK CG	ERO	58.97	135.24	00033	WOOD	70	70									*							
145	ELFIN COVE	ELV	58.20	136.35	00000	WATER	10000	1500	*															
146	ELIM	ELI	64.62	162.27	00130	TURF-D	1975	80	*								*	*						
147	ELLAMAR		60.89	146.70	00000	WATER	8000	4000	*															
148	EMMA CREEK		67.32	150.18	1110E	GRVL-D	2000	100	*															
149	EMMONAK		62.77	164.52	00010	DIRT	2000	70	*								*	*						
150	ENGLISH BAY	KEB	59.35	151.92	00027	GRAVEL	2000	30	*									*				*		
151	ENTRANCE ISLAND		57.41	133.44	00000	WATER	5000	500	*															
152	EUREKA	Z37	61.94	147.17	03249	GRAVEL	1600	60	*									*						
153	EUREKA CREEK		65.18	150.22	00700	DIRT	1600	25	*									*						
154	EVA CREEK		64.04	148.86	02817	GRAVEL	1200	70	*									*						
155	EXCURSION INLET	EXI	58.42	135.45	00000	WATER	1000	1000	*															
156	CHENA RIVER		64.83	147.85	00440	WATER	5000	300	*									*						
157	METRO FLD	MTF	64.81	147.76	00432	GRAVEL	4400	150	*								*	*						
158	WEMTICATNG		64.82	147.78	00435	GRAVEL	20	20										*						
159	FLM		64.84	147.81	00428	GRAVEL	80	60								*	*							
160	MILE M		64.78	147.44	00430	GRAVEL	1560	35																
160	EIELSON AFB	EIL	64.64	147.10	00545	ASPH	14520	150				*	*			*	*	*	*			*	*	*
160	SHRINER FIELD		64.72	147.20	00425	TURF	1800	35															*	
160	PHILLIPS FIELD	PII	64.85	147.79	00432	ASPH-G	3340	35	*					*				*	*				*	
160	PHILIPS FIELD H		64.85	147.79	00432	GRAVEL	50	50	*							*	*	*					*	
160	FAIRBANKS INTL	FAT	64.82	147.86	00434	ASPH	10300	150	*	*	*	*	*	*		*	*	*	*		*	*	*	*
160	FAIRBANKS INTL		64.82	147.86	00429	WATER	2000	200	*		*			*				*						
160	FAIRBANKS INTL H		64.82	147.86	00434	GRAVEL	100	100	*		*			*			*	*						
161	FAIRCHILD AAF	FBK	64.84	147.61	00448	ASPH-C	8714	300				*	*			*	*	*					*	
161	FLAIR LAKE		64.36	147.56	00910	TURF	1530	100										*						

Table D.2
(Continued)

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MEDICAL	FAR SERV	SNOW REM	WIND IND	INSTR	RELIL	ISLS	VASI	RWY LTS	TDZ	RVR
187	CLEAR CREEK		64.45	147.56	00660	TURF	3988	190																	
188	FALSE ISLAND		57.53	135.21	00000	WATER	4000	500	*																
189	FALSE PASS	KFP	54.86	163.39	00020	GRAVEL	2600	100	*																
189	FALSE PASS	KFP	54.86	163.39	00000	WATER	10000	3500	*																
190	FARKELL	FKL	62.51	153.89	01535	GRAVEL	5000	150	*		*		*					*	*				*		
191	FARKELL LAKE		62.53	153.61	01151	GRAVEL	2000	30	*									*							
191	FARKELL LAKE		62.54	153.62	01052	WATER	5000	500	*																
192	FEATHER RIVER		64.83	166.13	00325	GRAVEL	1310	60	*																
193	FIVE FINGER CG		57.27	133.63	00048	WOOD	50	50								*	*	*							
194	FIVE MILE	FVM	65.93	149.84	00510	GRAVEL	2500	75					*		*	*	*	*					*		
195	FLAT	FLT	62.46	157.96	00309	TURF-G	4100	150	*									*							
196	FLAXMAN ISLAND DEW STATION	FXM	70.17	146.86	00023	GRAVEL	3545	100								*	*	*		*			*		
197	FOLGER	5F0	63.54	156.04	00800	GRVL-D	1800	40	*																
198	FORT YUKON	FYU	66.57	145.25	00431	GRAVEL	5019	150	*			*					*	*	*				*		
198	HOSPITAL LAKE		66.58	145.24	00421	WATER	1000	300	*									*							
199	FRANCENS		63.07	144.86	03200	GRAVEL	1700	90	*									*							
170	FRANKLIN BLUFFS	FXF	69.72	148.67	357E	GRAVEL	5000	138					*				*	*					*		
171	FUNTER BAY	FNR	58.25	134.90	00000	WATER	10500	500	*																
172	GAKONA	GAK	62.30	145.29	01455	TURF-G	3720	40	*									*							
173	GALBRAITH LAKE	GBH	68.48	149.49	2670E	GRAVEL	5200	150					*					*				*	*		
174	GALENA	GAL	64.70	156.93	00152	ASPH-C	6665	150	*	*	*	*	*	*		*	*	*	*	*			*		
175	GANTELL	GAM	63.77	171.73	00026	ASPH	4500	100	*			*					*	*					*		
176	GATES CREEK	GEK	62.99	156.50	00725	GRAVEL	1600	80										*							
177	ALYESKA	AQV	60.97	149.12	00150	GRAVEL	2317	60	*								*								
178	GLACIER CREEK	KG7	61.46	142.38	02380	GRAVEL	1970	75	*																
179	GLACIER PARK		61.79	147.78	01550	GRAVEL	2100	50	*									*							
180	[illegible]		62.07	145.43	01150	TURF	2070	65										*							
180	GATEWAY LODGE H		62.12	145.48	01520	GRAVEL	52	40	*									*							
181	GOLD BEACH		60.98	150.64	00450	DIRT	1600	100	*																
182	GOLD CREEK		67.51	149.83	01280	GRVL-D	1250	75	*																
183	GOLDEN HORN LODGE		59.75	158.87	00091	WATER	5000	1500	*																
184	GOLD KING CREEK AFS		64.17	147.93	01720	GRAVEL	2000	75										*							
185	GOLOVIN	GLV	64.56	163.04	00025	GRAVEL	2400	80	*									*					*		
186	GOODNEWS	GNU	59.12	161.58	00015	GRAVEL	1350	60	*									*							
187	GOOSE BAY	Z40	61.39	149.84	00100	GRAVEL	5000	150	*									*					*		
188	GRANITE MOUNTAIN AFS	GMT	65.41	161.26	01455	GRAVEL	3925	125				*					*	*					*		
189	GRAYLING	KGX	62.90	160.06	00099	GRAVEL	2500	100	*								*	*							
190	GULKANA	GKN	62.16	145.45	01578	ASPH	4200	100	*		*		*				*	*	*				*		
190	GULKANA		62.16	145.46	01578	ASPH	100	100	*				*			*	*	*					*		
191	GUNSIGHT MOUNTAIN		61.90	147.32	02950	DIRT	1280	60										*							

Table D.2
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 8

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. TDX	AIRPORT NAME	ID	LAT	LON	ELEV	COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHEDULED	WEATHER	UNICOM	MEDICAL	FAR SERV	SNOW REMOVAL	WIND INDICATOR	RELIEF	ILS	VASI	RNWY LTS	TDZ LTS	RVR
192	GUSTAVUS	GST	58.43	135.71	00036	ASPH	5000	300	*			*	*			*	*	*	*					
193	HAINES	HNS	59.25	135.52	00016	ASPH-G	4402	100	*								*	*						
193	HAINES		59.24	135.44	00000	WATER	5000	4000	*					*										
193	CHILKAT LAKE		59.37	135.95	00350	GRAVEL	2160	20	*															
193	SCHAFFER		59.02	135.38	00010	GRAVEL	1050	25																
193	TENGS-WESTFALL		58.90	135.35	00010	GRAVEL	1900	30	*															
193	PYRAMID HARBOR		59.09	135.39	00010	GRAVEL	1000	40																
194	HALIBUT COVE		59.60	151.22	00050	GRAVEL	800	75	*								*							
195	HAMILTON		62.90	163.89	00011	TURF	1800	70	*								*							
196	UPPER HANNUM CREEK		65.91	163.33	01300	GRAVEL	4000	100	*								*							
197	HARRY VALLEY	HVY	69.16	148.82	00975	GRAVEL	5000	150					*			*	*					*		
198	HARTS DOME		65.61	164.58	00600	GRVL-D	1050	80	*															
199	HAWK INLET	HWI	58.13	134.75	00000	WATER	10000	3000	*															
200	HAYCOCK	HAY	65.20	161.15	00175	GRAVEL	1750	50	*															
201	HEALY RIVER	HRR	63.87	148.97	01294	GRAVEL	2640	50	*															
202	HEBRON	HEB	55.80	160.90	00020	GRAVEL	1000	70	*								*							
203	JOHNSTONE POINT		60.48	146.58	00015	GRAVEL	1900	60								*	*							
204	HOG RIVER		66.22	155.67	00680	TURF	4000	125									*							
205	HOLIKACHUK	HOL	62.91	159.53	00075	TURF	2200	70	*															
206	HOLLIS	HYL	55.48	132.44	00000	WATER	6000	500	*															
207	HOLY CROSS		62.19	159.78	00085	GRAVEL	3550	90	*								*	*						
208	HOMER	HOM	59.65	151.48	00078	ASPH	7400	150	*		*	*	*	*			*	*	*		*	*	*	
208	HOMER-BELUGA LAKE	SBL	59.65	151.50	00025	WATER	3000	600	*									*						
209	CAVANAUGH FOX RIVER		59.86	150.91	00050	TURF	1200	50																
210	RUSSEL		59.79	151.08	00020	DIRT	1000	60														*		
209	HONAH	HNH	54.11	135.45	00000	WATER	9000	5000	*															
209	HUONAH	HNH	58.10	135.40	00030	GRAVEL	2800	100	*								*							
210	HOOPER BAY	HPB	61.53	166.14	00018	ASPH-T	4000	100	*		*						*	*				*		
211	HOPE	SHO	60.90	149.62	00200	GRAVEL	1730	65	*									*						
212	HORSFELD		62.01	141.15	03300	TURF-G	1075	40	*									*						
213	HUGHES	HUS	66.04	154.26	00289	GRAVEL	4800	125	*								*	*						
214	HULL	HUK	70.25	148.91	00067	GRAVEL	1999	100						*				*				*		
215	DEMARCATION BAY		69.88	142.30	00024	GRAVEL	1800	75	*													*		
216	HUSLIA	HSL	65.70	156.39	00180	DIRT	3000	150	*								*	*						
217	HYDABURG	HYG	55.21	132.83	00000	WATER	5000	2000	*															
218	HYDER		55.90	130.00	00000	WATER	10000	1000	*															
219	ICY BAY	TCY	59.97	141.66	00050	GRAVEL	3980	100	*								*	*						
220	ICY CAPE AFS		70.29	161.90	00048	GRAVEL	3200	75																
221	IGIUGIG	IGG	59.32	155.90	00110	GRVL-D	2700	100	*									*						
222	ILIAMNA	ILI	59.75	154.91	00190	GRVL-D	3000	100	*		*	*	*				*	*	*			*		

Table D.2
(Continued)

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MIDCIRCL	FSAREA	SNOWREM	WINDIND	INSTR	RELIGS	VASI	RWYLTS	TDLTS	RVR
222	ILIAMNA ROADHOUSE		59.75	154.82	00060	GRAVEL	1620	100	*					*				*						
223	INDEPENDENCE CREEK		65.67	162.46	00250	GRAVEL	1630	55																
224	INTSKIN BAY	Z39	59.75	153.23	00380	GRVL-D	2000	40	*															
225	ITKILLIK RIVER		70.07	150.85	00036	GRAVEL	1700	55										*						
226	IVANOF BAY	KIB	55.90	159.48	00000	WATER	10000	4000	*															
227	JAKOLOF BAY		59.45	151.52	00005	GRAVEL	1100	40	*									*						
228	JENSENS		57.89	157.09	00240	GRVL-D	4700	125	*															
229	JUNEAU MUNI	JNU	58.36	134.57	00018	ASPH	8456	150	*	*	*	*	*			*	*	*	*		*	*	*	
230	JUNEAU MUNI H		58.36	134.57	00018	ASPH	50	50	*		*		*			*	*	*				*		
231	JUNEAU HARBOR		58.30	134.43	00000	WATER	10000	1000	*									*						
232	DEAN GOODWIN FLYING SERVICE		58.32	134.45	00000		10000	1000	*									*				*		
233	KAKE		56.33	134.50	00025	GRAVEL	250	80	*							*	*	*	*					
234	KAKE	JSE	56.30	134.42	00000		10000	3000										*				*		
235	KAKE		56.30	134.43	00000		10000	1000	*									*				*		
236	KAKE		70.13	148.04	00087	GRAVEL	2398	100										*	*		*	*		
237	KAKE		70.08	147.84	00060	GRAVEL	5460	130																
238	KAKE		62.45	151.22	00750	GRAVEL	1800	20	*															
239	KAKE	KAE	56.97	133.90	00000	WATER	10000	4000	*															
240	KAKHONAK	5KA	59.45	154.76	00050	GRVL-D	1200	75	*									*						
241	KAKU MINE		61.90	161.44	00250	TURF-G	1200	30																
242	KALAKAKET CREEK AFS	KKK	64.82	156.84	01598	GRAVEL	4000	140				*					*	*				*		
243	KALSKAG	KLG	61.54	160.32	49t	GRAVEL	2200	80	*								*	*						
244	KALTAG	KAL	64.33	158.74	00200	GRAVEL	2200	100	*								*	*						
245	ANS HOSPITAL		59.00	158.53	00100	DIRT	200	100	*						*			*				*		
246	KANTISHNA		63.54	150.99	01575	TURF	900	90	*															
247	KARLUK	KYK	57.57	154.45	00030	GRVL-D	1400	65																
248	KARLUK	KYK	57.57	154.44	00000	WATER	3000	100	*															
249	KARLUK LAKE	KXL	57.37	154.03	00368	WATER	10000	1000	*															
250	KASAAN	KXA	55.54	132.40	00000	WATER	2000	2000	*															
251	KASILOF	5K9	60.35	151.26	00125	GRAVEL	2460	100	*									*						
252	KASITSNA		59.47	151.57	00005	GRAVEL	800	75	*															
253	KATALLA		60.20	144.49	00010	DIRT-G	1000	60	*															
254	LAKE BROOKS		58.56	155.78	00036	WATER	5000	4000	*															
255	KAVIK RIVER	VIK	69.68	146.90	00640	GRAVEL	5918	140						*				*				*		
256	KENAI MUNI	ENA	60.57	151.25	00092	ASPH	7098	150	*	*	*	*	*	*		*	*	*	*		*	*		
257	KENAI MUNI H		60.57	151.25	00090	GRAVEL	100	100	*		*		*			*	*	*				*		
258	KENTAT RIVER	DRF	60.59	152.16	00030	GRAVEL	4300	150						*		*	*	*				*		
259	KENTAT RIVER		60.59	152.16	00035	GRAVEL	40	20								*	*	*						
260	KILUKUDU STATION AFS	KKB	60.52	151.30	00085	TURF	800	200									*	*						
261	KEST KOKELAND UNIT 2		60.78	151.75	00075	DIRT	1975	65	*															

Table D.2

(Continued)

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MIDIRL	F+R SERV	SNOW REM	WIND IND	INSTR	RELIS	ILS	VASI	RNWY LTS	TDZ LTS	RVR
249	ARNESS LAKE		60.64	151.30	00125	GRAVEL	1740	40	*									*							
249	ARNESS LAKE		60.64	151.30	00120	WATER	2500	500	*																
249	BIGFINGERS		60.69	151.39	00120	GRAVEL	270	240	*								*	*					*		
249	LOWER SALAMATOF LAKE		60.63	151.33	00102	WATER	2500	2500	*									*							
249	RUN JOHNSON		60.63	151.34	00125	GRAVEL	1860	30										*							
249	NIKISHKA BEACH		60.74	151.31	00200	GRAVEL	1440	40										*							
250	KETCHIKAN PENINSULA POINT	KTN	55.38	131.74	00000	WATER	10000	2000	*							*									
250	KETCHIKAN /TEMSCO H/		55.38	131.73	00020	CONC	80	24	*							*		*							
250	KETCHIKAN CG HELIPAD		55.33	131.64	00020	CONC	70	70				*		*	*	*	*	*							
250	KETCHIKAN INTL	KTN	55.35	131.71	00096	ASPH	7500	150	*		*	*					*	*				*	*	*	
250	KETCHIKAN HARBOR	SKE	55.34	131.67	00000	WATER	10000	1500	*		*							*							
250	HAKEWELL LAKE		55.24	130.67	00168	WATER	18000	1000	*																
250	HARNES LAKE		56.01	132.97	00000	WATER	8000	800	*																
250	OWEGATS LAKE		55.47	130.79	00710	WATER	9000	1000	*																
250	ELLA LAKE		55.47	131.11	00255	WATER	12000	2000	*																
250	GOAT LAKE		55.53	130.59	01775	WATER	12000	1000	*																
250	GRINDALL ISLAND		55.45	132.15	00000	WATER	5000	2500	*																
250	HEGMAN LAKE		55.58	131.53	00139	WATER	10000	2000	*																
250	HOKER LAKE		55.83	132.89	00250	WATER	8000	800	*																
250	HUGH SMITH LAKE		55.10	130.66	00050	WATER	17000	1000	*																
250	HUMPBACK LAKE		55.02	130.56	00272	WATER	18000	1000	*																
250	KEGAN LAKE		54.03	132.20	00010	WATER	9000	2000	*																
250	MCDONALD LAKE		55.96	131.84	00000	WATER	18000	1500	*																
250	LUCK LAKE		55.94	132.77	00080	WATER	7500	1500	*																
250	MANZANITA LAKE		55.57	131.05	00239	WATER	16000	2000	*																
250	ORCHARD LAKE		55.82	131.42	00140	WATER	18000	1000	*																
250	PATCHING LAKE		55.60	131.48	00300	WATER	15000	500	*																
250	PATRON LAKE		55.83	132.12	00050	WATER	4000	1500	*																
250	RED BAY LAKE		56.25	133.32	00010	WATER	10000	1500	*																
250	REFLECTION LAKE		56.03	131.58	00293	WATER	23000	1000	*																
250	SALMON BAY LAKE		56.26	133.19	00050	WATER	14000	2000	*																
250	SALMON LAKE		55.57	132.66	00118	WATER	13000	5000	*																
250	SWEETWATER LAKE		55.96	132.94	00025	WATER	11000	3000	*																
250	WILSON LAKE		54.51	130.57	00256	WATER	24000	1500	*																
250	WINSTANLEY LAKE		55.43	130.82	00400	WATER	7000	1000	*																
251	BUB BAKER MEML	IAN	66.98	160.43	00150	GRAVEL	4000	100	*									*					*		
252	KING COVE	KVC	55.05	162.31	00000	WATER	10000	4000	*																
252	KING COVE	KVC	55.12	162.26	00148	GRAVEL	4000	100	*			*					*	*							
253	KING SALMON	AKN	58.68	156.65	00057	ASPH	8515	150	*	*	*	*	*		*	*	*	*	*			*	*	*	
253	KING SALMON		58.68	156.67	00010	WATER	4000	500	*									*							

Table D.2
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 11

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SEGMENTED	WEATHER	UNICOM	MEDICAL	FAR SERV	SNOW REM	WIND IND	INSTR	RELIS	ILS	VASI	RNWY LTS	TDZ LTS	RVR
254	KIPNUK	KPN	59.94	164.04	00000	WATER	3000	500	*								*	*							
254	KIPNUK		59.93	164.03	0E	DIRT	2300	60	*								*	*							
255	KITOI BAY	KKB	58.19	152.37	00000	WATER	4000	1000	*																
256	KIVALINA	KVL	67.73	164.55	00010	PSP	1980	60	*									*							
257	KIVALIK		66.02	161.87	00010	GRAVEL	1600	250	*														*		
258	KLAWAK		55.55	133.10	00000	WATER	5000	1000	*																
259	KLAWOCK		55.58	133.07	50E	GRAVEL	2500	100	*								*	*					*		
260	KNIFE BLADE RIDGE		69.15	154.75	01380	GRAVEL	3600	150	*																
261	KOBUK /WIEN/	OBU	66.91	156.86	00145	GRVL-D	2800	100	*									*							
262	KODIAK MUNI	KDK	57.81	152.37	00146	GRAVEL	2900	100	*								*	*	*						
262	KODIAK		57.80	152.38	00130	WATER	2300	300	*									*							
262	INNER HARBOR		57.79	152.40	00000	WATER	5000	100	*									*							
262	KODIAK	ADQ	57.75	152.49	73S	ASPH	7539	150	*	*		*	*		*	*	*	*	*	*	*	*	*	*	
262	KODIAK AIRWAYS		57.79	152.39	00000	WATER	10000	200																	
262	MILLER AIRSTRIP		57.61	152.19	00025	PSP	2400	35										*							
262	KODIAK CATTLE COMPANY RANCH		57.46	152.33	00050	TURF	2700	100	*									*							
263	KOBBUNG	SKO	58.87	157.01	00030	DIRT	1000	40	*									*							
264	KUGRU RIVER		70.57	152.26	00015	GRAVEL	1800	75															*		
265	KOTLIK	KOT	63.03	163.56	00005	DIRT	2300	100	*																
266	KOTZEBUE		66.87	162.65	00005	WATER	1500	100	*		*		*					*							
266	RALPH WIEN MEMORIAL	OTZ	66.88	162.60	00011	GRAVEL	4000	115	*	*	*	*	*	*			*	*	*			*			
267	KOYUK	KKA	64.93	161.16	00130	GRAVEL	2000	80	*									*							
268	KOYUKUK	KYU	64.89	157.71	00115	TURF-D	1200	30	*								*	*							
269	KULIK LAKE	LKK	58.98	155.12	00717	GRVL-D	4600	140										*							
270	KULIK LAKE		58.98	155.12	00631	WATER	5000	5000																	
271	KUPARUK	UUK	70.29	149.11	00041	GRAVEL	1956	100						*			*	*		*			*		
271	KUPARUK		70.29	149.11	00041	GRAVEL	50	50										*							
272	KWICHAK		58.96	156.93	00025	DIRT	800	50	*																
273	KARTHLUK	KWT	60.80	161.44	00028	TURF	1800	100	*								*	*							
273	KARTHLUK		60.81	161.44	00020	WATER	5000	500	*																
274	KWIGILLINGOK	KWK	59.84	163.14	00000	WATER	2000	300	*									*							
275	LAKE LOUISE	Z55	62.29	146.58	02450	GRAVEL	2450	100	*									*							
275	LAKE LOUISE	Z55	62.28	146.52	02362	WATER	5000	4000	*									*							
276	LAKE NERKA		59.44	154.84	00040	WATER	5000	300	*																
277	LARSEN BAY	KLN	57.54	154.00	00000	WATER	10000	1000	*																
278	LAMING		60.41	149.37	00475	GRAVEL	2300	95	*									*							
279	ALITAK	AL7	56.90	154.25	00000	WATER	10000	1000	*																
280	LEVELOCK	KLL	59.12	156.86	60E	DIRT	1500	30	*									*							
281	LIGNITE		63.91	149.02	01171	GRAVEL	1200	75	*																
281	LIGNITE		63.90	148.98	01275	GRAVEL	1450	50	*																

Table D.2

(Continued)

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MEDICAL	FAR SERV	SNOW REM	WIND IND	INSTR	RILS	VASI	RNWY LTS	TDLTS	RVR
282	LIVENGOOD	LIV	65.53	148.54	00730	TURF	1250	70	*									*						
283	LONELY DEW STATION	LNI	70.91	153.24	00017	GRAVEL	3819	100								*	*	*	*			*		
284	LONG CREEK		64.42	155.50	00850	DIRT	1965	135	*									*						
285	LONG LAKE		61.38	143.32	01500	TURF	1150	30																
286	LORING		55.60	131.64	00000	WATER	10000	2000	*															
287	LOST RIVER 1	LSR	65.40	167.16	00080	GRAVEL	3650	150	*									*						
287	LOST RIVER 2	LSR	65.46	167.17	00220	GRAVEL	5100	150										*						
288	MACLAREN GLACIER		63.27	146.52	03000	GRAVEL	3150	80	*															
289	MCCARTHY	MXY	61.43	142.92	01494	TURF-G	2000	120	*									*						
289	MCCARTHY NR 2		61.48	142.90	01531	GRVL-D	4250	140	*							*	*							
289	JAKES BAR		61.22	142.89	01052	GRAVEL	1450	160										*						
290	MCGRATH	MMC	57.14	153.20	00000	WATER	10000	1000	*															
291	MCGRATH	MCG	62.95	155.60	00337	ASPH	1722	150	*		*	*	*				*	*	*			*		
291	MCGRATH		62.96	155.59	00325	WATER	3000	350	*				*											
292	MCKINLEY PARK	SMK	63.73	148.91	01720	GRAVEL	3000	100	*									*						
293	MT MCKINLEY NATL PARK		63.65	148.80	02050	GRAVEL	5000	150										*				*		
294	MEADOWS LAKE LODGE		62.99	144.48	03050	GRVL-D	2300	90										*						
294	EAGLE CREEK MINE		63.00	144.42	03200	GRVL-D	1800	50																
295	MANLEY HOT SPRINGS	MLY	65.00	150.64	00270	GRAVEL	2760	100	*					*				*				*		
296	MANOKOTAK		58.99	159.05	00107	GRAVEL	2400	100	*									*						
296	MANOKOTAK	KMO	58.98	159.06	00000	WATER	5000	200	*															
297	MARSHALL	MLL	61.87	162.07	00090	GRAVEL	1275	75	*								*	*						
298	MARVEL CREEK	757	60.92	159.63	01800	GRAVEL	1900	80	*									*						
299	MASCOT GULCH		65.73	164.95	00720	GRVL-D	1030	40	*															
300	MAY CREEK	MYK	61.34	142.68	01650	GRVL-D	4000	140	*									*						
301	MEDFRA	MDR	63.11	150.74	00435	TURF	2200	100	*															
302	MEKORYUK	MYU	60.37	166.27	00045	GRAVEL	3394	100	*		*						*	*				*		
303	MENTASTA LODGE		62.89	143.67	02300	DIRT	2500	80	*									*						
304	METLAKATLA	MTM	55.13	131.58	00000	WATER	5000	5000	*									*						
305	MEYERS CHUCK		55.74	132.25	00000	WATER	7000	200	*									*						
306	MIDDLETON ISLAND	MDO	59.45	146.31	00087	GRAVEL	4370	133	*								*	*	*					
307	MUZBYS		64.40	146.92	00752	TURF	1770	70						*				*						
308	MINCHUMINA	MHM	63.88	152.30	00684	GRAVEL	4400	150	*				*			*	*	*	*					
309	MINERAL POINT		63.07	143.34	02019	GRVL-D	2400	110	*															
310	MINTO	MNT	64.90	149.17	00328	GRAVEL	2000	100	*									*						
311	MOOSE CREEK	Z61	62.60	157.15	00980	GRVL-D	900	30	*															
312	SUMMIT LAKE		60.68	149.49	01300	WATER	5000	1000	*															
312	UPPER TRAIL LAKE		60.49	149.37	00471	WATER	5000	5000	*									*						
313	MOSER BAY	KMY	57.03	154.14	00000	WATER	10000	1000	*															
314	MOSES POINT	M09	64.70	162.05	00014	ASPH	4623	100	*							*		*				*		

Table D.2

(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.,

PAGE 13

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MEDICAL	FARSERV	SNOWREMD	WINDIND	INSTR	RELIS	ILS	VASI	RNWYLTS	TDZLTS	RVR
315	MOUNTAIN VILLAGE	MOU	62.09	163.72	00005	WATER	5000	500	*									*							
315	MOUNTAIN VILLAGE	MOU	62.09	163.72	00185	GRAVEL	2100	75	*								*	*							
316	MYRTLE CREEK		67.22	149.98	01670	GRVL-D	3200	100	*																
317	ORANGE HILL		62.21	142.85	02875	GRAVEL	1650	60	*																
317	DEVILS MOUNTAIN LODGE		62.40	142.99	02880	GRVL-D	1118	40										*					*		
317	REEVE		62.38	142.88	02400	TURF-G	2125	90	*																
318	NAKEEN		58.93	157.05	00050	GRVL-D	1275	40	*																
319	PEDERSON POINT		58.77	157.06	00060	GRAVEL	1200	40	*																
319	NAKNEK	SNK	58.73	157.02	00070	DIRT-G	1400	90	*								*	*					*		
319	NAKNEK		58.73	157.02	00030	WATER	3000	300	*									*							
319	TIKHBITS		58.73	157.00	00050	GRVL-D	1700	60						*			*	*							
320	NANCY LAKE		61.69	149.97	00218	WATER	6000	600	*									*							
321	NAPAKIAK	NNA	60.69	162.12	00000	WATER	2000	200	*									*							
322	NAPAISKAK		60.70	161.77	24E	DIRT	2700	100	*														*		
322	NAPAISKAK	PKA	60.71	161.76	00010	WATER	15000	2000	*																
323	NENANA MUNI	ENN	64.55	149.07	00360	GRAVEL	6256	150	*				*				*	*	*				*		
324	NEW KOLIGANEK	KGK	59.73	157.28	00240	GRAVEL	2200	100	*									*							
325	NEW STUYAHOK	KNW	59.48	157.34	00075	GRVL-D	2200	100	*									*							
326	NEWTOK	WWT	60.92	164.65	00006	WATER	5000	400	*									*							
327	NIGHTMUTE		60.48	164.75	00006	WATER	2000	200	*																
328	SHELL		60.74	151.33	00200	GRAVEL	140	140						*				*							
329	NIKOLAI	SNI	63.02	154.38	00450	GRAVEL	950	40	*									*							
330	NIKOLSKI AFS	IKO	52.94	168.85	00075	GRAVEL	3500	100				*						*					*		
331	NINILCHIK	NIN	60.02	151.59	00270	GRAVEL	2500	100	*									*							
332	NOATAK	WTK	67.57	162.97	00099	GRAVEL	2400	75	*								*	*							
333	NOME CITY FIELD		64.51	165.39	00059	GRAVEL	3200	70	*					*				*							
333	NOME	OME	64.51	165.44	00036	ASPH	5575	150	*		*	*	*				*	*	*	*		*	*		
334	NONDALTON	SNN	59.99	154.84	00250	GRAVEL	2225	100	*									*							
335	ROBERT /MOH/ CURTIS MEML	ORV	66.83	161.02	00083	DIRT	1973	73	*								*	*					*		
336	NORTHEAST CAPE AFS	OHC	63.33	168.97	00030	GRAVEL	5000	150				*			*	*	*	*					*		
337	NORTH KUPARUK		70.34	149.03	00024	GRAVEL	2000	100						*			*	*				*	*		
337	NORTH KUPARUK		70.34	149.03	00025	GRAVEL	50	50										*							
338	BRADLEY SKY-RANCH		64.75	147.37	00483	TURF	2400	150	*									*							
338	HUMARDS		64.73	147.35	00490	DIRT	1760	70																	
338	WRIGHTS		64.77	147.33	00480	GRAVEL	2550	45																	
339	NORTHWAY	ORT	62.96	141.93	01716	ASPH	4347	150	*		*		*				*	*	*				*		
340	NORTH WHALE		56.12	133.14	00000	WATER	10000	1000	*																
340	NECK LAKE CAMP		56.09	133.13	00000	WATER	6000	3000	*																
341	NUGGET BENCH		62.52	150.94	02010	GRAVEL	1400	70	*									*					*		
342	NULATO	NUL	64.73	158.08	00310	GRAVEL	2800	100	*								*	*							

Table D.2

(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 18

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MEDICAL	FAR SERV	SNOW REMOVAL	WIND IND	INSTR	RELIS	IVASI	RWY LTS	TDZ LTS	RVR
343	NUNAPITCHUK		60.89	162.47	00010	WATER	3000	300	*															
344	NYAC	ZNC	60.98	159.99	00460	GRAVEL	3656	100									*							
345	OGOTORUK CREEK		68.10	165.76	00025	GRAVEL	1180	60																
345	CAPE THOMPSON		68.10	165.74	00080	GRAVEL	1800	80																
346	OLD HARBOR	OLH	57.21	153.30	00015	GRAVEL	2000	100	*								*							
346	OLD HARBOR	OLH	57.20	153.31	00000	WATER	4000	4000	*								*							
347	OLD MAN	OLN	66.45	150.59	1271E	GRAVEL	5000	137					*				*	*				*	*	
348	OLGA BAY	KOY	57.16	154.23	00000	WATER	10000	1000	*															
349	OLIKTOK DEW STATION	OLI	70.50	149.88	00016	GRAVEL	4020	100								*	*	*		*			*	
350	ORAIR	ZJY	63.15	155.53	00575	GRAVEL	2000	80										*						
351	OUZINKIE	KOZ	57.92	152.50	00000	WATER	4000	1000	*															
352	PAIMIUT	PMU	61.96	160.23	00032	WATER	5000	500	*															
353	PAINTER CREEK 1	PCE	57.15	157.41	00540	GRAVEL	5000	150										*						
354	PALMER MUNI	PAQ	61.59	149.09	00232	ASPH-T	3416	100	*		*		*	*			*	*					*	
354	PALMER MUNI H		61.59	149.09	00230	GRAVEL	50	50	*				*			*	*	*					*	
354	OM MCKINLEY RANCH		61.54	149.08	00120	TURF	2550	85									*	*						
354	FINGER LAKE		61.61	149.29	00337	WATER	5500	500	*															
354	B & B HOYS RANCH		61.59	149.26	00300	GRAVEL	1070	30										*						
354	BUTTE MUNICIPAL		61.53	149.02	64E	GRAVEL	2000	100	*									*					*	
355	PARKS	KPK	57.43	153.91	00000	WATER	10000	1000	*															
356	PASS CREEK NO 1		62.40	151.55	01850	DIRT	1400	30	*															
357	PAULOFF HARBOR	KPH	54.46	162.69	00000	WATER	3000	500	*															
358	PAYSON	SPX	63.03	145.50	02653	GRAVEL	2050	65	*								*	*						
359	PEAR ISLAND		60.69	147.38	00000	WATER	6000	2000	*															
360	PEARD BAY AFS		70.81	158.25	00093	GRAVEL	1292	75																
361	PEDRO BAY		59.79	154.12	00045	DIRT	1600	50	*									*						
362	PELICAN	PEC	57.96	136.23	00000	WATER	10000	2000	*									*						
363	PERRY ISLAND	PYL	60.69	147.92	00000	WATER	10000	2000	*															
364	PERRYVILLE	KPV	55.91	159.14	00000	WATER	10000	5000	*															
364	PERRYVILLE		55.91	159.14	00025	TURF	1800	50	*									*						
365	INDIAN POINT		56.75	133.25	00000	WATER	10000	4000	*															
365	TEMSCO		56.81	132.95	00050	SOUD	50	20	*									*						
365	PETERSBURG	PSG	56.81	132.96	00000	WATER	10000	1100	*									*						
365	PETERSBURG RAMP & TURNAROUND		56.71	132.98	00000	WATER	10000	1000	*									*						
365	PETERSBURG	PSG	56.80	132.94	1069	GRAVEL	6000	152	*		*						*	*	*			*		
366	PETERSVILLE		62.49	150.77	01580	DIRT	1450	30										*						
367	PETTYJOHN		63.05	147.01	03150	GRAVEL	1200	80	*															
368	PILOT POINT	PIP	57.56	157.56	00075	GRAVEL	3500	90	*								*	*				*		
369	UGASHIK BAY	UGB	57.43	157.74	00132	GRAVEL	5500	150	*									*						
369	PILOT STATION		61.93	162.89	00275	DIRT-G	1700	90	*								*	*						

Table D.2

(Continued)

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SEWARD	WEATHER	UNICOM	MELDOC	FAR SERV	SNOW REM	WIND IND	INSTR	RELIS	IFLS	VASI	RNWY LTS	TDZ LTS	RVR
370	PINGO		70.03	147.72	00118	GRAVEL	6000	150									*	*					*		
370	PINGO		70.03	147.72	00118	GRAVEL	50	50										*							
371	PLATINUM	PTU	59.02	161.82	00009	GRAVEL	2350	60	*								*	*							
371	PLATINUM MINE		58.91	161.71	00100	GRAVEL	2000	75									*	*							
372	POINT BAKER	KPB	56.35	133.62	00000	WATER	4000	250	*																
373	POINT BARROW NARL	NFV	71.30	156.63	00009	PSP	4990	141					*		*	*	*	*		*			*		
374	POINT HOPE	PHO	68.34	166.79	00020	GRAVEL	4100	78	*									*					*		
375	POINT LAY DEW STATION	PIZ	69.73	163.01	00020	GRAVEL	3519	100							*			*	*		*		*		
376	SLEEPERS STRIP		61.25	149.96	00125	DIRT	1585	85																	
377	POINT MCINTYRE		70.40	148.68	00015	GRAVEL	1540	70	*														*		
378	POINT NOWELL		60.49	147.93	00000	WATER	10000	4000	*																
379	TEXACO POINT POSSESSION		60.98	150.50	00200	TURF	3750	95	*																
380	POINT RETREAT CG	PRT	58.41	134.95	00049	WOOD	70	70					*			*	*	*							
381	PORCUPINE CREEK	PCK	67.24	150.28	01100	GRVL-D	1500	125	*									*							
382	PORTAGE	SPG	60.81	148.93	00030	GRAVEL	3000	150	*																
383	PORTAGE CREEK		58.91	157.74	00000	WATER	3000	500	*																
384	PORT ALEXANDER		56.25	134.65	00000	WATER	3000	300	*																
385	PORT ALICE		55.79	133.59	00000	WATER	10000	1000	*																
386	PORT ASHTON		60.06	148.05	00000	WATER	10000	4000	*																
387	PORT BAILEY	KPY	57.93	153.04	00000	WATER	10000	2000	*									*							
388	PORT CLARENCE CGS	KPC	65.25	166.86	00010	ASPH	4500	120										*					*		
389	PORT GRAHAM	PGM	59.35	151.83	00093	GRAVEL	1800	75	*								*	*							
390	PORT HEIDEN	PTH	56.96	158.64	00095	GRAVEL	7500	300	*			*		*				*							
391	PORT LIONS	ORI	57.89	152.84	00052	GRAVEL	2600	150	*									*							
391	PORT LIONS		57.87	152.88	00000	WATER	5000	500	*																
392	PORT MOLLER AFS	PML	56.01	160.56	00027	GRAVEL	3500	100				*						*					*		
393	PORT NELLIE JUAN		60.55	148.16	00000	WATER	10000	2500	*																
394	PORT PROTECTION		56.33	133.61	00000	WATER	4000	1000	*																
395	RIG AND LITTLE PORT WALTER	PWR	56.38	134.65	00000	WATER	3000	400	*																
396	PORT WILLIAMS	KPR	58.49	152.58	00000	WATER	10000	4000	*								*								
397	PRINCE CREEK		69.37	153.29	01000	GRAVEL	3600	100	*																
398	PROSPECT CREEK	PPC	66.81	150.64	1075E	GRAVEL	5000	150					*		*	*	*	*		*			*		
399	PRUDHOE BAY	PUO	70.25	148.34	00045	GRAVEL	5500	150				*	*	*				*	*		*		*		
399	PRUDHOE BAY H		70.25	148.34	00045	GRAVEL	100	100					*			*	*	*					*		
400	PURKEYPILE MINE		62.94	152.27	01950	GRAVEL	2450	100										*							
401	QUAIL CREEK		65.35	149.76	01550	GRAVEL	1750	75	*								*								
402	QUARTZ CREEK /KOUGAROK/	SQC	65.41	164.65	00416	GRAVEL	3320	95	*									*							
403	THE QUEENS	SQN	58.88	158.43	00030	DIRT	1380	100																	
404	KAINHAGAK	KWN	59.76	161.96	00010	GRAVEL	1960	85	*									*							
404	KAINHAGAK		59.75	161.91	0E	WATER	5000	500	*																

Table D.2

(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.,

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MEDICAL	FSS/RSRV	SNOW REMVD	WIND IND	RTR	RTL	ILS	VASI	RWY LTS	TDZ LTS	PVR
405	RAINY PASS LODGE	ZZA	62.09	152.73	01844	WATER	6000	100	*				*												
406	RAINY PASS LODGE		62.08	152.72	01900	GRVL-D	1340	40					*										*		
407	RAMPART	RMP	65.51	150.14	00275	GRAVEL	2500	40	*																
408	RED DEVIL	RDV	61.79	157.35	00210	GRAVEL	4000	125	*								*	*							
409	RIVERSIDE LODGE		63.16	142.12	01830	DIRT	2400	100	*																
410	RUBY	RBY	64.73	155.46	00635	GRAVEL	2400	75	*								*	*							
411	RUSSIAN MISSION	RSH	61.79	161.32	00070	GRVL-D	1400	70	*									*							
411	RUSSIAN MISSION		61.78	161.32	00020	WATER	3000	500	*																
412	SAGINAW		56.86	134.19	00000	WATER	10000	1000																	
412	SAGINAW		56.89	134.16	00000	WATER	10000	1000	*																
413	SAGWON	SAG	69.37	148.70	00650	GRAVEL	5825	200	*					*				*							
413	FIN CREEK		69.50	147.60	1200E	GRAVEL	4250	90									*	*					*		
414	ST GEORGE		56.60	169.56	00090	GRAVEL	2300	60	*								*								
415	ST MICHAEL		63.48	162.03	00000	WATER	10000	1000	*																
415	ST MICHAEL	SMK	63.49	162.03	30E	DIRT	1975	50	*								*	*							
416	ST PAUL ISLAND	SNP	57.16	170.22	00044	GRAVEL	5075	150	*			*					*	*		*			*		
417	SALMON LAKE	ZHI	64.91	165.01	00490	GRAVEL	2150	75	*																
418	SAND POINT	SDP	55.32	160.52	00022	GRAVEL	3800	150	*			*		*			*	*							
419	SANDY RIVER FEDERAL 1	KSR	56.22	160.23	00100	GRAVEL	4000	100	*																
420	SAN JUAN		60.05	148.06	00000	WATER	10000	4000	*																
420	SAN JUAN	WSJ	57.73	153.32	00000	WATER	10000	2000	*																
421	SAPSUK RIVER		55.42	161.24	00075	GRAVEL	560	30																	
422	SAVOONGA	SVA	63.69	170.47	00051	GRAVEL	4000	150	*			*					*	*					*		
423	SCAMMON BAY		61.85	165.56	00022	GRVL-D	2900	100	*								*	*							
423	SCAMMON BAY	SCM	61.85	165.58	00000	WATER	10000	500	*																
424	SELAWIK	WLK	66.60	159.99	00025	TURF-D	2000	50	*								*	*					*		
425	SELDOVIA	SOV	59.45	151.70	00021	GRAVEL	2400	150	*									*							
425	SELDOVIA		59.43	151.71	00000	WATER	2000	1000	*																
426	SERPENTINE HOT SPRINGS		65.85	164.70	00450	GRAVEL	1500	50	*																
427	SEWARD	SWD	60.13	149.42	00028	GRAVEL	4750	160	*								*	*					*		
428	SHAGELUK	SHX	62.70	159.57	00070	TURF	2200	30	*									*							
428	SHAGELUK		62.68	159.57	00040	WATER	5000	1000	*																
429	SHAKTOOLIK	SKK	64.37	161.14	00022	GRVL-D	2400	35	*									*							
430	SHEEP MOUNTAIN	SMU	61.81	147.50	02750	GRVL-D	2200	50	*									*							
431	SHELDONS POINT	SXP	62.53	164.84	00000	WATER	15000	2000	*									*							
432	SHEMYA AFB	SYA	52.72	185.91	00097	ASPH	9990	200				*	*		*	*	*	*					*		*	
433	SHESHALIK		67.01	162.86	00010	GRAVEL	2000	75	*																
434	SHISHMAREF	SHH	66.26	166.05	00008	TRTD	2200	55	*									*							
435	SHUNGNAK	SHG	66.89	157.15	00200	GRAVEL	1430	85	*									*							
436	SITKA	SIT	57.05	135.36	00019	ASPH	5000	150	*			*				*	*	*	*	*	*	*	*		

Table D.2
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 17

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MEDICAL	FAR SERV	SNOW REM	WIND IND	INSTR	RTL	ILS	VASI	RWY LTS	TDZ LTS	RVR
436	STANDARD OIL FLOAT		57.05	135.34	00000	WATER	4000	200	*							*		*							
436	JAMESTOWN BAY		57.08	135.28	00000	WATER	4000	400	*									*							
436	SITKA RAMP & TURNAROUND		57.04	135.35	00000	WATER	4000	200	*									*							
436	SITKA		57.05	135.34	00000	WATER	4000	200	*		*							*							
437	SITKINAK CGS	SKJ	56.54	154.14	00080	ASPH-T	4500	150					*			*	*	*		*		*			
437	MARK LAKE CG		56.53	154.11	00000	WATER	5000	3000					*		*	*		*							
438	SKAGWAY	SGY	59.46	135.31	00044	ASPH-T	3301	75	*								*	*							
438	SKAGWAY		59.45	135.32	00000	WATER	2000	2000	*									*							
439	SKILAK HLM HELISTOP		60.48	150.45	00275	PSP	20	14	*									*							
440	SKWENTNA	SKW	61.97	151.19	00148	GRAVEL	3500	150	*				*				*	*	*				*		
440	ALEXANDER LAKE		61.73	150.87	00150	TURF	1600	50										*							
441	DUFFYS TAVERN		62.72	143.92	02430	GRAVEL	1800	60	*				*				*	*							
442	SLEETMUTE	SLQ	61.70	157.17	00225	GRAVEL	2000	40	*								*	*							
443	SMITTISHAM		58.13	133.73	00018	GRAVEL	2500	50						*		*	*	*							
443	SMITTISHAM		58.15	133.73	00000	WATER	3000	270							*	*		*							
444	SNOWSHOE LAKE	SSO	62.03	146.69	02280	WATER	5000	1000								*		*							
445	GAFOF		60.48	151.16	00115	TURF	2712	160										*							
445	SPORT LAKE		60.53	151.05	00170	WATER	2000	500										*							
445	DAHLEN HOMESTEAD		60.50	150.93	00300	GRAVEL	1400	120										*							
445	DAN FRANCE		60.48	150.93	00260	DIRT	1490	40										*							
445	ISAAK HOMESTEAD		60.46	151.12	00250	GRVL-D	936	50																	
445	MILLER HOMESTEAD		60.53	150.94	00300	DIRT	2590	30										*							
445	LONGMARE LAKE		60.51	150.90	00200	WATER	5000	500										*							
445	SOLDOTNA HOSPITAL H		60.49	151.08	00095	ASPH	80	48	*						*	*	*	*							
445	SOLDOTNA	SXQ	60.48	151.04	00107	ASPH	4972	130	*								*	*	*	*			*	*	
445	MACKEYS LAKES		60.53	151.00	00175	WATER	3000	1000	*									*							
446	SOLOMON /LEES CAMP/	SOL	64.62	164.39	00095	GRAVEL	1850	100										*							
446	SOLOMON STATE FIELD		64.56	164.44	00025	DIRT-G	1650	60	*									*							
447	P&F CANNERY		58.73	156.94	00060	DIRT	750	30	*									*							
447	DIAMOND NN CANNERY		58.71	156.99	00060	DIRT	800	30																	
447	SOUTH NAKNEK AR 2	WSN	58.70	157.01	00130	GRAVEL	1350	75	*									*							
448	SPARREVOHN AFS	SVW	61.10	155.59	01583	GRAVEL	4100	150			*			*	*	*	*								
449	FERCO AVIATION		61.38	142.80	01480	GRAVEL	1000	30																	
450	SWAN HARBOR		55.23	160.55	00000		5000	0	*														*		
451	SQUIRREL RIVER		67.11	160.47	00200	GRAVEL	1100	100	*																
452	STAMPEDE	Z90	63.75	150.33	01850	GRAVEL	4300	90	*																
453	STEAMBOAT BAY	WSB	55.53	133.44	00000	WATER	6000	2000	*																
454	STEBBINS	WBB	63.52	162.28	26E	GRVL-D	1990	95	*									*							
455	MORGAN HOMESTEAD		60.50	150.87	00210	GRVL-D	2300	75										*							
455	SCOUT LAKE		60.53	150.85	00300	GRAVEL	1300	70										*							

Table D.2

(Continued)

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MEDICAL	F+R SERV	SNOWREM	WIND IND	INSTR	RELIS	IVASI	RAWY LTS	TDZ LTS	RVR
455	SCOUT LAKE		60.53	150.85	00245	WATER	1000	600										*						
455	RALPH GAETANOS		60.53	150.75	00200	DIRT	2100	80										*						
455	NORTH GASLINE		60.83	149.99	00350	GRAVEL	2980	50	*															
455	SOUTH GASLINE		60.70	150.18	00400	GRAVEL	3735	65	*															
455	STERLING /NAPTOWNE/		60.53	150.72	00200	TURF	2100	50	*								*	*						
456	STEVENS VILLAGE	SVS	66.01	149.09	00310	TURF-D	2200	30	*									*						
457	STONY RIVER 2	SRV	61.79	156.59	00230	GRAVEL	2400	30	*									*						
458	STRELNA NR 2		61.51	144.07	01280	GRAVEL	1575	25	*									*						
459	SULLIVAN CITY		65.02	164.32	00970	GRAVEL	2100	40	*															
460	SUMMIT	UMM	63.33	149.12	02409	GRAVEL	2760	200	*		*		*			*	*	*	*			*		
461	SUMMIT LAKE	SSA	63.15	145.54	03220	DIRT	1310	70	*									*						
462	LITTLE SUSITNA		61.37	150.26	00070	DIRT	2600	75									*	*						
463	SUSITNA LODGE		63.09	147.47	02675	GRVL-D	1980	100	*									*						
463	SUSITNA LODGE		63.09	147.47	02650	WATER	2800	350	*															
464	JUNESVILLE MINE		61.73	148.93	00870	GRAVEL	1450	90	*															
465	SWANSON RIVER		60.76	150.81	00200	GRAVEL	2640	75						*			*	*				*		
466	TAHNETA PASS	HNE	61.90	147.30	02960	GRVL-D	1646	100	*									*				*		
466	TAHNETA PASS	HNE	61.90	147.30	02950	WATER	7000	1000	*									*						
467	TAKOTNA	TCT	62.99	154.07	00825	GRAVEL	1600	100	*									*						
467	TATALINA AFS	TLJ	62.89	155.97	00944	GRAVEL	3800	150				*	*		*		*	*						
468	TAKU HARBOR		58.07	134.01	00000	WATER	3000	1000	*															
469	TAKU LODGE	TKL	58.49	133.94	00000	WATER	5000	500	*															
470	TALKEETNA	TKA	62.32	150.09	00358	GRAVEL	4040	120	*		*		*				*	*	*			*		
470	TALKEETNA VILLAGE STRIP		62.32	150.11	00346	GRAVEL	1200	30	*									*						
471	TANACROSS	TSG	63.37	143.33	01549	ASPH	5100	150	*								*	*						
472	TANALIAN POINT	TPO	60.20	154.32	00280	DIRT-G	2900	80										*						
473	RALPH M CALHOUN MEML	TAL	65.17	152.11	00228	GRAVEL	4374	150	*		*	*	*				*	*	*			*		
474	TANUNAK		60.58	165.27	00017	GRAVEL	2400	75	*								*	*				*		
475	TATITLEK		60.86	146.68	00000	WATER	8000	4000	*															
475	TATITLEK		60.87	146.68	25E	GRAVEL	1025	35	*									*						
476	TATITNA		62.29	153.36	01490	TURF	1500	100	*									*						
477	TAYLOR		65.68	164.80	00440	GRVL-D	1600	60	*															
478	TAYLOR CREEK		60.68	157.37	00900	GRAVEL	1500	50	*									*						
479	TAZLINA	Z14	62.07	146.46	02450	GRAVEL	1650	60	*									*						
479	TAZLINA /SMOKEY LAKE/		62.06	146.45	02407	WATER	2200	600	*															
480	TERRNOF BAY		56.43	134.07	00000	WATER	10000	5000	*															
481	TELIDA		63.39	153.27	00650	TURF	1100	25	*									*						
482	TELLER NR 1		65.24	166.36	00010	GRAVEL	908	60	*									*						
482	TELLER 3		65.27	166.35	00020	ASP	1700	50	*									*				*		
483	BHEVIG MISSION	KTS	65.33	166.48	00025	GRAVEL	2200	60	*									*						

Table D.2

(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 19

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MEDICAL	FAR/SARV	SNOW/WIND	INSTR	RELIL	IVASI	RWY/LTS	TDLTS	RVR
484	TENAKEE	TKE	57.78	135.22	00000	WATER	10000	7000	*														
485	TERROR BAY	KTY	57.83	153.18	00000	WATER	10000	1000	*														
486	TETLIN	STF	63.13	142.52	01625	TURF	2000	25	*								*						
487	THOMPSON PASS		61.18	145.69	02080	TURF	1800	60	*												*		
488	THORNE RIVER	KTB	55.69	132.53	00000	WATER	3000	2000	*								*						
489	TIKCHIK LODGE		59.96	158.47	00304	WATER	2000	2000	*														
490	TIMBER CREEK		64.09	155.57	00935	DIRT	3265	60															
491	TIN CITY AFS	TNC	65.56	167.92	00269	GRAVEL	4700	150				*	*			*	*	*			*		
492	TUGIAK	TUG	59.06	160.38	12E	GRAVEL	2550	100	*								*	*					
493	TOK	TKJ	63.30	143.00	01670	GRAVEL	2300	50	*									*					
493	TOK 2		63.30	143.02	01630	GRAVEL	2035	114										*					
493	RUDYS PRIVATE		63.33	142.95	01630	GRAVEL	3200	200										*					
494	TOKEEN /NEW/		55.94	133.32	00000	WATER	6000	400	*														
495	TUKSOOK BAY	OOK	60.53	165.11	00095	GRVL-D	1960	75	*								*	*			*		
496	TULSONA LAKE		62.11	146.04	02075	GRAVEL	1850	70	*									*					
496	TULSONA LAKE		62.11	146.04	02000	WATER	4000	1500	*									*					
497	TUNSINA /UPPER/	STS	61.66	145.18	01500	TURF-D	1720	150	*									*					
498	TUOLTA CAMP	MUY	58.64	149.57	02400	GRAVEL	2500	50					*		*	*	*	*			*		
499	TUTATLANIKA RIVER		64.03	148.52	02717	GRVL-D	2400	70	*									*					
500	TWAITAG BAY PRODUCTION		60.82	151.80	00200	GRVL-D	4500	100						*		*	*	*			*		
501	TWAMAY BAR		67.11	150.89	01000	DIRT	1200	70	*									*					
502	TWEE POINT C G	TRP	54.80	130.93	00047	WOOD	70	70													*		
503	TWINITY		65.73	164.85	00580	GRAVEL	1100	40	*									*			*		
504	TULUKSAK	TLT	61.10	160.97	00030	TURF	2000	100	*								*	*					
505	TUNTATULIAG	Z20	60.35	162.63	00012	WATER	2000	200	*														
506	TUNTUTULIAG		60.36	162.69	18E	TURF	1000	50	*									*					
507	NICHIN COVE		55.85	133.23	00000	WATER	10000	300	*									*					
508	TWELVE MILE ARM		55.39	132.70	00000	WATER	10000	1000	*														
509	TWIN HILLS		59.08	160.27	82E	GRAVEL	2000	90	*														
510	TYONEK	TYE	61.08	151.14	00110	GRAVEL	1427	100						*		*		*					
510	NIKOLAI CREEK		61.01	151.45	00030	GRAVEL	4100	100										*					
510	GRANITE POINT		61.02	151.34	00150	GRAVEL	2100	60															
511	UGASHIK	UGA	57.51	157.39	00025	DIRT	1245	65	*														
512	AUFEIS UNIT AIRSTRIP		68.16	149.57	1100E	GRAVEL	5250	135						*				*			*		
512	UMIAT	UMT	69.38	152.17	290E	GRAVEL	5918	142	*												*		
512	UMIAT M		69.37	152.13	00350	GRAVEL	50	50	*												*		
513	NORTH SHORE	UMR	53.52	167.92	00140	GRAVEL	6000	200	*														
513	UMNAK	UNS	53.37	167.90	00127	GRAVEL	8070	200	*			*						*				*	
514	UNALAKLEET	UNK	63.89	160.80	00021	GRAVEL	2320	170	*			*	*				*	*	*		*	*	
515	UTICA CREEK		65.92	163.05	00100	GRAVEL	2200	90	*								*	*					

Table D.2

(Continued)

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. TOX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MELDOC	FUEL+SERV	SNOW REMV	WIND IND	INSTR	RILS	IALS	VASI	RNWY LTS	TDLTS	RVR
516	INDIAN MOUNTAIN AFS	IIN	65.99	153.70	01220	GRAVEL	4100	120				*						*				*			
517	UYAK SP	KUY	57.63	154.00	00000		10000	1000	*														*		
518	VALDEZ NR 2	VDZ	61.13	146.24	00111	ASPH T	5000	100	*	*		*		*			*	*		*		*			
519	VENETIE	VEE	67.02	146.41	00550	DIRT	4400	50	*								*	*							
520	VICTORY		61.80	147.94	01800	DIRT	1700	60										*							
521	WAINWRIGHT /BEACH/		70.64	160.00	00005	GRAVEL	2000	50	*																
521	WAINWRIGHT DEW STATION	AIN	70.61	159.86	00088	GRAVEL	3520	100					*				*	*		*			*		
521	WAINWRIGHT	5WW	70.63	160.03	35E	GRAVEL	2200	100	*								*	*					*		
522	WALES	WAA	65.62	168.10	00025	GRAVEL	2400	100	*									*					*		
522	WALES BEACH		65.61	168.08	00010	GRVL-D	1400	50										*							
523	WASILLA	Z16	61.59	149.45	00370	GRAVEL	2300	90	*								*	*							
523	KILARNEY		61.57	149.47	00300	GRVL-D	1477	60																	
523	WESS		61.62	149.62	00355	GRVL-D	900	65										*					*		
523	WASILLA LAKE	Z16	61.59	149.41	00330		4000	1000	*									*					*		
524	WATERFALL	KWF	55.30	133.24	00000	WATER	10000	1000	*																
525	WATTAMISE		59.33	161.22	00250	GRAVEL	2500	75	*																
526	WEST WAVIK	VKW	59.76	147.18	00410	GRAVEL	1500	150									*								
527	WEST KUPARUK	XPU	70.33	149.28	00041	GRAVEL	1700	100						*						*					
528	WEST POINT VILLAGE	KWP	57.77	153.55	00000	WATER	10000	500	*																
529	WHITE MOUNTAIN	WMO	64.68	163.41	00262	GRVL-D	1900	80	*									*							
529	WHITE MOUNTAIN MINE		62.18	154.85	02100	GRAVEL	2400	60										*							
530	WHITTIER		60.78	148.72	30E	GRAVEL	1500	100	*									*							
531	WIDE BAY	IBY	57.37	156.41	00050	GRAVEL	3000	100	*																
532	WILLOW LAKE		61.80	145.19	01400	TURF-G	2180	60										*							
533	WILLOW	Z22	61.76	150.05	00220	GRAVEL	3400	115	*									*							
534	WISEMAN	WSM	67.40	150.12	01150	GRAVEL	3000	100	*									*							
534	LINDA CREEK		67.53	149.82	01400	GRVL-D	1550	75										*							
535	WOODCHOPPER	WOO	65.31	143.41	00950	GRAVEL	2500	50																	
536	WOOD RIVER LODGE		63.76	147.97	2960E	GRAVEL	1800	40										*					*		
537	WRANGELL	WRG	56.47	132.38	00000	WATER	10000	360	*									*							
537	WRANGELL	WRG	56.48	132.37	44S	GRAVEL	6000	170	*			*					*	*		*		*	*		
538	YAKATAGA	CYT	60.09	142.49	00012	GRAVEL	4950	150	*								*	*							
538	YAKATAGA M		60.08	142.49	00008	GRAVEL	100	100	*									*							
539	YAKUTAT	YAK	59.51	139.66	00033	CONC	7813	150	*			*	*				*	*	*				*		
539	YAKUTAT		59.54	139.74	00000	WATER	7500	2000	*																
539	YAKUTAT M		59.51	139.66	00030	CONC	50	50	*				*				*	*							
539	HARLEQUIN LAKE		59.41	139.02	00100	GRAVEL	2096	50	*									*							
539	SITUK		59.55	139.51	00050	GRAVEL	2112	50	*									*							
539	TANIS MESA		59.25	138.50	00130	GRAVEL	1980	50	*									*							
539	DANGEROUS RIVER		59.41	139.19	00050	GRAVEL	2100	50	*									*							

Table D.2
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 21

FAA AIRPORT DIRECTORY TAPE - PHYSICAL CHARACTERISTICS DATA

COMM. IDX	AIRPORT NAME	ID	LAT	LON	ELEV	RUNWAY COMP	RUNWAY LGTH	RUNWAY WDTH	PUBLIC	TOWER	FSS	SCHED	WEATHER	UNICOM	MEDICAL	FAR SERV	SNOW REM	WIND IND	INSTR	RELIL	IVASI	RNWY LTS	TDZ LTS	RVR
539	MIDDLE DANGEROUS CAMP		59.41	139.10	00050	TURF	2139	70	*									*						
539	MARINE FOODS CANNERY		59.79	140.06	00020	TURF	2400	50	*															
539	YAKTSE		59.92	141.31	00125	GRAVEL	1915	35	*															
539	RUDDEN STREAM		59.79	140.01	00015	GRAVEL	1800	50	*													*		
539	ALSEK RIVER		59.19	138.44	00030	TURF	1875	50	*									*						
539	EAST ALSEK RIVER		59.13	138.40	00020	TURF	2052	55	*									*						
540	YANKEE CREEK 2		43.00	156.36	01120	GRVL-D	2000	80	*									*						
541	YES BAY LODGE		55.92	131.80	00000	WATER	5000	2000	*									*						
542	ZACHAR BAY	KZB	57.55	153.74	00000	WATER	10000	4000	*															

Table D.3
Airport Operations Data

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 1

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM.	AIRPORT NAME		ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
TDX		ID	TAXI	LOCAL GA	ITPNT GA	MIL	TOTAL	PEAK MO,GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
1	ADAK NS /MITCHELL FLD/	ADK	10	0	10	5000	5020	2	0	0	0	0	0	0
2	ADUGNAK LAKE		50	10	50	10	120	50	0	0	0	0	0	0
3	AGGIE CREEK		50	0	50	0	100	10	0	0	0	0	0	0
4	AKHIOK	AKK	50	0	100	0	150	10	0	0	0	0	0	0
5	AKIACHAK		100	0	150	0	250	25	0	0	0	0	0	0
5	AKIACHAK	KKI	100	50	50	0	200	15	0	1	0	0	1	2
6	AKIAK	AKI	100	0	20	0	120	10	0	0	0	0	0	0
7	AKUTAN	KQA	5	0	0	0	5	0	0	0	0	0	0	0
8	ALEKANUK	AUK	500	0	150	0	650	30	0	0	0	0	0	0
8	ALEKANUK	AUK	100	0	200	0	300	20	0	0	0	0	0	0
9	ALEKNAGIK	AKK	500	1500	200	0	2200	140	3	2	0	0	0	5
9	[illegible]		25	0	200	0	225	30	0	0	0	0	0	0
9	ALEKNAGIK		25	0	150	0	175	20	0	0	0	0	0	0
9	ALEKNAGIK MISSION SCHOOL		50	100	200	0	350	40	1	1	0	0	0	2
10	ALIAKAMET	AET	400	0	400	20	820	50	0	0	0	0	0	0
11	AMBLER RIVER	AHL	100	0	160	0	260	40	0	0	0	0	0	0
12	ANCHITKA	AHT	0	0	0	10	10	0	0	0	0	0	0	0
13	AMERICAN CREEK		50	50	0	0	100	15	0	1	0	0	0	1
14	AMOOK BAY		50	100	20	0	170	30	0	0	0	0	1	1
15	ANAKTUVUK PASS	AKP	100	0	400	0	500	50	0	0	0	0	0	0
16	CAMPBELL AIRSTRIP	CSR	0	0	0	0	0	0	0	0	0	0	0	0
16	PROVIDENCE HOSPITAL		50	0	100	0	150	10	0	0	0	0	0	0
16	CAMPBELL HLM		0	0	0	100	100	0	0	0	0	0	0	0
16	ANCHORAGE INTL	ANC	10000	70600	70100	4200	154900	15400	123	158	29	0	0	310
16	ANCHORAGE INTL H		100	500	500	0	1100	300	0	0	0	20	0	20
16	MERRILL FIELD	MRI	30000	173248	125366	0	328614	35539	250	350	53	116	3	772
16	MERRILL FIELD H		1500	2000	1500	0	5000	500	0	0	0	52	0	52
16	CAMPBELL LAKE		10	2500	500	0	3010	300	11	14	0	0	25	50
16	ELMENDORF AFB	EDF	0	3500	500	70000	74000	800	5	2	0	0	0	7
16	ELMENDORF AFB/SUMD HOSPITAL		0	0	0	100	100	0	0	0	0	0	0	0
16	FIRE ISLAND	SFI	250	100	200	0	550	50	1	0	0	0	0	1
16	FAHNTT CREEK		0	30	0	0	30	10	1	0	0	0	0	1
16	FIRE ISLAND		0	0	0	0	0	0	0	0	0	0	0	0
16	SKY HARBOR		0	1000	250	0	1250	150	29	11	0	0	0	40
16	LAKE HOOD STRIP		50	1500	3000	0	4550	800	0	0	0	0	0	0
16	SPENARD AIRSTRIP	LHD	50	400	250	0	700	50	28	2	0	0	0	30
16	LAKE HOOD	LHD	5500	11000	35500	60	52060	8000	0	0	0	0	0	0
17	BRYANT AAF	FRN	0	40000	2000	23000	65000	5000	3	6	0	0	0	9
17	BRYANT AAF H		0	0	0	5000	5000	0	0	0	0	0	0	0
18	ST MARYS	KSM	1000	250	1200	0	2450	60	0	2	0	0	0	2

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Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 2

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. ID#	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO.GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
19	ANGUON	AGN	500	0	600	0	1100	100	0	0	0	0	0	0
20	ANIAK	ANI	4000	200	5000	15	9215	560	1	11	1	0	0	13
20	ANIAK		150	200	150	0	500	20	2	0	0	0	0	2
21	ANNETTE ISLAND	ANN	200	0	14500	2000	16700	20	0	3	2	0	0	5
21	TAMGAS HARBOR		50	50	50	0	150	10	0	0	0	0	0	0
22	ANVIK	ANV	200	0	50	0	250	20	0	0	0	0	0	0
22	ANVIK	ANV	100	50	50	0	200	10	1	0	0	0	1	2
23	ARCTIC VILLAGE	ARC	100	12	50	0	162	10	0	0	0	0	0	0
23	ARCTIC VILLAGE		100	0	150	0	250	30	0	0	0	0	0	0
24	BEAVER RIVER		50	0	30	0	80	5	0	0	0	0	0	0
25	CASCO COVE CGS	ATU	0	0	0	0	0	0	0	0	0	0	0	0
26	BARN SPRING BAY	BNF	50	0	50	0	100	10	0	0	0	0	0	0
27	BILEY POST-WILL ROGERS MEM	BRW	1500	2000	1500	50	5050	200	2	2	0	0	0	4
27	BILEY POST-WILL ROGERS MEM H		50	0	50	0	100	50	0	0	0	0	0	0
28	BARTER ISLAND DEW STATION	BTI	0	50	100	50	200	15	0	0	0	0	0	0
29	BARTLETT COVE	BQV	150	100	150	0	400	35	0	0	0	0	1	1
30	BASIN CREEK		50	0	200	0	250	30	0	0	0	0	0	0
31	BEAR CREEK 1	BCC	10	0	5	0	15	5	0	0	0	0	0	0
31	BEAR CREEK 3		200	0	100	0	300	20	0	0	0	0	0	0
31	BEAR CREEK 4		25	0	200	0	225	50	0	0	0	0	0	0
32	JOHNSONS LANDING		0	100	100	0	200	20	0	1	0	0	0	1
33	CAPE SABINE		50	200	100	0	350	30	0	0	0	0	0	0
34	BEAVER	WBQ	100	0	400	0	500	40	0	0	0	0	0	0
35	BEDROCK CREEK		0	0	0	0	0	0	0	0	0	0	0	0
36	BELKOFSKI		10	0	500	0	510	150	0	0	0	0	0	0
37	BELL ISLAND HOT SPRINGS	KHE	50	0	300	0	350	100	0	0	0	0	0	0
38	BELUGA	BLG	500	100	5000	0	5600	700	0	1	0	0	0	1
39	BEN CREEK		50	0	50	0	100	20	0	0	0	0	0	0
40	BANGAR LAKE		50	200	2000	0	2250	300	0	0	0	0	6	6
40	BETHEL		7500	100	8200	200	16000	1000	0	0	0	0	9	9
40	ARTHUR DALL LAKE		0	10	300	0	310	50	0	0	0	0	1	1
40	BETHEL H		0	0	0	0	0	0	0	0	0	0	0	0
40	BETHEL	BET	7000	4500	7000	1200	19700	2500	3	25	2	0	0	30
41	BETTLES	BTT	500	1200	3000	150	4850	1000	2	3	1	0	0	6
41	EVANSVILLE		400	100	200	0	700	60	0	1	0	0	1	2
42	BETTLES RIVER		50	0	50	0	100	20	0	0	0	0	0	0
43	BIG HORN		10	100	50	0	160	10	0	2	0	0	0	2
44	BIG HURRAH MINE		50	0	50	0	100	10	0	0	0	0	0	0
45	BIG INDIAN CREEK		10	0	50	0	60	10	0	0	0	0	0	0
46	BIG LAKE STRIP NR 2	BGQ	200	300	800	0	1300	320	0	4	0	0	0	4

Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 3

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO.GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
47	BIG MOUNTAIN AFS	BMX	100	0	125	25	250	10	0	0	0	0	0	0
48	BIRCHWOOD	Z15	300	50000	4500	0	54800	8000	65	20	0	0	0	85
49	BLACK DOME		50	0	50	0	100	10	0	0	0	0	0	0
50	BLACK RAPIDS	SBK	10	0	50	50	110	10	0	0	0	0	0	0
51	BLUFF		50	10	10	0	70	5	0	0	0	0	0	0
52	BURNTTE		100	0	400	0	500	80	2	1	0	0	0	3
52	BURNTTE/UPPER/	BLU	0	0	0	0	0	0	0	0	0	0	0	0
53	BUSKELL BAY AFS		50	0	10	0	60	5	0	0	0	0	0	0
54	BUTTONBAY	BYA	100	0	100	0	200	15	0	0	0	0	0	0
55	BUCK CREEK		50	0	50	0	100	10	0	0	0	0	0	0
56	BUCKLAND	BKC	150	0	150	0	300	20	0	0	0	0	0	0
57	CACHE CREEK FIELD		10	0	25	0	35	5	0	0	0	0	0	0
58	CAMDEN BAY POINT		10	0	50	0	60	10	0	0	0	0	0	0
59	CAMP MINE		25	0	100	0	125	40	0	0	0	0	0	0
60	CANDLE 2	CDL	50	20	50	0	120	25	0	0	1	0	0	1
61	CANTWELL		25	150	150	0	325	40	0	1	0	0	0	1
61	CARSHNER		10	0	50	0	60	10	0	0	0	0	0	0
61	CARTER BOWTH AIRFIELD		40	150	125	0	315	15	0	1	0	0	0	1
62	CANYON CREEK		0	0	0	0	0	0	0	0	0	0	0	0
63	CAPE DECISION C. GA	CDE	0	0	0	75	75	0	0	0	0	0	0	0
64	CAPE KRUSENSTERN		50	0	100	0	150	0	0	0	0	0	0	0
65	CAPE LISBURNE AFS	LUR	0	0	200	0	200	10	0	0	0	0	0	0
66	CAPE NEWENHAM AFS	EHM	10	0	50	24	84	10	0	0	0	0	0	0
67	CAPE ROLE		150	0	250	0	400	25	0	0	0	0	0	0
68	CAPE ROMANZOF AFS	CZF	0	0	0	0	0	0	0	0	0	0	0	0
69	CAPE SARICHEF AFS	CSH	100	0	10	50	160	1	0	0	0	0	0	0
70	CAPE STMPSON		100	0	100	0	200	20	0	0	0	0	0	0
71	CAPE SPENCER C.G.	CSP	0	0	0	10	10	0	0	0	0	0	0	0
72	CAPE YAKATAGA		10	0	50	0	60	5	0	0	0	0	0	0
73	CATHEDRAL RAPIDS		500	500	1500	0	2500	50	1	5	0	0	0	6
74	CATHEDRAL RIVER		45	0	100	0	145	10	0	0	0	0	0	0
75	CENTRAL	CEM	100	0	150	0	250	15	0	0	0	0	0	0
76	CHAIX HILLS		100	0	200	0	300	100	0	0	0	0	0	0
77	CHALKYITSIK	CIK	150	0	150	0	300	60	0	0	0	0	0	0
78	CHANDALAR LAKE	HCR	100	100	1000	0	1200	150	0	0	0	0	0	0
78	CHANDALAR LAKE		0	75	400	0	475	50	0	0	0	0	0	0
79	CHATHAM	CYM	200	0	400	0	600	100	0	0	0	0	0	0
80	CHEFORNAK	CYF	100	0	100	0	200	20	0	0	0	0	0	0
80	CHEFORNAK		100	0	100	0	200	20	0	0	0	0	0	0
81	CHELATNA LAKE LODGE	Z24	25	50	200	0	275	30	1	1	0	0	0	2

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Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 4

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM.	AIRPORT NAME		ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT						
TDX		ID	TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO.GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
82	CHENA HOT SPRINGS	CEX	100	60	200	0	360	15	0	1	0	0	0	1
83	CHERNOFSKI HARBOR	KCN	0	0	0	0	0	0	0	0	0	0	0	0
84	CHEVAK	VAK	50	0	10	0	60	5	0	0	0	0	0	0
84	CHEVAK		100	0	50	0	150	20	0	0	0	0	0	0
84	CHEVAK		100	0	30	0	130	25	0	0	0	0	0	0
85	CHICKEN	CKX	150	0	150	0	300	50	0	0	0	0	0	0
86	CHIEF COVE		50	0	100	0	150	20	0	0	0	0	0	0
87	CHIGNIK BAY		10	0	200	0	210	20	0	0	0	0	0	0
87	CHIGNIK FISHERIES	KCG	450	100	50	0	600	150	1	0	0	0	0	1
87	CHIGNIK		150	0	100	0	250	10	0	0	0	0	0	0
88	CHIGNIK LAGOON	KCL	500	100	500	0	1100	100	1	0	0	0	0	1
89	CHIGNIK LAKE		500	0	200	0	700	20	0	0	0	0	0	0
90	CHISANA	CZN	50	0	100	0	150	15	0	0	0	0	0	0
91	CHISTOCHINA	CZO	400	500	700	0	1600	150	0	0	0	0	0	0
91	CHISTYS		50	0	100	0	150	10	0	0	0	0	0	0
91	CHITINA		15	300	400	0	715	150	4	0	0	0	0	4
92	CHITINA	CXC	500	200	500	0	1200	100	1	3	0	0	0	4
92	CHITINA		500	20	200	0	720	50	0	0	0	0	1	1
93	CHOKOSNA		10	0	10	0	20	5	0	0	0	0	0	0
94	CHUATBAT		0	250	250	0	500	40	0	4	0	0	0	4
94	CHUENG		0	50	50	0	100	10	1	0	0	0	0	1
95	CIRCLE CITY	CHC	100	150	1000	0	1250	130	1	2	0	0	0	3
95	CIRCLE HOT SPRINGS	CHP	200	0	1500	0	1700	300	0	0	0	0	0	0
97	CLARKS POINT	CLP	1500	150	1200	0	2850	200	0	1	0	0	0	1
98	CLEAR AFAS		100	100	250	50	500	50	6	5	0	0	0	11
98	CLEAR SKY LODGE	CLF	0	300	500	0	800	50	3	0	0	0	0	3
98	LIARD		50	200	500	0	750	60	0	1	0	0	0	1
99	CLEARWATER		5	0	10	0	15	5	0	0	0	0	0	0
100	COAL CREEK		100	0	100	0	200	10	0	0	0	0	0	0
101	COASTAL		1200	0	1800	0	3000	200	0	0	0	0	0	0
102	COFFMAN COVE	KCC	400	200	500	0	1100	50	0	0	0	0	2	2
103	COLD BAY	CDB	50	20	1155	139	1364	150	1	0	0	0	0	1
103	COLD BAY		0	50	100	50	200	15	0	0	0	0	0	0
103	BLIND LAKE		0	0	0	0	0	0	0	0	0	0	0	0
104	COLEFOOT	CXF	4500	0	4300	0	8800	500	0	0	0	0	0	0
105	GOLDSTREAM		50	0	100	0	150	10	2	0	0	0	0	2
106	COLORADO CREEK	KCR	50	0	150	0	200	30	0	0	0	0	0	0
107	COLORADO STATION		10	0	100	0	110	15	0	0	0	0	0	0
107	COLORADO/DUNKLE MINE/		0	0	0	0	0	0	0	0	0	0	0	0
108	QUARTZ CREEK	JLA	50	0	500	0	550	50	0	0	0	0	0	0

Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 5

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO.GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
108	CURRER LANDING		50	0	100	0	150	10	0	0	0	0	0	0
109	KENAI LAKE		150	100	100	0	350	50	0	0	0	0	1	1
109	COPPER CENTER 1	CZC	0	0	0	0	0	0	0	0	0	0	0	0
109	COPPER CENTER 2		50	0	200	0	250	10	1	0	0	0	0	1
110	CORDOVA-MILE 13	CDV	1500	3000	1500	200	6200	1000	9	6	0	0	0	15
110	CORDOVA MUNI	CDV	2000	1000	500	0	3500	200	13	3	1	1	2	20
110	EYAK LAKE		2500	5000	1500	0	9000	1500	0	0	0	0	9	9
110	CORDOVA M		10	0	200	0	210	25	0	0	0	0	0	0
111	COUNCIL 2		150	0	20	0	170	20	0	0	0	0	0	0
111	COUNCIL 1	CIL	50	0	50	0	100	10	0	0	0	0	0	0
112	CHAK BAY		100	0	50	0	150	10	0	0	0	0	0	0
113	CHARTON ISLAND	CJI	50	0	10	0	60	1	0	0	0	0	0	0
114	CHAIG	CGA	2000	0	500	0	2500	200	0	0	0	0	0	0
114	CRAIG OG		0	0	0	100	100	0	0	0	0	0	0	0
115	CREVICE CREEK		0	100	10	0	110	20	1	0	0	0	0	1
116	CROOKED CREEK/KANTISHNA/	CKD	0	0	0	0	0	0	0	0	0	0	0	0
117	CROSSWIND LAKE		0	0	0	0	0	0	0	0	0	0	0	0
118	CURRY		5	0	25	0	30	5	0	0	0	0	0	0
119	DAHL /SEWARD PENINSULA/		50	0	50	0	100	10	0	0	0	0	0	0
120	DAHL CREEK	DCK	300	50	200	0	550	40	0	1	0	0	0	1
121	DAVID RIVER		500	0	100	0	600	100	0	0	0	0	0	0
122	DEADHORSE	SCC	2700	50	485	250	3485	150	0	0	0	3	0	3
122	DEADHORSE		500	500	100	0	1100	50	0	0	0	1	0	1
123	DECOURCY MOUNTAIN MINE		10	0	10	0	20	5	0	0	0	0	0	0
124	DERRING	DRG	100	0	50	0	150	30	0	0	0	0	0	0
124	DERRING /NEW/		0	0	0	0	0	0	0	0	0	0	0	0
125	ALLEN AAF	BIG	0	1200	1500	4500	7200	400	4	6	0	0	0	10
126	DENALI FIELD 2		10	0	50	0	60	10	0	0	0	0	0	0
126	DENALI ROAD COMMISSION 2		0	0	0	0	0	0	0	0	0	0	0	0
126	DENALI ROAD COMMISSION NR 1		0	0	50	0	50	10	0	0	0	0	0	0
127	DIETRICH CAMP	DTK	750	100	2500	0	3350	600	0	0	0	0	0	0
128	DILLINGHAM	DLG	10000	12450	28800	0	51250	7000	26	49	4	0	0	79
128	DILLINGHAM		1000	1000	400	0	2400	50	0	0	0	0	15	15
128	CITY FIELD		0	0	0	0	0	0	0	0	0	0	0	0
129	DUT LAKE		50	0	150	0	200	10	0	0	0	0	0	0
130	DUTCH HARBOR NAV AFS	DEB	0	0	0	0	0	0	0	0	0	0	0	0
131	DUNCAN CANAL AFS		100	0	10	0	110	10	0	0	0	0	0	0
132	DUTCH HARBOR	DUT	100	0	50	0	150	20	0	0	0	0	0	0
132	BROAD BAY		0	0	0	0	0	0	0	0	0	0	0	0
132	DUTCH HARBOR		100	0	150	0	250	10	0	0	0	0	0	0

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Table D.3
(Continued)

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO.GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
157	CLEAR CREEK		0	0	50	50	100	20	0	0	0	0	0	0
158	FALSE ISLAND		400	0	500	0	900	40	0	0	0	0	0	0
159	FALSE PASS	KFP	50	0	50	0	100	20	0	0	0	0	0	0
159	FALSE PASS	KFP	0	0	0	0	0	0	0	0	0	0	0	0
160	FAREWELL	FWL	100	200	400	0	700	50	1	2	0	0	0	3
161	FAREWELL LAKE		75	100	50	0	225	30	0	1	0	0	0	1
161	FAREWELL LAKE		50	50	50	0	150	20	0	0	0	0	1	1
162	FEATHER RIVER		10	0	50	0	60	10	0	0	0	0	0	0
163	FIVE FINGER CG		0	0	0	50	50	0	0	0	0	0	0	0
164	FIVE MILE	FVM	7000	50	8000	0	15050	700	0	0	0	0	0	0
165	FLAT	FLT	200	50	350	0	600	50	0	1	0	0	0	1
166	FLAXMAN ISLAND DEW STATION	FXM	0	10	50	50	110	10	0	0	0	0	0	0
167	FLIGER	SFO	0	0	0	0	0	0	0	0	0	0	0	0
168	FORT YUKON	FYU	2500	3500	3500	200	9700	1000	4	5	0	0	0	9
168	HOSPITAL LAKE		50	200	150	0	400	30	0	2	0	0	2	4
169	FRANCENS		50	0	100	0	150	20	0	0	0	0	0	0
170	FRANKLIN BLUFFS	FKF	4300	0	4300	0	8600	500	0	0	0	0	0	0
171	FUNTER BAY	FNR	100	0	150	0	250	15	0	0	0	0	0	0
172	GAKONA	GAK	20	50	100	0	170	15	1	0	0	0	0	1
173	GALBRAITH LAKE	GBH	4500	0	4500	0	9000	500	0	0	0	0	0	0
174	GALENA	GAL	500	500	6000	600	7600	1400	3	4	0	0	0	7
175	GAMBELL	GAM	100	0	50	0	150	15	0	0	1	0	0	1
176	GATES CREEK	GEK	0	500	50	0	550	50	0	1	0	0	0	1
177	ALYESKA	AQY	50	500	100	0	650	60	2	0	0	0	0	2
178	GLACIER CREEK	KGZ	50	0	10	0	60	5	0	0	0	0	0	0
179	GLACIER PARK		10	0	50	0	60	10	0	0	0	0	0	0
180	HARRISICKS		0	150	35	0	185	20	0	1	0	0	0	1
180	GATEWAY LODGE H		0	100	100	50	250	100	0	0	0	0	0	0
181	GOLD BENCH		10	0	50	0	60	10	0	0	0	0	0	0
182	GOLD CREEK		0	300	150	0	450	50	1	0	0	0	0	1
183	GOLDEN HORN LODGE		50	0	50	0	100	20	0	0	0	0	0	0
184	GOLD KING CREEK AFS		100	0	50	0	150	20	0	0	0	0	0	0
185	GOLOVIN	GLV	500	900	200	0	1600	30	0	1	0	0	0	1
186	GOODNEWS	GNU	150	0	1700	0	1850	200	0	0	0	0	0	0
187	GOOSE BAY	ZWO	50	0	200	100	350	50	0	2	0	0	0	2
188	GRANITE MOUNTAIN AFS	GMT	300	0	300	0	600	25	0	0	0	0	0	0
189	GRAYLING	KGX	250	500	100	0	850	80	1	2	0	0	0	3
190	GULKANA	GKN	4000	4000	9000	500	17500	6000	9	9	1	2	0	21
190	GULKANA		0	50	50	100	200	10	0	0	0	1	0	1
191	GUNSIGHT MOUNTAIN		0	100	100	0	200	40	2	0	0	0	0	2

Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 8

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. ID#	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO.GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
192	GUSTAVUS	GST	300	100	350	30	780	150	0	1	0	0	0	1
193	HAINES	HNS	600	2000	4000	0	6600	250	9	4	0	0	0	13
193	HAINES		100	0	150	0	250	20	0	0	0	0	0	0
193	CHILKAT LAKE		10	0	100	0	110	20	0	0	0	0	0	0
193	SCHAFFER		100	0	100	0	200	10	0	0	0	0	0	0
193	TENAS-WESTFALL		100	100	100	0	300	20	0	0	0	0	0	0
193	PYRAMID HARBOR		0	0	100	0	100	12	0	0	0	0	0	0
194	HALIBUT COVE		200	0	10	0	210	15	0	0	0	0	0	0
195	HAMILTON		60	0	50	0	110	10	0	0	0	0	0	0
196	UPPER HANNUM CREEK		50	0	200	0	250	20	0	0	0	0	0	0
197	HAPPY VALLEY	HVY	4300	0	4300	0	8600	600	0	0	0	0	0	0
198	HARTS DOME		50	0	50	0	100	8	0	0	0	0	0	0
199	HAWK INLET	HWI	450	0	500	0	950	60	0	0	0	0	0	0
200	HAYCOCK	HAY	50	0	20	0	70	10	0	0	0	0	0	0
201	HEALY RIVER	HRR	500	0	100	0	600	15	0	0	0	0	0	0
202	HEENDEEN BAY	HED	10	0	20	0	30	5	0	0	0	0	0	0
203	JOHNSTONE POINT		50	0	50	0	100	10	0	0	0	0	0	0
204	HOB RIVER		25	0	50	0	75	5	0	0	0	0	0	0
205	HOLIKACHUK	HOL	0	0	0	0	0	0	0	0	0	0	0	0
206	HOLLIS	HYL	100	0	100	0	200	10	0	0	0	0	0	0
207	HOLY CROSS		250	100	100	0	450	40	2	0	0	0	0	2
208	HOMER	HOM	7500	5500	3500	100	16600	3000	11	4	3	1	0	19
209	HOMER-BELUGA LAKE	SBL	2500	500	300	0	3300	1500	0	0	0	0	5	5
210	CAVANAUGH FOX RIVER		25	0	20	0	45	10	0	0	0	0	0	0
211	HOPE		10	0	10	0	20	5	0	0	0	0	0	0
212	HORSFELD		15	10	100	0	125	20	0	0	0	0	0	0
213	HUGHES	HUS	400	100	400	20	920	50	1	0	0	0	0	1
214	HULL	HUK	2000	0	3000	0	5000	200	0	0	0	0	0	0
215	DEMARCATION BAY		50	0	10	0	60	20	0	0	0	0	0	0
216	HUSLIA	HSL	150	100	250	0	500	30	1	1	0	0	0	2
217	HYDABURG	HYG	200	0	250	0	450	50	0	0	0	0	0	0
218	HYDER		250	0	25	0	275	20	0	0	0	0	0	0
219	ICY BAY	ICY	50	20	50	0	120	20	1	0	0	0	0	1
220	ICY CAPE AFS		10	0	15	10	35	5	0	0	0	0	0	0
221	IGTUGIG	IGG	25	0	1500	0	1525	500	0	0	0	0	0	0
222	ILIAMNA	ILI	500	200	500	100	1300	200	3	8	0	0	0	11

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Table D.3
(Continued)

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

CONN.	AIRPORT NAME		ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
IDX		ID	TAXI	LOCAL GA	ITRNT GA	MTL	TOTAL	PEAK MO,GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
222	ILIAMNA ROADHOUSE		1500	1000	2500	0	5000	200	3	3	1	0	0	7
223	INDEPENDENCE CREEK		50	0	150	0	200	20	0	0	0	0	0	0
224	INTSKIN BAY	Z39	10	0	50	0	60	20	0	0	0	0	0	0
225	ITKILLIK RIVER		0	0	0	0	0	0	0	0	0	0	0	0
226	IVANOF BAY	KIB	50	0	0	0	50	0	0	0	0	0	0	0
227	JAKOLOF BAY		100	0	50	0	150	20	0	0	0	0	0	0
228	JENSENS		100	0	200	0	300	20	0	0	0	0	0	0
229	JUNEAU MUNI	JNU	10000	10000	22500	350	42850	5500	12	22	3	0	0	37
229	JUNEAU MUNI H		10	0	50	0	60	10	0	0	0	0	0	0
229	JUNEAU HARBOR		45000	1500	2500	100	49100	500	0	0	0	0	28	28
229	DEAN GOUDAIN FLYING SERVICE		1500	1000	100	0	2600	150	0	1	0	0	1	2
229	NORTH DOUGLAS		2500	2500	1500	0	6500	1000	0	0	0	6	0	6
229	JUNEAU	JSE	0	0	0	500	500	0	0	1	0	0	0	1
229	CHANNEL FLYING SVC		5000	6000	500	0	11500	1000	0	7	0	0	7	14
230	KABLER		500	20	500	0	1020	200	0	0	0	0	0	0
231	KAD RIVER		5	0	10	0	15	10	0	0	0	0	0	0
232	KAHILTNA GLACIER		10	0	100	0	110	50	0	0	0	0	0	0
233	KAKE	KAE	500	0	500	0	1000	50	0	0	0	0	0	0
234	KAKHONAK	SKA	500	100	650	0	1250	50	2	1	0	0	0	3
235	KAKU MINE		10	0	5	0	15	1	0	0	0	0	0	0
236	KALAKAKET CREEK AFS	KKK	0	0	200	0	200	20	0	0	0	0	0	0
237	KALSKAG	KLG	250	400	300	0	950	50	1	2	0	0	0	3
238	KALTAG	KAL	200	0	150	0	350	5	0	0	0	0	0	0
239	AKS HOSPITAL		0	0	25	100	125	5	0	0	0	0	0	0
240	KANTISHNA		0	0	10	0	10	5	0	0	0	0	0	0
241	KARLUK	KYK	30	0	50	0	80	10	0	0	0	0	0	0
241	KARLUK	KYK	150	0	30	0	180	20	0	0	0	0	0	0
242	KARLUK LAKE	KKL	50	0	100	0	150	25	0	0	0	0	0	0
243	KASAAN	KXA	200	0	260	0	460	25	0	0	0	0	0	0
244	KASILOF	SKQ	50	100	500	0	650	100	2	1	0	0	0	3
245	KASITSNA		200	0	10	0	210	30	0	0	0	0	0	0
246	KATALLA		100	0	50	0	150	20	0	0	0	0	0	0
247	LAKE BRUNAS		50	50	300	0	400	100	0	0	0	0	0	0
248	KAVIK RIVER	VIK	1500	0	2000	0	3500	300	0	0	0	0	0	0
249	KENAI MUNI	ENA	10000	12500	45000	1200	68700	7000	27	33	5	0	0	65
249	KENAI MUNI H		100	500	1000	0	1600	1100	0	0	0	5	0	5
249	DWIFT RIVER	DHF	600	50	100	0	750	50	0	0	0	0	0	0
249	DWIFT RIVER		0	1500	100	0	1600	100	0	0	0	1	0	1
249	KILLUHOOD STATION AFS	KWS	0	0	0	6	6	0	0	0	0	0	0	0
249	KEST FORELAND UNIT 2		10	0	50	0	60	20	0	0	0	0	0	0

Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 9

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

CONN. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MTL	TOTAL	PEAK MO.GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
222	ILIAMNA ROADHOUSE		1500	1000	2500	0	5000	200	3	3	1	0	0	7
223	INDEPENDENCE CREEK		50	0	150	0	200	20	0	0	0	0	0	0
224	INISKIN BAY	Z39	10	0	50	0	60	20	0	0	0	0	0	0
225	ITKILLIK RIVER		0	0	0	0	0	0	0	0	0	0	0	0
226	IVANOF BAY	KIB	50	0	0	0	50	0	0	0	0	0	0	0
227	JAKOLOF BAY		100	0	50	0	150	20	0	0	0	0	0	0
228	JENSENS		100	0	200	0	300	20	0	0	0	0	0	0
229	JUNEAU MUNI	JNU	10000	10000	22500	350	42850	5500	12	22	3	0	0	37
229	JUNEAU MUNI H		10	0	50	0	60	10	0	0	0	0	0	0
227	JUNEAU HARBOR		45000	1500	2500	100	49100	500	0	0	0	0	28	28
229	OCEAN GROUNDS FLYING SERVICE		1500	1000	100	0	2600	150	0	1	0	0	1	2
229	NORTH DOUGLAS		2500	2500	1500	0	6500	1000	0	0	0	6	0	6
229	JUNEAU	JSE	0	0	0	500	500	0	0	1	0	0	0	1
229	CHANNEL FLYING SVC		5000	6000	500	0	11500	1000	0	7	0	0	7	14
230	KADLEK		500	20	500	0	1020	200	0	0	0	0	0	0
231	KAD RIVER		5	0	10	0	15	10	0	0	0	0	0	0
232	KAHILTNA GLACIER		10	0	100	0	110	50	0	0	0	0	0	0
233	KAKE	KAE	500	0	500	0	1000	50	0	0	0	0	0	0
234	KAKHONAK	SKA	500	100	650	0	1250	50	2	1	0	0	0	3
235	KAKU MINE		10	0	5	0	15	1	0	0	0	0	0	0
236	KALANAKET CREEK AFS	KKK	0	0	200	0	200	20	0	0	0	0	0	0
237	KALSKAG	KLG	250	400	300	0	950	50	1	2	0	0	0	3
238	KALTAG	KAL	200	0	150	0	350	5	0	0	0	0	0	0
239	ANS HUSPITAL		0	0	25	100	125	5	0	0	0	0	0	0
240	KANTISHNA		0	0	10	0	10	5	0	0	0	0	0	0
241	KARLUK	KYK	30	0	50	0	80	10	0	0	0	0	0	0
241	KARLUK	KYK	150	0	30	0	180	20	0	0	0	0	0	0
242	KARLUK LAKE	KKL	50	0	100	0	150	25	0	0	0	0	0	0
243	KASAAN	KXA	200	0	260	0	460	25	0	0	0	0	0	0
244	KASILOF	SKS	50	100	500	0	650	100	2	1	0	0	0	3
245	KASITSNA		200	0	10	0	210	30	0	0	0	0	0	0
246	KATALLA		100	0	50	0	150	20	0	0	0	0	0	0
247	LAKE BRUOKS		50	50	300	0	400	100	0	0	0	0	0	0
248	KAVIK RIVER	VIK	1500	0	2000	0	3500	300	0	0	0	0	0	0
249	KENAI MUNI	ENA	10000	12500	45000	1200	68700	7000	27	33	5	0	0	65
249	KENAI MUNI H		100	500	1000	0	1600	1100	0	0	0	5	0	5
249	DWIFT RIVER	DRF	600	50	100	0	750	50	0	0	0	0	0	0
249	DWIFT RIVER		0	1500	100	0	1600	100	0	0	0	1	0	1
249	KILLHUND STATION AFS	WWS	0	0	0	6	6	0	0	0	0	0	0	0
249	WEST FORELAND UNIT 2		10	0	50	0	60	20	0	0	0	0	0	0

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Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 10

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM.	AIRPORT NAME		ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
TDX		ID	TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO,GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
249	ARNERS LAKE		0	100	100	0	200	10	1	1	0	0	0	2
249	ARNESS LAKE		15	100	150	0	265	40	0	0	0	0	3	3
249	BIGTENDERS		8500	500	9000	0	18000	1000	0	0	0	5	0	5
249	LOWER BALAMATOF LAKE		50	100	100	0	250	25	0	0	0	0	0	0
249	DON JOHNSON		100	100	50	0	250	20	0	0	0	0	0	0
249	NIKISHKA BEACH		0	50	150	0	200	25	0	0	0	0	0	0
250	KETCHIKAN PENINSULA POINT	KTN	100	50	50	0	200	10	0	0	0	0	10	10
250	KETCHIKAN /TEMSCO H/		300	200	10	0	510	40	0	0	0	6	0	6
250	KETCHIKAN CG HELIPAD		0	0	0	500	500	0	0	0	0	0	0	0
250	KETCHIKAN INTL	KTN	1800	9600	100	250	11750	1100	0	2	1	0	0	3
250	KETCHIKAN HARBOR	SKE	13500	8000	3000	0	24500	3000	0	0	0	0	20	20
250	RAKEWELL LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	RARNES LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	CHECATS LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	ELLA LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	GOAT LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	GHINALL ISLAND		50	0	50	0	100	20	0	0	0	0	0	0
250	HECKMAN LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	HUNTER LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	HUGH SMITH LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	HUMPBACK LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	KEGAN LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	MCDONALD LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	LUCK LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	MANZANITA LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	ORCHARD LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	PATCHING LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	RATMUM LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	RED BAY LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	REFLECTION LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	SALMON BAY LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	SALMON LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	SAFETWATER LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	WILSON LAKE		50	0	50	0	100	20	0	0	0	0	0	0
250	WINSTANLEY LAKE		50	0	50	0	100	20	0	0	0	0	0	0
251	BUR BAKER MEML	IAN	100	150	100	0	350	40	0	2	0	0	0	2
252	KING COVE	KVC	0	0	50	0	50	20	0	0	0	0	0	0
252	KING COVE	KVC	50	0	100	0	150	10	0	0	0	0	0	0
253	KING SALMON	AKN	5000	4000	20000	7000	36000	3000	7	26	2	0	0	35
253	KING SALMON		25	300	200	0	525	50	0	0	0	0	4	4

Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 11

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO.GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
259	KIPNUK	KPN	100	0	50	0	150	30	0	0	0	0	0	0
259	KIPNUK		100	0	200	0	300	20	0	0	0	0	0	0
255	KITOI BAY	KKB	50	0	50	0	100	10	0	0	0	0	0	0
256	KIVALINA	KVL	500	0	100	0	600	60	0	0	0	0	0	0
257	KIWALIK		0	0	0	0	0	0	0	0	0	0	0	0
258	KLAWAK		700	0	650	0	1350	20	0	0	0	0	0	0
259	KLAWOCK		100	0	500	0	600	60	0	2	0	0	0	2
260	KNIFE BLADE RIDGE		0	0	0	0	0	0	0	0	0	0	0	0
261	KOBUK /WIEN/	OBU	100	150	1000	0	1250	100	1	1	0	0	0	2
262	KODIAK MUNI	KDK	2000	2000	2000	0	6000	600	10	20	5	1	0	36
262	KODIAK		500	500	1500	0	2500	300	0	0	0	0	5	5
262	INNER HARBOR		50	100	200	0	350	40	0	0	0	0	2	2
262	KODIAK	ADQ	0	15279	532	12100	27911	2002	1	3	0	0	0	4
262	KODIAK AIRWAYS		2500	50	50	0	2600	10	0	0	0	0	0	0
262	MILLER AIRSTRIP		0	250	0	0	250	0	3	2	0	0	0	5
262	KODIAK CATTLE COMPANY RANCH		10	0	100	0	110	30	0	0	0	0	0	0
263	KOGRUNG	SKO	10	0	50	0	60	10	0	0	0	0	0	0
264	KOGRU RIVER		10	0	50	0	60	20	0	0	0	0	0	0
265	KOTLIK	KOT	100	0	100	0	200	20	0	0	0	0	0	0
266	KOTZEBUE		0	0	0	0	0	0	0	0	0	0	0	0
266	RALPH WIEN MEMORIAL	OTZ	7000	2200	3700	200	13100	1400	12	32	3	0	5	52
267	KOYUK	KKA	300	0	100	0	400	50	0	0	0	0	0	0
268	KOYUKUK	KYU	200	0	100	0	300	20	0	0	0	0	0	0
269	KOLIK LAKE	LKK	50	0	100	0	150	40	0	0	0	0	0	0
270	KOLIK LAKE		50	0	50	0	100	25	0	0	0	0	0	0
271	KUPARUK	UUK	500	50	1000	0	1550	100	0	0	0	1	0	1
271	KUPARUK		50	100	50	0	200	30	0	0	0	1	0	1
272	KVICHAK		25	100	1500	0	1625	300	1	0	0	0	0	1
273	KWETHLUK	KWT	250	0	100	0	350	30	0	0	0	0	0	0
273	KWETHLUK		50	0	50	0	100	10	0	0	0	0	0	0
274	KWIGILLINGOK	KWK	100	0	330	0	430	35	0	0	0	0	0	0
275	LAKE LOUISE	7S5	0	0	200	0	200	50	0	0	0	0	0	0
275	LAKE LOUISE	7S5	0	500	600	0	1100	100	0	1	0	0	0	1
276	LAKE MENKA		25	0	50	0	75	10	0	0	0	0	0	0
277	LARSEN BAY	KLN	10	0	10	0	20	5	0	0	0	0	0	0
278	LAWING		100	200	500	0	800	50	2	2	0	0	0	4
279	ALTTAK	ALZ	50	0	0	0	50	0	0	0	0	0	0	0
280	LEVELOCK	KLL	50	100	100	0	250	20	0	0	0	0	0	0
281	LIGNITE		0	0	0	0	0	0	0	0	0	0	0	0
281	LIGNITE		0	0	0	0	0	0	0	0	0	0	0	0

Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 12

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO,GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
282	LIVENGOOD	LIV	0	0	300	0	300	50	0	0	0	0	0	0
283	LONELY DEW STATION	LNI	50	0	50	10	110	20	0	0	0	0	0	0
284	LONG CREEK		150	100	200	0	450	35	1	0	0	0	0	1
285	LONG LAKE		10	10	25	0	45	10	0	0	0	0	0	0
286	LORING		50	0	100	0	150	20	0	0	0	0	0	0
287	LOST RIVER 1	LSR	100	0	10	0	110	10	0	0	0	0	0	0
287	LOST RIVER 2	LSR	200	0	300	0	500	30	1	0	0	0	0	1
288	MACLAREN GLACIER		10	0	50	0	60	10	0	0	0	0	0	0
289	MCCARTHY	MXY	0	100	100	0	200	25	0	1	0	0	0	1
289	MCCARTHY NR 2		0	100	200	0	300	40	0	1	0	0	0	1
289	JAMES BAR		50	0	50	0	100	20	0	0	0	0	0	0
290	MCGRATH	KMC	50	0	50	0	100	10	0	0	0	0	0	0
291	MCGRATH	MCG	4000	2000	13500	450	19950	8000	19	10	0	0	0	29
291	MCGRATH		20	0	100	0	120	50	0	0	0	0	0	0
292	MCKINLEY PARK	SMK	400	600	500	0	1500	75	1	1	0	0	0	2
293	MT MCKINLEY NATL PARK		0	0	0	0	0	0	3	1	0	0	0	4
294	MANOKEEN LAKE LODGE		0	0	0	0	0	0	0	0	0	0	0	0
295	EAGLE CREEK MINE		10	0	10	0	20	5	0	0	0	0	0	0
295	MANLEY HOT SPRINGS	MLY	300	400	300	0	1000	150	2	1	0	0	0	3
296	MANOKOTAK		500	0	50	0	550	1	0	0	0	0	0	0
296	MANOKOTAK	KMO	50	0	550	0	600	60	0	0	0	0	0	0
297	MARSHALL	MLL	100	50	100	0	250	35	0	0	0	0	0	0
298	MARVEL CREEK	Z57	0	40	50	0	90	20	1	0	0	0	0	1
299	MASCOT GULCH		50	0	50	0	100	10	0	0	0	0	0	0
300	MAY CREEK	MYK	50	0	100	0	150	30	0	0	0	0	0	0
301	MEDFRA	MOR	120	100	200	0	420	40	1	2	0	0	0	3
302	MEKORYUK	MYU	20	20	150	0	190	25	1	0	0	0	0	1
303	METASTA LODGE		20	0	100	0	120	15	0	0	0	0	0	0
304	METLAKATLA	MTM	500	0	650	0	1150	25	0	0	0	0	0	0
305	MEYERS CHUCK		500	0	100	0	600	20	0	0	0	0	0	0
306	MIDDLETON ISLAND	MDO	10	0	50	0	60	10	0	0	0	0	0	0
307	MIZPAH		0	50	10	0	60	10	1	0	0	0	0	1
308	MINCHUMINA	MHM	25	0	575	0	600	110	0	0	0	0	0	0
309	MINERAL POINT		0	10	100	0	110	20	0	0	0	0	0	0
310	MINTO	MNT	500	0	200	0	700	20	0	0	0	0	0	0
311	MOOSE CREEK	Z61	0	0	50	0	50	10	0	0	0	0	0	0
312	SUMMIT LAKE		10	50	100	0	160	15	0	0	0	0	1	1
312	UPPER TRAIL LAKE		500	500	500	0	1500	200	0	0	0	0	2	2
313	MOSER BAY	KMY	50	0	50	0	100	10	0	0	0	0	0	0
314	MOSES POINT	MOS	1500	0	1500	10	3010	500	0	0	0	0	0	0

Table D.3
(Continued)

SYSTEMS CONTROL INC, (VT,), 1801 PAGE MILL ROAD, PALO ALTO, CA,, PAGE 13

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO,GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
315	MOUNTAIN VILLAGE	MOU	50	0	50	0	100	10	0	0	0	0	0	0
315	MOUNTAIN VILLAGE	MOU	200	200	100	0	500	50	0	1	0	0	0	1
316	MYRTLE CREEK		50	0	100	0	150	10	0	0	0	0	0	0
317	ORANGE HILL		0	0	50	0	50	40	0	0	0	0	0	0
317	DEVILS MOUNTAIN LODGE		0	500	100	0	600	50	1	1	0	0	0	2
317	REEVE		0	0	50	0	50	40	0	0	0	0	0	0
318	NAKEEN		25	50	100	0	175	20	0	1	0	0	0	1
319	PEDERSON POINT		50	0	100	0	150	10	0	0	0	0	0	0
319	NAKNEK	SNK	3000	1500	6000	0	10500	550	6	5	0	0	0	11
319	NAKNEK		50	500	500	0	1050	300	0	0	0	0	2	2
319	TIKHITTS		2000	100	2500	0	4600	300	0	4	1	0	0	5
320	NANCY LAKE		50	0	100	0	150	10	0	0	0	0	0	0
321	NAPAKIAK	NNA	120	0	400	0	520	48	0	0	0	0	0	0
322	NAPAISKAK		200	0	300	0	500	40	0	0	0	0	0	0
322	NAPAISKAK	PKA	100	0	200	0	300	20	0	0	0	0	0	0
323	NENANA MUNI	ENN	1000	1500	2000	0	4500	300	3	3	0	0	0	6
324	NEW KOLIGANEK	KGK	50	0	500	0	550	60	0	0	0	0	0	0
325	NEW STUYAHOK	KNW	50	0	600	0	650	60	0	1	0	0	0	1
326	NEWTOK	WWT	0	0	150	0	150	5	0	0	0	0	0	0
327	NIGHTMUTE		50	0	50	0	100	10	0	0	0	0	0	0
328	SHELL		0	2760	2700	0	5460	500	0	0	0	3	0	3
329	NIKOLAI	SNI	500	0	300	0	800	60	0	0	0	0	0	0
330	NIKOLSKI AFS	IKO	0	0	0	0	0	0	0	0	0	0	0	0
331	NIMILCHIK	NIN	150	0	1000	0	1150	200	0	0	0	0	0	0
332	NUATAK	WTK	1500	0	100	0	1600	250	0	0	0	0	0	0
333	NOME CITY FIELD		0	30	0	0	30	5	0	1	0	0	0	1
333	NOME	OME	10000	3300	3100	900	17300	1400	8	30	4	2	0	44
334	NONDALTON	SNN	500	100	650	0	1250	50	3	0	0	0	0	3
335	ROBERT /BOB/ CURTIS MEML	ORV	50	0	200	0	250	30	0	0	0	0	0	0
336	NORTHEAST CAPE AFS	OHC	10	0	0	10	20	0	0	0	0	0	0	0
337	NORTH KUPARUK		1000	50	1000	0	2050	200	0	0	0	1	0	1
337	NORTH KUPARUK		50	100	50	0	200	20	0	0	0	1	0	1
338	HEADLEY SKY-RANCH		100	500	500	0	1100	50	9	6	0	0	0	15
338	HOWARDS		0	50	100	0	150	15	0	1	0	0	0	1
338	WRIGHTS		100	0	300	0	400	40	0	0	0	0	0	0
339	NORTHWAY	ORT	2100	1600	3500	300	7500	570	2	2	0	0	0	4
340	NORTH WHALE		100	150	100	0	350	20	0	0	0	0	1	1
340	NECK LAKE CAMP		100	200	400	0	700	20	0	0	0	0	2	2
341	NUGGET CREEK		0	0	25	0	25	5	0	0	0	0	0	0
342	NULATO	NUL	100	150	100	0	350	40	0	1	0	0	0	1

Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 13

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO,GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
315	MOUNTAIN VILLAGE	MOU	50	0	50	0	100	10	0	0	0	0	0	0
315	MOUNTAIN VILLAGE	MOU	200	200	100	0	500	50	0	1	0	0	0	1
316	MYRTLE CREEK		50	0	100	0	150	10	0	0	0	0	0	0
317	ORANGE HILL		0	0	50	0	50	40	0	0	0	0	0	0
317	DEVILS MOUNTAIN LODGE		0	500	100	0	600	50	1	1	0	0	0	2
317	REEVE		0	0	50	0	50	40	0	0	0	0	0	0
318	NAKEEN		25	50	100	0	175	20	0	1	0	0	0	1
319	PEDERSON POINT		50	0	100	0	150	10	0	0	0	0	0	0
319	NAKNEK	SNX	3000	1500	6000	0	10500	550	4	5	0	0	0	11
319	NAKNEK		50	500	500	0	1050	300	0	0	0	0	2	2
319	TIKHEITS		2000	100	2500	0	4600	300	0	4	1	0	0	5
320	NANCY LAKE		50	0	100	0	150	10	0	0	0	0	0	0
321	NAPAKIAK	WNA	120	0	400	0	520	48	0	0	0	0	0	0
322	NAPAISKAK		200	0	300	0	500	40	0	0	0	0	0	0
322	NAPAISKAK	PKA	100	0	200	0	300	20	0	0	0	0	0	0
323	NENANA MUNI	ENN	1000	1500	2000	0	4500	300	3	3	0	0	0	6
324	NEW KOLIGANEK	KGK	50	0	500	0	550	60	0	0	0	0	0	0
325	NEW STUYAHOK	KNW	50	0	600	0	650	60	0	1	0	0	0	1
326	NEWTOK	WWT	0	0	150	0	150	5	0	0	0	0	0	0
327	NIGHTMUTE		50	0	50	0	100	10	0	0	0	0	0	0
328	SHELL		0	2760	2700	0	5460	500	0	0	0	3	0	3
329	NIKOLAI	SNI	500	0	300	0	800	60	0	0	0	0	0	0
330	NIKOLSKI AFS	IKO	0	0	0	0	0	0	0	0	0	0	0	0
331	NIMILCHIK	NIN	150	0	1000	0	1150	200	0	0	0	0	0	0
332	NUATAK	WTK	1500	0	100	0	1600	250	0	0	0	0	0	0
333	NOME CITY FIELD		0	30	0	0	30	5	0	1	0	0	0	1
333	NOME	OME	10000	3300	3100	900	17300	1400	8	30	4	2	0	44
334	NONDALTON	SNN	500	100	650	0	1250	50	3	0	0	0	0	3
335	ROBERT /BOB/ CURTIS MEML	ORV	50	0	200	0	250	30	0	0	0	0	0	0
336	NORTHEAST CAPE AFS	OHC	10	0	0	10	20	0	0	0	0	0	0	0
337	NORTH KUPARUK		1000	50	1000	0	2050	200	0	0	0	1	0	1
337	NORTH KUPARUK		50	100	50	0	200	20	0	0	0	1	0	1
338	NUKLEY SKY-RANCH		100	500	500	0	1100	50	9	6	0	0	0	15
338	NUNAPOS		0	50	100	0	150	15	0	1	0	0	0	1
338	NUTIKTS		100	0	300	0	400	40	0	0	0	0	0	0
339	NORTHWAY	ORT	2100	1600	3500	300	7500	570	2	2	0	0	0	4
340	NORTH WHALE		100	150	100	0	350	20	0	0	0	0	1	1
340	NECK LAKE CAMP		100	200	400	0	700	20	0	0	0	0	2	2
341	NUGGET BENCH		0	0	25	0	25	5	0	0	0	0	0	0
342	NULATO	NUL	100	150	100	0	350	40	0	1	0	0	0	1

Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 14

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO.GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
343	NUNAPITCHUK		100	0	200	0	300	20	0	0	0	0	0	0
344	NYAC	ZNC	100	0	30	0	130	10	0	0	0	0	0	0
345	OGOTORUK CREEK		0	0	50	0	50	15	0	0	0	0	6	6
345	CAPE THOMPSON		0	0	40	0	40	20	0	0	0	0	0	0
346	OLD HARBOR	OLH	75	0	75	0	150	15	0	0	0	0	0	0
347	OLD HARBOR	OLH	75	0	100	0	175	40	0	0	0	0	0	0
348	OLGA BAY	OLN	0	0	4500	0	4500	500	0	0	0	0	0	0
349	OLTATUK DEW STATION	KOY	50	0	50	0	100	5	0	0	0	0	0	0
350	ORPHIR	OLI	50	0	50	10	110	20	0	0	0	0	0	0
351	OUZINKIE	717	0	0	15	0	15	2	0	0	0	0	0	0
352	PATMUT	KOZ	50	0	30	0	80	15	0	0	0	0	0	0
353	PATWIN CREEK 1	PHU	100	0	10	0	110	10	0	0	0	0	0	0
354	PALMER MINI	PCE	0	0	50	0	50	20	0	0	0	0	0	0
354	PALMER MINI H	PAQ	9000	28000	16000	350	53350	5500	38	22	1	0	0	61
354	DR MCKINLEY RANCH		0	50	100	0	150	10	0	0	0	1	0	1
354	FINGER LAKE		0	100	100	0	200	15	0	2	0	0	0	2
354	P P B RNYS RANCH		25	0	0	0	25	0	0	0	0	0	0	0
354	PUTTE MUNICIPAL		0	300	200	0	500	60	0	1	0	0	0	1
355	PAWKS		0	455	25	0	480	200	6	2	0	0	0	8
356	PASS CREEK NO 1	KPK	50	0	10	0	60	20	0	0	0	0	0	0
357	PAULOFF HARBOR	KPH	0	0	25	0	25	5	0	0	0	0	0	0
358	PAXSON	SPX	0	0	0	0	0	0	0	0	0	0	0	0
359	PEAK ISLAND		50	100	500	0	650	100	1	0	0	0	0	1
360	PEARD BAY AFS		50	0	10	0	60	10	0	0	0	0	0	0
361	PEARD BAY		50	0	50	10	110	20	0	0	0	0	0	0
362	PELICAN	PEC	500	0	550	0	1050	50	0	0	0	0	0	0
363	PERRY ISLAND	PYL	500	20	100	0	620	50	0	0	0	0	0	0
364	PERRYVILLE	KPV	50	0	10	0	60	5	0	0	0	0	0	0
364	PERRYVILLE		0	0	0	0	0	0	0	0	0	0	0	0
365	INDIAN POINT		100	0	200	0	300	20	1	0	0	0	0	1
365	TEMSCO		100	0	100	0	200	10	0	0	0	0	0	0
365	PETERSBURG		500	500	500	0	1500	150	0	0	0	1	0	1
365	PETERSBURG RAMP & TURNAROUND	PSG	5000	3000	2000	0	10000	1500	0	0	0	0	11	11
365	PETERSBURG		0	0	0	0	0	0	0	0	0	0	0	0
366	PETERSVILLE	PSG	30	500	100	0	630	30	0	5	1	0	0	6
367	PETTYJOHN		25	0	50	0	75	5	0	0	0	0	0	0
368	PILOT POINT	PIP	0	0	5	0	5	2	0	0	0	0	0	0
368	UGASHIK BAY	UGA	1800	200	400	0	2400	250	1	5	1	0	1	8
369	PILOT STATION		25	0	100	0	125	10	0	0	0	0	0	0
			100	0	100	0	200	20	0	0	0	0	0	0

Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 15

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO,GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
370	PINGO		1000	100	1500	0	2600	200	0	1	0	6	0	7
370	PINGO		100	1500	500	0	2100	500	0	0	0	6	0	6
371	PLATINUM	PTU	60	60	400	0	520	70	0	1	0	0	0	1
371	PLATINUM MINE		100	0	200	0	300	50	0	0	0	0	0	0
372	POINT BAKER	KPB	500	0	200	0	700	25	0	0	0	0	0	0
373	POINT BARROW NARL	NFV	50	0	100	600	750	20	0	0	0	0	0	0
374	POINT HOPE	PHO	300	200	200	0	700	40	1	0	0	0	0	1
375	POINT LAY DEW STATION	PIZ	50	0	20	50	120	10	0	0	0	0	0	0
376	SLEEPERS STRIP		100	0	10	0	110	15	0	0	0	0	0	0
377	POINT MCINTYRE		50	0	50	0	100	10	0	0	0	0	0	0
378	POINT NARELL		50	0	50	0	100	10	0	0	0	0	0	0
379	TEXACO POINT POSSESSION		0	0	50	0	50	10	0	0	0	0	0	0
380	POINT PETWAT CG	PRT	0	0	0	10	10	0	0	0	0	0	0	0
381	PLACERVINE CREEK	PCK	50	0	10	0	60	10	0	0	0	0	0	0
382	PONTAGE	SPG	10	0	100	0	110	20	0	0	0	0	0	0
383	PONTAGE CREEK		50	0	200	0	250	25	0	0	0	0	0	0
384	PORT ALEXANDER		250	0	200	0	450	50	0	0	0	0	0	0
385	PORT ALICE		250	100	100	0	450	25	1	0	0	0	1	2
386	PORT ASHTON		50	0	10	0	60	10	0	0	0	0	0	0
387	PORT BAILEY	KPY	50	0	50	0	100	10	0	0	0	0	0	0
388	PORT CLARENCE CGS	KPC	0	0	0	0	0	0	1	0	0	0	0	1
389	PORT GRAHAM	PGM	500	0	200	0	700	250	0	0	0	0	0	0
390	PORT HEIDEN	PTH	100	100	300	50	550	50	2	2	0	0	0	4
391	PORT LIONS	ORT	50	0	300	0	350	30	0	0	0	0	0	0
391	PORT LIONS		75	0	75	0	150	15	0	0	0	0	0	0
392	PORT MILLER AFS	PML	50	100	200	0	350	50	0	1	0	0	0	1
393	PORT NELLIE JUAN		50	0	10	0	60	10	0	0	0	0	0	0
394	PORT PROTECTION		100	0	150	0	250	20	0	0	0	0	0	0
395	BIG AND LITTLE PORT WALTER	PWR	100	0	50	0	150	15	0	0	0	0	0	0
396	PORT WILLIAMS	KPR	50	0	50	0	100	10	0	0	0	0	0	0
397	PRINCE CREEK		0	0	0	0	0	0	0	0	0	0	0	0
398	PROSPECT CREEK	PPC	4500	0	4500	0	9000	500	0	0	0	0	0	0
399	PRUDHOE BAY	PUO	9000	300	9500	0	18800	550	0	0	0	0	0	0
399	PRUDHOE BAY H		50	500	1000	0	1550	400	0	0	0	1	0	1
400	PURKEYPILE MINE		10	0	50	0	60	15	0	0	0	0	0	0
401	QUAIL CREEK		0	0	0	0	0	0	0	0	0	0	0	0
402	QUARTZ CREEK /KOUGAROK/	SQC	100	0	150	0	250	30	0	0	0	0	0	0
403	THE QUEENS	SQN	500	0	550	0	1050	150	0	0	0	0	0	0
404	KAIVAGAK	KKN	50	0	400	0	450	45	0	0	0	0	0	0
404	KAIVAGAK		120	0	50	0	170	20	0	0	0	0	0	0

Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 16

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO.GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
405	RAINY PASS LODGE	PZB	150	50	500	0	700	100	0	0	0	0	2	2
406	RAINY PASS LODGE		50	15	100	0	165	20	0	0	0	0	0	0
407	RAMPART	RMP	50	0	500	0	550	150	0	0	0	0	0	0
408	RED DEVIL	RDV	100	300	500	0	900	80	1	2	0	0	0	3
409	RIVERSIDE LODGE		0	0	0	0	0	0	0	0	0	0	0	0
410	RUBY	RBY	200	200	200	0	600	80	0	1	0	0	0	1
411	RUSSIAN MISSION	RSH	100	10	100	0	210	20	0	1	0	0	0	1
411	RUSSIAN MISSION		200	0	50	0	250	30	0	0	0	0	0	0
412	PENTILLA-SAGINAW		100	125	100	0	325	20	0	1	0	0	1	2
412	SAGINAW		0	0	0	0	0	0	0	0	0	0	0	0
413	SAGWON	SAG	12000	0	8500	0	20500	1200	0	0	0	0	0	0
413	FIR CREEK		1200	0	100	0	1300	20	0	0	0	0	0	0
414	ST GEORGE		2	0	0	1	3	0	0	0	0	0	0	0
415	ST MICHAEL		20	50	20	0	90	10	0	0	0	0	1	1
415	ST MICHAEL	SMK	100	150	300	0	550	75	0	1	0	0	0	1
416	ST PAUL ISLAND	SNP	100	0	10	20	130	20	0	0	0	0	0	0
417	SALMON LAKE	Z81	200	0	250	0	450	30	0	0	0	0	0	0
418	SAND POINT	SDP	500	800	400	0	1700	100	0	3	2	0	0	5
419	SANDY RIVER FEDERAL 1	KSP	10	0	10	0	20	5	0	0	0	0	0	0
420	SAN JUAN		50	0	100	0	150	25	0	0	0	0	0	0
420	SAN JUAN	KSJ	50	0	50	0	100	10	0	0	0	0	0	0
421	SAPSUK RIVER		0	0	50	0	50	10	0	0	0	0	0	0
422	SAVOONGA	SVA	150	0	15	2	167	10	0	0	0	0	0	0
423	SCAMMON BAY		800	0	300	0	1100	30	0	0	0	0	0	0
423	SCAMMON BAY	SCM	100	0	260	0	360	50	0	0	0	0	0	0
424	SELAWIK	WLK	150	30	200	0	380	40	0	1	0	0	0	1
425	SELDOVIA	SOV	500	100	500	0	1100	450	1	0	0	0	0	1
425	SELDOVIA		0	0	0	0	0	0	0	0	0	0	0	0
426	SERVENTINE HOT SPRINGS		0	0	50	0	50	8	0	0	0	0	0	0
427	SEWARD	SWD	2500	3000	500	0	6000	1200	7	3	0	0	0	10
428	SHAGELUK	SHX	100	100	50	0	250	10	0	0	0	0	0	0
428	SHAGELUK		0	0	100	0	100	30	0	0	0	0	0	0
429	SHAKTOOLIK	SKK	250	0	100	0	350	50	0	0	0	0	0	0
430	SHEEP MOUNTAIN	SHU	15	0	100	0	115	10	0	0	0	0	0	0
431	SHELDONS POINT	SXP	0	0	260	0	260	85	0	0	0	0	0	0
432	SHEMYA AFB	SYA	0	0	0	1200	1200	0	0	0	0	0	0	0
433	SHESHALIK		50	0	200	0	250	40	0	0	0	0	0	0
434	SHISHMAREF	SHH	300	0	350	0	650	50	0	0	0	0	0	0
435	SHUNGNAK	SHG	150	40	100	0	290	25	0	1	0	0	0	1
436	SITKA	SIT	70	120	100	0	290	15	3	0	1	0	0	4

Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 17

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO.GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
436	STANDARD OIL FLOAT		1000	0	2000	0	3000	100	0	0	0	0	0	0
436	JAMESTOWN BAY		2000	150	100	0	2250	50	0	0	0	0	5	5
436	SITKA RAMP & TURNAROUND		0	0	0	0	0	0	0	0	0	0	0	0
436	SITKA		500	2500	2200	0	5200	500	0	0	0	0	6	6
437	SITKINAK CGS	8KJ	20	0	30	12	62	15	0	0	0	0	0	0
437	MARK LAKE CG		15	0	20	5	40	5	0	0	0	0	0	0
438	SKAGWAY	8GY	800	700	800	0	2300	75	6	3	0	0	0	9
438	SKAGWAY		50	100	200	0	350	15	0	0	0	0	1	1
439	SKILAK BLM HELISTOP		0	0	100	10	110	50	0	0	0	0	0	0
440	SKWENTNA	8XW	50	100	120	0	270	50	0	1	0	0	0	1
440	ALEXANDER LAKE		50	50	450	0	550	100	1	1	0	0	0	2
441	DUFFYS TAVERN		50	0	100	0	150	20	0	0	0	0	0	0
442	SLEETMUTE	8LQ	100	100	300	0	500	40	0	1	0	0	0	1
443	SHEETISHAM		200	0	50	0	250	10	0	0	0	0	0	0
443	SHEETISHAM		100	0	100	0	200	20	0	0	0	0	0	0
444	SNOWSHOE LAKE	580	0	300	20	0	320	30	0	1	0	0	0	1
445	GARDE		0	150	0	0	150	15	0	1	0	0	0	1
445	SHORT LAKE		0	500	100	0	600	50	0	0	0	0	2	2
445	DAHLEN HOMESTEAD		0	50	50	0	100	15	1	0	0	0	0	1
445	DAN FRANCE		0	50	50	0	100	15	0	1	0	0	0	1
445	ISAAK HOMESTEAD		0	0	30	0	30	5	0	0	0	0	0	0
445	MILLER HOMESTEAD		10	0	50	0	60	10	0	0	0	0	0	0
445	LONGMARE LAKE		0	50	500	0	550	50	0	0	0	0	4	4
445	SUSITNA HOSPITAL H		10	0	50	10	70	5	0	0	0	0	0	0
445	SUSITNA	8X0	500	4000	3000	0	7500	1000	14	23	4	0	0	41
445	MACKEYS LAKES		0	500	100	0	600	50	0	0	0	0	2	2
446	SOLOMON /LEER CAMP/	80L	20	0	150	0	170	25	0	0	0	0	0	0
446	SOLOMON STATE FIELD		25	0	40	0	65	15	0	0	0	0	0	0
447	PAF CANNERY		500	0	500	0	1000	75	0	0	0	0	0	0
447	DIAMOND NN CANNERY		500	1000	1000	0	2500	400	0	1	0	0	0	1
447	SOUTH NAKNEK NR 2	8SN	50	0	500	0	550	60	0	0	0	0	0	0
448	SPANEVOHN AFS	8VW	240	0	240	0	480	40	0	0	0	0	0	0
449	FERCO AVIATION		10	150	100	0	260	15	0	1	0	0	0	1
450	SQUAW HARBOR		50	0	0	0	50	0	0	0	0	0	0	0
451	SQUIRREL RIVER		25	0	20	0	45	5	0	0	0	0	0	0
452	STAMPEDE	Z90	200	0	200	0	400	25	0	0	0	0	0	0
453	STEAMBOAT BAY	8SR	100	0	100	0	200	20	0	0	0	0	0	0
454	STEBBINS	W88	120	0	100	0	220	50	0	0	0	0	0	0
455	MORGAN HOMESTEAD		0	50	50	0	100	10	0	1	0	0	0	1
455	SCOUT LAKE		50	50	30	0	130	20	1	0	0	0	0	1

Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 18

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO.GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
455	SCOUT LAKE		100	200	50	0	350	50	0	0	0	0	1	1
455	RALPH GAFLANDS		0	0	0	0	0	0	1	0	0	0	0	1
455	NORTH GASLINE		0	0	50	0	50	10	0	0	0	0	0	0
455	SOUTH GASLINE		0	0	50	0	50	10	0	0	0	0	0	0
455	STERLING /NAPTOWNE/		50	100	300	0	450	50	3	0	0	0	0	3
456	STEVENS VILLAGE	SVS	150	0	500	0	650	125	0	0	0	0	0	0
457	STONY RIVER 2	SRV	150	0	50	0	200	30	0	0	0	0	0	0
458	STRELNA NR 2		0	0	20	0	20	4	0	0	0	0	0	0
459	SULLIVAN CITY		10	0	50	0	60	5	0	0	0	0	0	0
460	SUMMIT	UMM	50	800	750	0	1600	200	2	2	0	0	0	4
461	SUMMIT LAKE	SSA	0	50	200	0	250	20	1	0	0	0	0	1
462	LITTLE SUSITNA		10	0	100	0	110	20	0	0	0	0	0	0
463	SUSITNA LODGE		10	0	50	0	60	5	1	1	0	0	0	2
463	SUSITNA LODGE		10	300	50	0	360	80	0	0	0	0	2	2
464	JUNESVILLE MINE		10	100	50	0	160	75	1	0	0	0	0	1
465	SWANSON RIVER		200	100	100	0	400	20	1	0	0	0	0	1
466	TANGETA PASS	HNE	150	100	400	0	650	100	1	3	0	0	0	4
466	TANGETA PASS	HNF	50	50	150	0	250	15	0	0	0	0	1	1
467	TANUTNA	TCT	300	200	300	0	800	80	1	2	0	0	0	3
467	TATALINA AFS	TLJ	200	100	50	0	350	20	0	1	0	0	0	1
468	TAKU HARBOR		50	0	100	0	150	10	0	0	0	0	0	0
469	TAKU LODGE	TKL	50	0	100	0	150	15	0	0	0	0	0	0
470	TALKEETNA	TKA	1400	1000	9000	360	11960	1200	9	5	0	0	0	14
470	TALKEETNA VILLAGE STRIP		900	2000	1000	0	3900	550	4	3	0	0	0	7
471	TANACROSS	TSG	50	0	200	0	250	50	0	2	0	0	0	2
472	TANALIAN POINT	TPO	50	100	150	0	300	30	2	2	0	0	0	4
473	RALPH M CALHOUN MEML	TAL	600	400	300	24	1324	200	5	4	0	0	0	9
474	TANUNAK		100	50	100	0	250	20	1	0	0	0	0	1
475	TATITLEK		50	0	50	0	100	10	0	0	0	0	0	0
475	TATITLEK		20	0	20	0	40	8	0	0	0	0	0	0
476	TATITNA		0	0	0	0	0	0	0	0	0	0	0	0
477	TAYLOR		10	0	175	0	185	20	0	0	0	0	0	0
478	TAYLOR CREEK		0	0	0	0	0	0	0	0	0	0	0	0
479	TAZLINA	714	30	0	70	0	100	30	0	0	0	0	0	0
479	TAZLINA /SMOKEY LAKE/		150	400	300	0	850	75	0	0	0	0	1	1
480	TERENDE BAY		100	0	50	0	150	20	0	0	0	0	0	0
481	TELIDA		0	0	100	0	100	15	0	0	0	0	0	0
482	TELLER NR 1		500	300	150	0	950	100	0	2	0	0	0	2
482	TELLER 3		400	250	300	0	950	60	0	2	0	0	0	2
483	THREVIG MISSION	KTS	100	0	50	0	150	50	0	0	0	0	0	0

Table D.3
(Continued)

SYSTEMS CONTROL INC, (VT,), 1801 PAGE MILL ROAD, PALO ALTO, CA,, PAGE 19

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM, IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITINT GA	MIL	TOTAL	PEAK MO,GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
483	TENAKEE	TKE	200	0	100	0	300	25	0	0	0	0	0	0
485	TERROR BAY	KTY	10	0	10	0	20	2	0	0	0	0	0	0
486	TETLIN	STE	100	50	100	0	250	10	1	0	0	0	0	1
487	THOMPSON PASS		10	0	40	0	50	10	0	0	0	0	0	0
488	THORNE RIVER	KTB	600	150	200	0	950	100	0	0	0	0	2	2
489	TINCHIK LODGE		50	0	100	0	150	25	0	0	0	0	0	0
490	TIMBER CREEK		0	0	0	0	0	0	0	0	0	0	0	0
491	TIN CITY AFS	TNC	200	0	100	50	350	25	0	0	0	0	0	0
492	TUGIAK	TUG	100	50	800	0	950	100	2	0	0	0	0	2
493	TUK	TKJ	50	100	200	0	350	20	3	0	0	0	0	3
493	TLK 2		0	100	200	0	300	20	2	2	0	0	0	4
493	RUDYS PRIVATE		20	150	200	10	380	20	2	0	0	0	0	2
493	TUREEN /NEW/		100	0	50	0	150	20	0	0	0	0	0	0
495	TUKSOUK BAY	ODK	100	0	180	0	280	20	0	0	0	0	0	0
496	TULSONA LAKE		50	100	1000	0	1150	100	2	1	0	0	0	3
496	TULSONA LAKE		50	100	500	0	650	50	2	0	0	0	2	4
497	TUNTUTULIAK /UPDEC/	STS	50	100	300	0	450	40	0	0	0	0	0	0
498	TUOLTY CAMP	MUY	10	50	1000	0	1060	15	0	0	0	0	0	0
499	TUTATLANIKA RIVER		0	0	0	0	0	0	0	0	0	0	0	0
500	TWAINS BAY PRODUCTION		3000	0	100	0	3100	20	0	0	0	0	0	0
501	TRAMWAY RAN		0	0	50	0	50	5	0	0	0	0	0	0
502	TREE POINT C G	TRP	0	0	0	50	50	0	0	0	0	0	0	0
503	TRINITY		50	0	50	0	100	10	0	0	0	0	0	0
504	TULUKSAK	TLT	50	50	200	0	300	30	0	1	0	0	0	1
505	TUNTUTULIAG	720	110	0	220	0	330	35	0	0	0	0	0	0
506	TUNTUTULIAG		110	40	300	0	450	50	0	0	0	0	0	0
507	NICHIN COVE		100	200	100	0	400	50	0	0	0	0	1	1
508	TAELVE MILE ARM		200	100	200	0	500	20	0	0	0	0	1	1
509	TATA HILLS		50	0	70	0	120	20	0	0	0	0	0	0
510	TYONEK	TYE	2000	0	100	0	2100	400	0	0	0	0	0	0
510	NIKOLAI CREEK		400	0	500	0	900	50	0	0	0	0	0	0
510	GRANITE POINT		50	0	50	0	100	10	0	0	0	0	0	0
511	UGASHIK	UGA	50	200	700	0	950	130	1	0	0	0	0	1
512	AUFEIS UNIT AIRSTRIP		360	0	5	0	365	4	0	0	0	0	0	0
512	UMIAT	UMT	500	0	1000	0	1500	100	0	0	0	0	0	0
512	UMIAT M		10	0	50	0	60	10	0	0	0	0	0	0
513	NORTH SHORE	UMR	0	0	0	0	0	0	0	0	0	0	0	0
513	UNYAK	UNS	0	0	100	0	100	50	0	0	0	0	0	0
514	UNALAKLEET	UNK	5000	2000	1000	20	8020	1100	0	3	0	0	0	3
515	UTTCA CREEK		100	0	100	0	200	15	0	0	0	0	0	0

Table D.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 20

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITRNT GA	MIL	TOTAL	PEAK MO.GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
516	INDIAN MOUNTAIN AFS	UTO	0	0	0	0	0	0	0	0	0	0	0	0
517	UYAK SR	KUY	50	0	50	0	100	10	0	0	0	0	0	0
518	VALDEZ NR 2	VDZ	13000	2000	15000	0	30000	1400	2	3	1	0	0	6
519	VENETIE	VEE	150	0	250	0	400	30	0	0	0	0	0	0
520	VICTORY		0	0	50	0	50	10	0	0	0	0	0	0
521	WAINWRIGHT /BEACH/		50	0	10	0	60	10	0	0	0	0	0	0
521	WAINWRIGHT DEW STATION	AIN	50	0	50	10	110	30	0	0	0	0	0	0
521	WAINWRIGHT	SWW	150	30	250	0	430	25	0	1	0	0	0	1
522	WALES	WAA	150	0	0	0	150	20	0	0	0	0	0	0
522	WALES BEACH		150	0	50	0	200	20	0	0	0	0	0	0
523	WASILLA	Z16	300	500	200	0	1000	100	0	11	0	5	0	16
523	WILLARNEY		0	5	0	0	5	1	0	0	0	0	0	0
523	WESS		0	0	0	0	0	0	1	0	0	0	0	1
523	WASILLA LAKE	Z16	50	0	100	10	160	10	0	0	0	0	0	0
524	WATERFALL	KWF	50	0	50	0	100	20	0	0	0	0	0	0
525	WATTANUSF		10	0	50	0	60	5	0	0	0	0	0	0
526	WEST WAVIK	VKW	5	0	2	0	7	5	0	0	0	0	0	0
527	WEST KUPARUK	XPU	0	0	0	0	0	0	0	0	0	0	0	0
528	WEST POINT VILLAGE	KWP	50	0	50	0	100	10	0	0	0	0	0	0
529	WHITE MOUNTAIN	WMO	400	0	200	25	625	50	0	0	0	0	0	0
529	WHITE MOUNTAIN MINE		50	100	10	0	160	20	1	0	0	0	0	1
530	WHITTIER		20	0	50	0	70	10	0	0	0	0	0	0
531	WIDE BAY	TBY	10	0	10	0	20	5	0	0	0	0	0	0
532	WILLOW LAKE		0	0	10	0	10	2	0	0	0	0	0	0
533	WILLOW	Z22	50	350	400	0	800	150	2	2	0	0	0	4
534	WISEMAN	WSM	24	0	50	0	74	4	0	0	0	0	0	0
534	LINDA CREEK		0	150	10	0	160	15	0	1	0	0	0	1
535	WOODCHOPPER	WOO	0	0	0	0	0	0	0	0	0	0	0	0
536	WOOD RIVER LODGE		0	0	350	0	350	40	0	0	0	0	0	0
537	WRANGELL	WRG	3000	1000	500	0	4500	600	0	0	0	0	4	4
537	WRANGELL	WRG	50	3000	4500	0	7550	2000	3	6	2	0	0	11
538	YAKATAGA	CYT	50	0	100	10	160	20	0	0	0	0	0	0
538	YAKATAGA H		60	150	100	0	310	200	0	0	0	1	0	1
539	YAKUTAT	YAK	2000	4000	2000	300	8300	1500	8	9	1	0	0	18
539	YAKUTAT		50	0	50	0	100	15	0	0	0	0	0	0
539	YAKUTAT H		10	50	100	10	170	10	0	0	0	1	0	1
539	HARLEQUIN LAKE		100	0	50	0	150	100	0	0	0	0	0	0
539	SITUK		100	0	100	0	200	100	0	0	0	0	0	0
539	TANIS MESA		150	0	50	0	200	20	0	0	0	0	0	0
539	DANGEROUS RIVER		150	0	100	0	250	50	0	0	0	0	0	0

Table D.3
(Continued)

SYSTEMS CONTROL INC, (VT,), 1801 PAGE MILL ROAD, PALO ALTO, CA,, PAGE 21

FAA AIRPORT DIRECTORY TAPE - OPERATIONS AND BASED AIRCRAFT DATA

COMM. IDX	AIRPORT NAME	ID	ANNUAL OPERATIONS DATA						BASED GA AIRCRAFT					
			TAXI	LOCAL GA	ITNT GA	MIL	TOTAL	PEAK MO,GA	SNGL UNDER 4 PL	SNGL 4 OR OVER	MULT ENG	HELI	SEA	TOTAL
539	MIDDLE DANGEROUS CAMP		150	0	100	0	250	50	0	0	0	0	0	0
539	MARINE FOODS CANNERY		50	0	100	0	150	20	0	0	0	0	0	0
539	YAMISE		10	0	20	0	30	10	0	0	0	0	0	0
539	SUDDEN STREAM		50	0	50	0	100	10	0	0	0	0	0	0
539	ALSEK RIVER		100	0	100	0	200	15	0	0	0	0	0	0
539	EAST ALSEK RIVER		50	0	50	0	100	20	0	0	0	0	0	0
540	YAKUTE CREEK 2		250	250	250	0	750	50	1	0	0	0	0	1
541	YES BAY LODGE		200	0	100	0	300	100	0	0	0	0	0	0
542	ZACHAR BAY	KZB	50	0	50	0	100	10	0	0	0	0	0	0

Table D.4

Airport Equipment Summary

AIRPORT EQUIPMENT AND CHARACTERISTICS	NUMBER OF AIRPORTS	PERCENT OF TOTAL (809)
Scheduled Service	68	8.4
Open to Public	606	74.9
Tower	13	1.6
FSS	37	4.6
Weather Stations	83	10.3
Fire and Rescue	81	10.0
Emergency Medical Facilities	41	5.1
Snow Removal	215	26.6
Wind Indicator	501	61.9
Runway Lights	170	21.0
Touchdown Lights	3	0.4
VASI	33	4.1
REIL	23	2.8
Instrumented Runway	42	5.2
ILS	12	1.5
Unicom	37	4.6
RVR	6	.7

Table D.5
Airport Operations and
Based-Aircraft Summary

ALASKA BASED GA AIRCRAFT		
AIRCRAFT TYPE	NUMBER OF AIRCRAFT	PERCENT OF TOTAL*
Single Engine Under Four Place	1122	35.4
Single Engine, Four Place and Over	1341	42.4
Multi-Engine	147	4.7
Helicopter	267	8.4
Seaplane	289	9.1
TOTAL	3166	100.0*

ESTIMATED ANNUAL OPERATIONS		
TYPE OF OPERATION	ANNUAL NUMBER	PERCENT OF TOTAL*
Air taxi	444411	21.6
Local GA	639434	31.0
Itinerant GA	804480	39.0
Military	172063	8.4
TOTAL	2060388	100.0*

*Air carrier aircraft and operations data are not included in the FAA airport directory tapes. Air carrier statistics were obtained from a difference source for use elsewhere in this report and are not included here.

Table D.6

NUMBER OF AIRPORTS VS. ANNUAL MILITARY OPERATIONS
DATA BASED ON FAA AIRPORT DIRECTORY TAPE

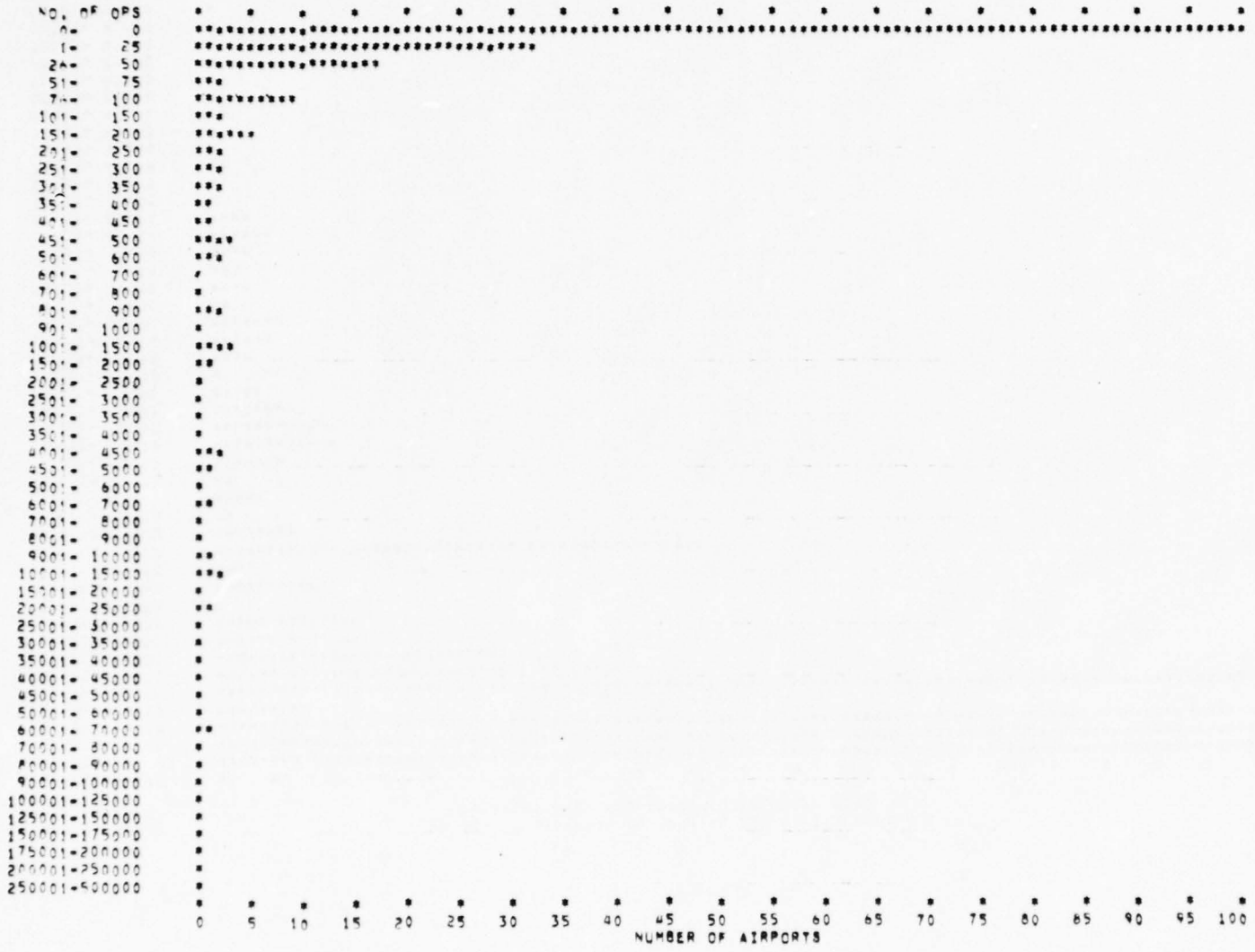


Table D.7

NUMBER OF AIRPORTS VS. ANNUAL AIR TAXI OPERATIONS
DATA BASED ON FAA AIRPORT DIRECTORY TAPE

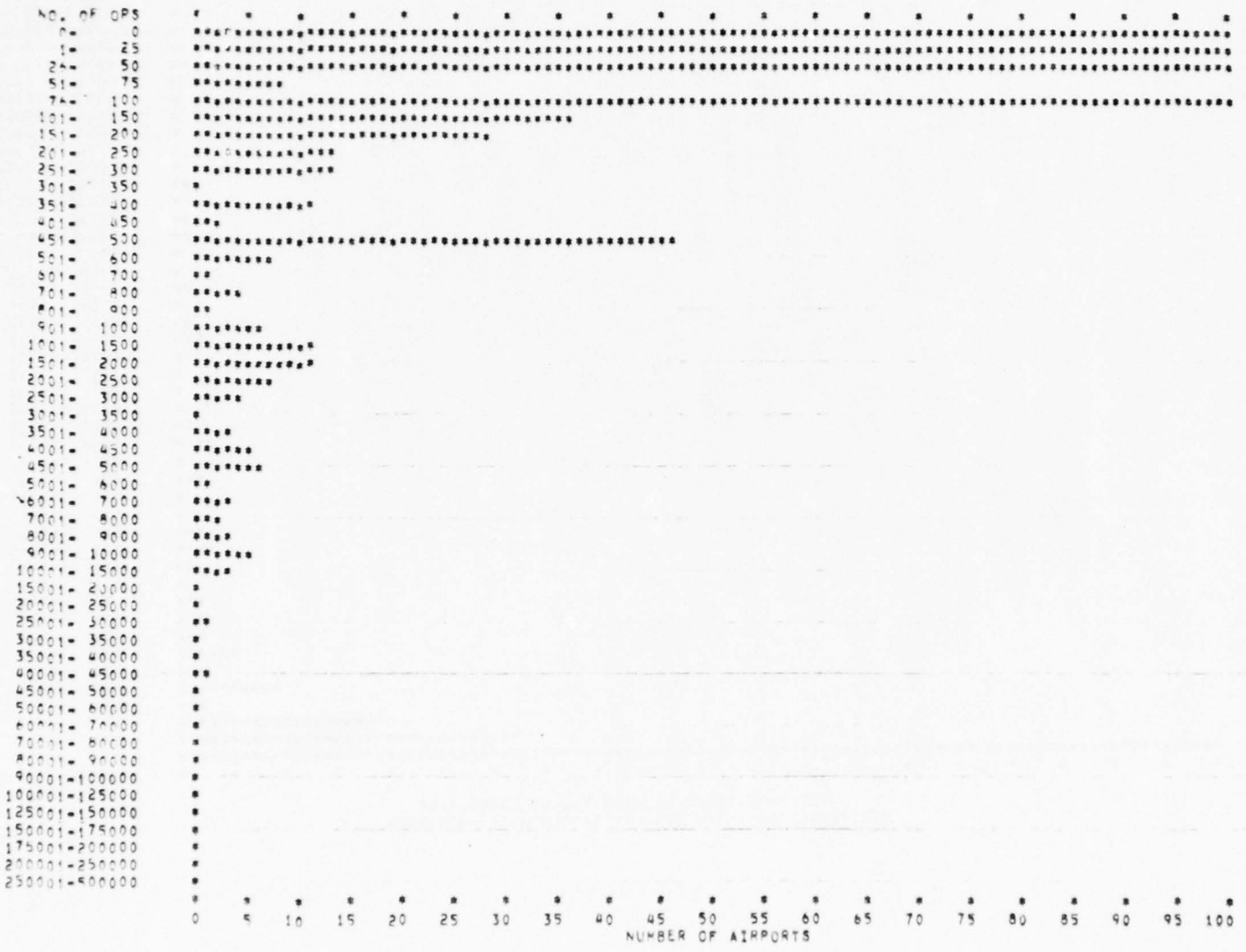


Table D.8

NUMBER OF AIRPORTS VS. ANNUAL LOCAL GA OPERATIONS
DATA BASED ON FAA AIRPORT DIRECTORY TAPE

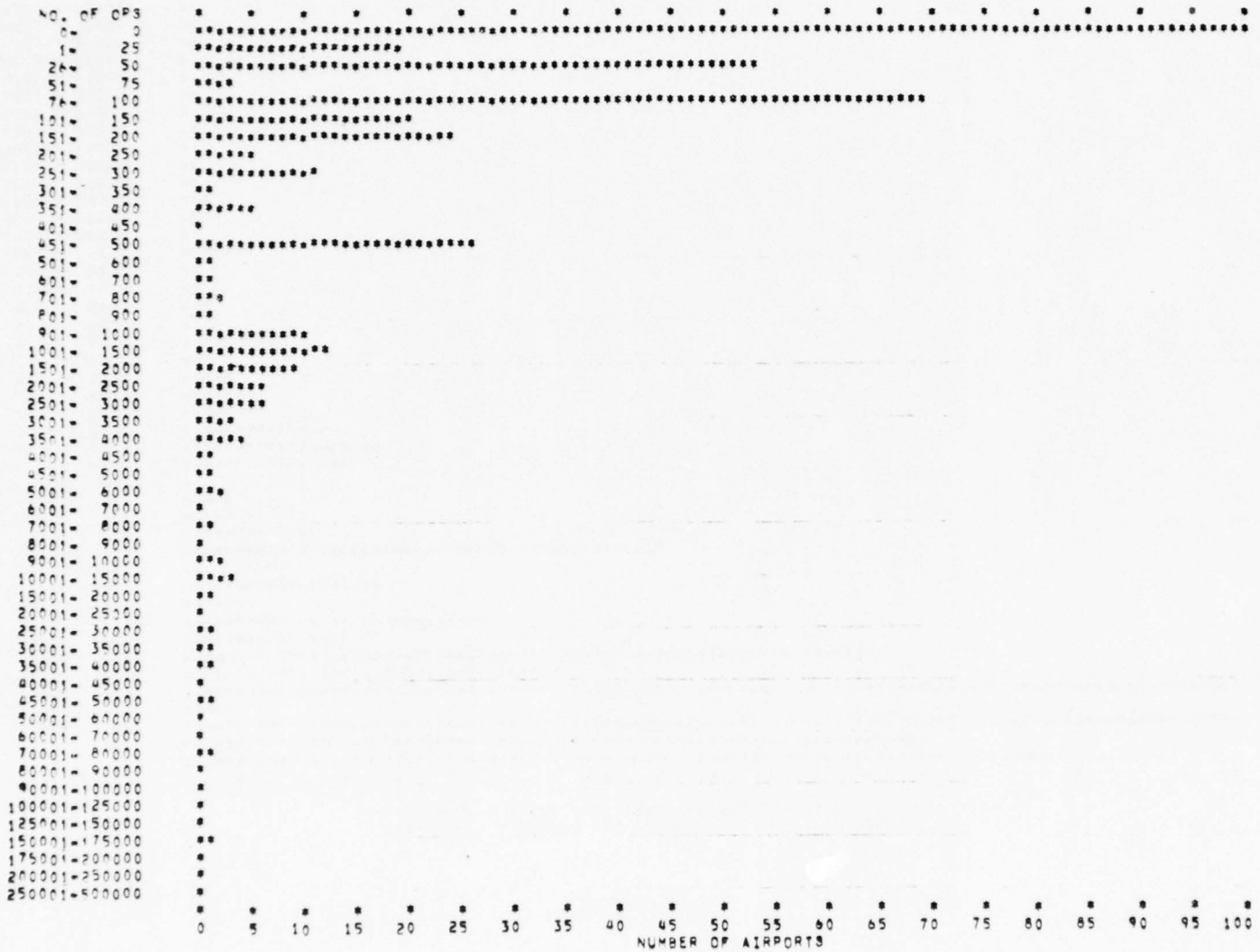


Table D.9

NUMBER OF AIRPORTS VS. ANNUAL ITRNT GA OPERATIONS
DATA BASED ON FAA AIRPORT DIRECTORY TAPE

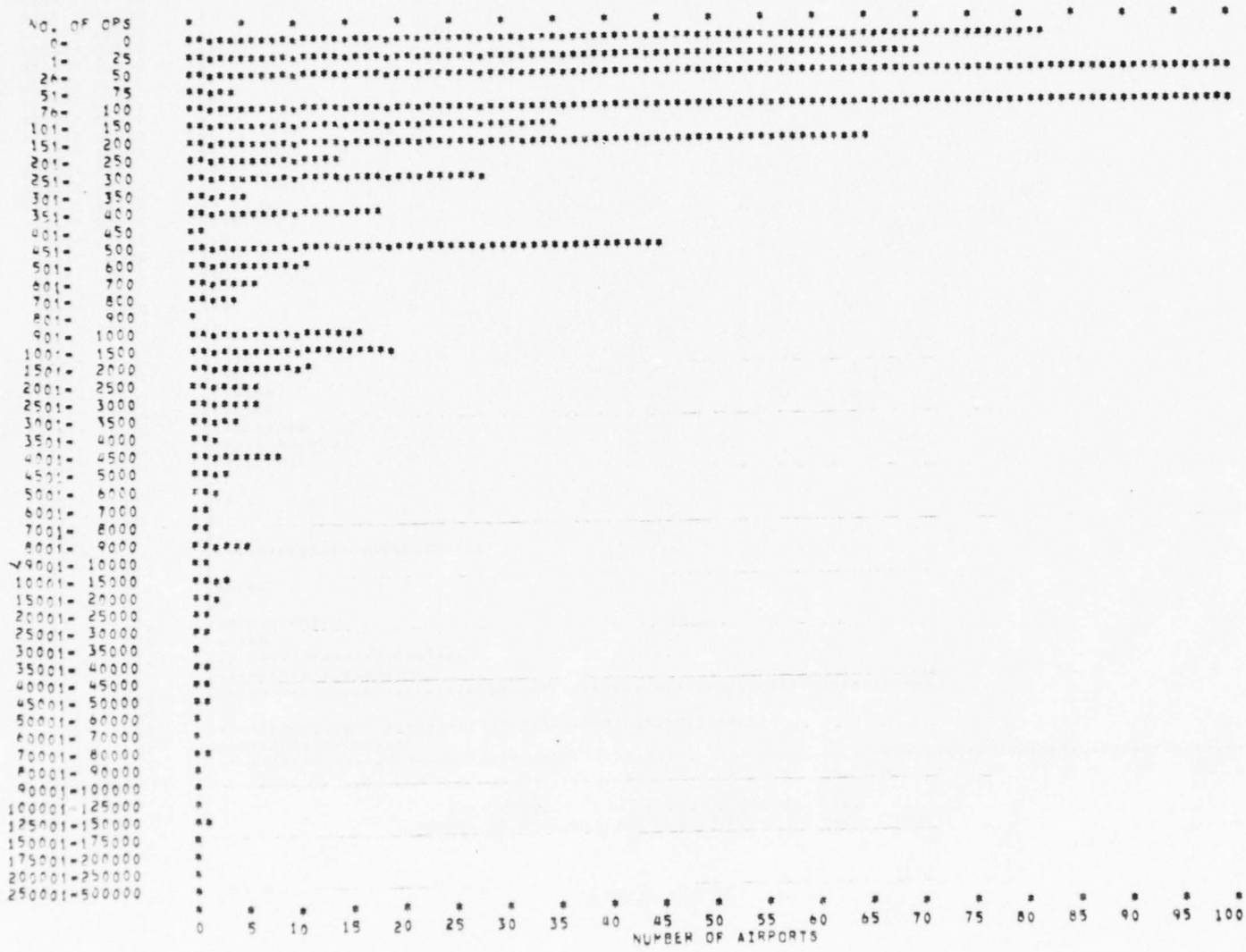
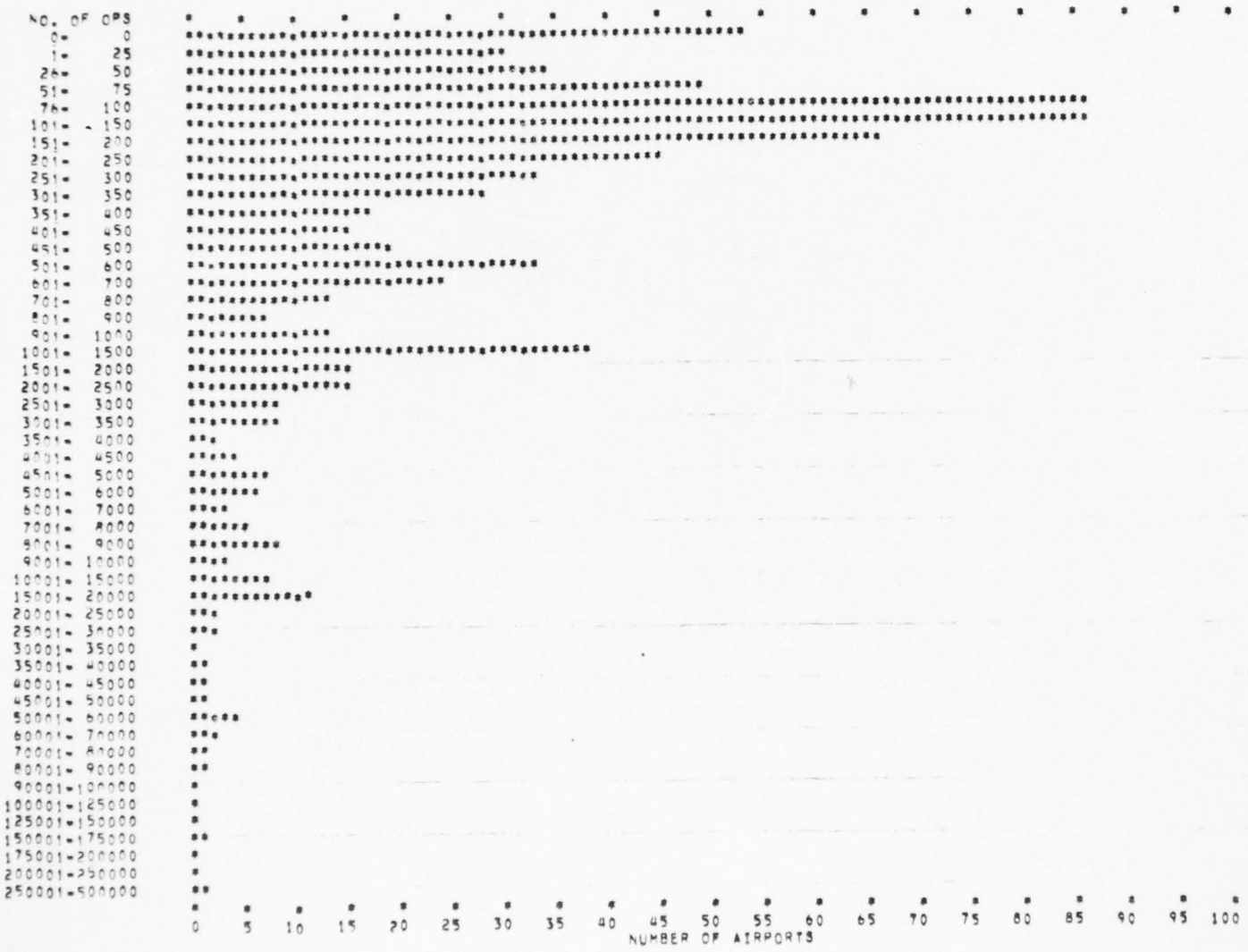


Table D.10

NUMBER OF AIRPORTS VS. ANNUAL TOTAL OPERATIONS
DATA BASED ON FAA AIRPORT DIRECTORY TAPE



APPENDIX E
ESTIMATED ALASKA AIR TAXI ORIGIN-DESTINATION STATISTICS

Ideally Alaska air taxi origin-destination statistics would be directly available from either state (Alaska Transportation Commission - ATC) and/or federal (Civil Aeronautics Board - CAB) regulatory agencies. Since this was not the case, an alternative approach was needed to estimate this information, vital in prioritizing the relative benefits associated with filling individual low altitude navigation coverage gaps.

While origin-desgination data was not available from the ATC, that agency did provide access to its "Raw Air Taxi Data" Quarterly Reports (a sample of the 63 pages used in this study is shown in Table E.1). This data base includes the number of flights, passengers, revenue, and source. It was obtained for a total of 280 air taxi operators for each of four quarters from the third quarter of 1974 through the second quarter of 1975.

This "raw data" was coded, keypunched, summed over the four quarters, combined by base community and sorted by type of operation. Table E.2 summarizes these results. The assistance of the AACA was solicited in order to transform the data listed in Table E.2 to the needed origin-destination statistics. Computer forms were produced wherein each of the 280 air taxi operators were listed with space provided to designate the (six or less) destination communities/regions typically served by each operator, together with the per cent distribution of his operations between the communities/regions listed. In addition, relevant flight data was also requested; i.e., VFR (V) or IFR (I), high altitude (H) or low altitude (L) operations.

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The AACA provided valuable assistance in this effort by using his experience within Alaska's air taxi industry to estimate most of the requested information. Destination zones defined by one of 24 operating regions (Table E.3), were substituted for destination community designators (the other community in the origin-destination pair, the air taxi operator's base location was deemed to be the origin community). The resulting inputs of the AACA are shown in Table E.4.

With this information, the original raw air taxi data was aggregated by operating region and categorized by altitude regime and navigation mode. These results are presented in Table E.5. While certain of the categories are of limited value (such as #22, "LOCAL"), in general, the dimensions are sufficiently accurate to permit estimating the distribution of air taxi flights and revenue between Alaska's Victor routes. This is a reasonable task only because of the relative simplicity of Alaska's airway structure (Figure E.1). The results of this effort are shown in Table E.6, which includes only low altitude IFR traffic. The ranking in this table is according to number of flights and total revenue. Notice that the rankings of these two figures of merit are almost identical. The only difference occurs in cases 8, 9, and 10. However, the number of flights is almost the same for each of these three as is the total revenue. Hence, the ranking between eighth, ninth, or tenth position is of little consequence.

One other source of origin-destination statistics was uncovered. Last year, the Alaska Air Carriers Association, on behalf of the Institute of Social, Economic and Government Research, located at the University of Alaska in Fairbanks, submitted a questionnaire (Table E.7) to its membership to ascertain the operating characteristics of the Alaskan Air Taxi

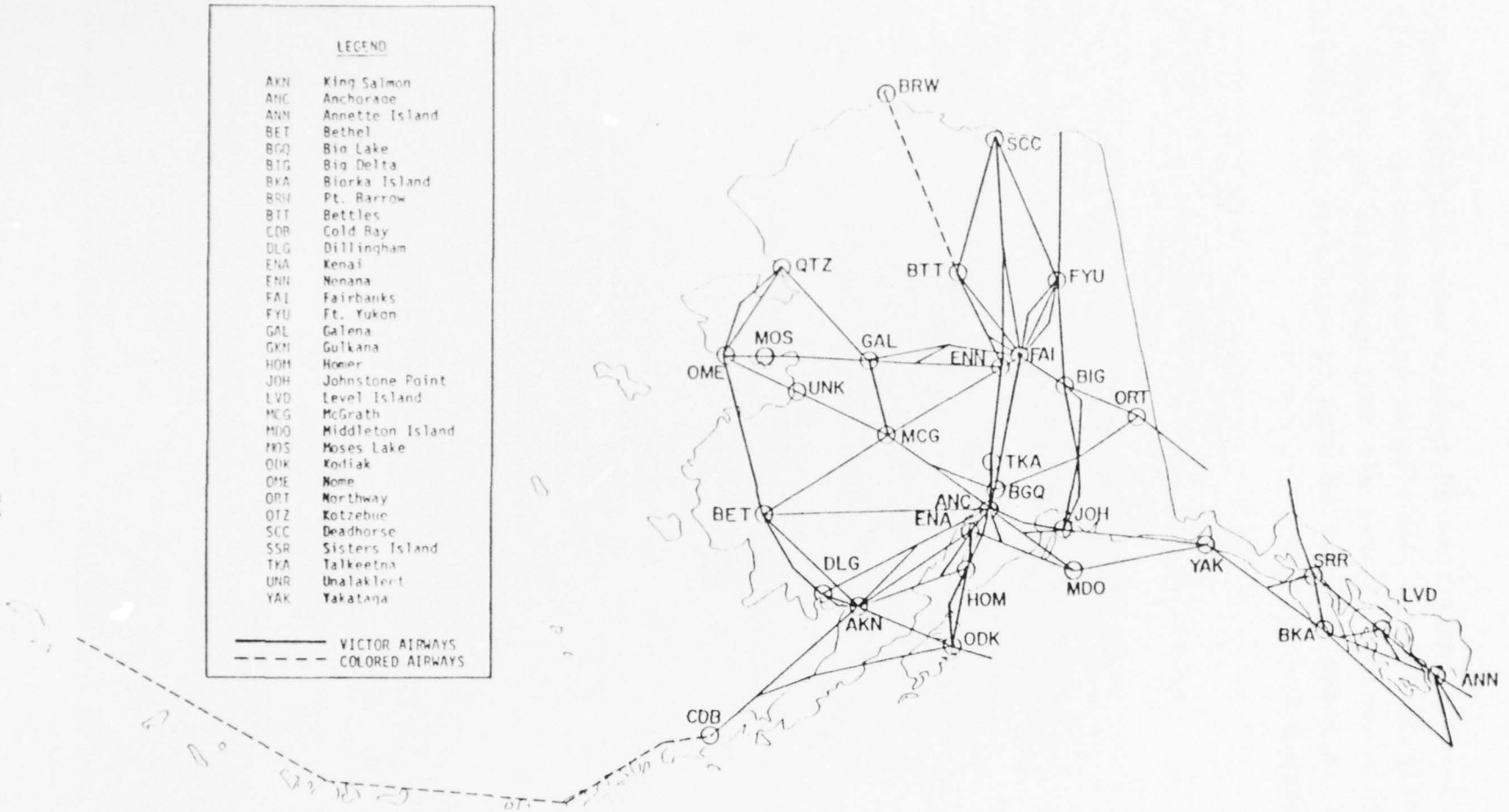

Figure E.1 Alaska Airway Structure

Industry. To date, only some 40 replies were received, many only partially completed. Additional information may be available from this sources if more air taxi responses are forthcoming. If so, these data may be used to calibrate the material found in Table E.4.

Table E.1
Raw Air Taxi Data

Southcentral Air Taxi - Final Weight — Quarterly Op. Reports 3rd Quarter 1974

4

		# Pilots	# Flights	# Passengers	Use Freight	Use Mail	Passenger Revenue	Freight Revenue	Mail Revenue	Total Revenue	Days	Air Commerce Hours
	Kenai											
76	Nelson Aviation	1	54	110	1,000	0	$4,500	$375	–	$4,875	49	6.5.0
77	Kenai Sky Service Inc.	13	418	572	38,140	–	$57,808	–	–	$57,808	38	196.9
78	Kenai Aviation	1	269	507	15,116	–	$13,523	–	–	$13,523	252	372.5
	Kodiak											
80	Kodiak Air Taxi	1	38	33	52	N/A	$710	$39	N/A	$749	51	13.0
81	South Central Air Service	1	119	163	7,500	–	$15,015	$1,234	–	$16,249	91	269.0
82	**Lake Creek** Lake Creek Lodge (CRS Cutthroat Lodge)	1	120	312	–	–	$8,027	–	–	$8,027	61	131.7
83	**Lake Louise** Gerhard Lathen dba.	2	170	293	–	–	$10,115	–	–	$10,115	90	135.0
85	**McCarthy** Wrangell Mt. Air Service	2	11	13	–	–	$555	–	–	$555	8	11.1
86	**Clay Creek** Wilson Air Service	No Activity This Period										
87	**Chisik Lake** Chisik Island Hunting Service	2	192	94	13,473	0	$5,193	$1,742	0	$6,935	46	141.5
88	**Goose Pass** Situk Lindy Lodge (Cutthroat)	1	23	23	2,300	–	$705	–	–	$705	60	23.0
89	Goose Pass Air Safety Service	1		136	–	–	$12,413	–	–	$12,413	–	166.0
	Sekeeva											
90	Sekeeva Lodge (Sheldon Jackson Fly Service)	3	56	51	0	0	$2,355	0	0	$2,355	53	52.1
	Palmer											
91	George W. Chapman	1	80	130	0	0	$1,007	–	–	$1,007	81	134.6
92	Knik Aviation Inc.											
93	Lazy Ell Aviation Inc.	2	2	2	–	–	$45	–	–	$45	2	1.9
94	Wilderness Air Inc.	1	47	63	–	–	$6,360	–	–	$6,360	40	115.0
95	Woods Air Service	2	11	20	N/A	N/A	$3,312	N/A	N/A	$43,312	253	467.6
	Page Total	35	1,590	2,672	74,579	0	$150,429	$3,390	–	$154,218	1,325	2,199.2

Table E.2

Alaska Air Taxi Operations and Revenue Data by Community

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
AMBLER	AIR TAXI-FIXED WING	401	1464	9590	0	31612	1045	0	32657	49	52
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	401	1464	9590	0	31612	1045	0	32657		
ANCHORAGE	AIR TAXI-FIXED WING	106677	131410	19336458	7911	9439627	3610776	2400	13052803	1	2
	AIR TAXI-ROTARY WING	162358	290552	63307485	0	11452142	5648336	600	17101078		
	CONTRACT-FIXED WING	1124	210	22375920	0	15745	3089547	0	3105292		
	CONTRACT-ROTARY WING	8172	1797	20000	0	448103	27145	0	475248		
	TOTAL	278331	423969	105039863	7911	21355617	12375804	3000	33734421		
ANNETTE	AIR TAXI-FIXED WING	4007	9703	438276	238873	98070	35529	11267	144866	16	33
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	4007	9703	438276	238873	98070	35529	11267	144866		
BARROW	AIR TAXI-FIXED WING	1560	8396	747821	0	485407	85649	0	571056	31	13
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	1560	8396	747821	0	485407	85649	0	571056		

Table E.2
(Continued)

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
BARTLETT COVE	AIR TAXI-FIXED WING	292	865	4119	0	28199	576	0	28775	55	56
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	292	865	4119	0	28199	576	0	28775		
BEAR LAKE	AIR TAXI-FIXED WING	62	76	20000	0	7259	0	0	7259	66	57
	AIR TAXI-ROTARY WING	97	243	8650	0	18801	0	0	18801		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	159	319	28650	0	26060	0	0	26060		
BETHEL	AIR TAXI-FIXED WING	11140	32329	1918176	750565	1236994	134616	116144	1487754	6	6
	AIR TAXI-ROTARY WING	205	104	0	0	127050	0	0	127050		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	11345	32433	1918176	750565	1364044	134616	116144	1614804		
BETTLES	AIR TAXI-FIXED WING	1991	4361	504926	325688	105494	68098	39811	213403	22	18
	AIR TAXI-ROTARY WING	763	0	0	0	105757	45704	0	151461		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	2754	4361	504926	325688	211251	113802	39811	364864		
BIRCHWOOD	AIR TAXI-FIXED WING	62	24	0	0	12926	0	0	12926	75	70
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	62	24	0	0	12926	0	0	12926		
CANTWELL	AIR TAXI-FIXED WING	122	110	9745	0	4840	1102	0	5942	70	75
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	122	110	9745	0	4840	1102	0	5942		

Table E.2
(Continued)

SYSTEMS CONTROL INC. (VT.)• 1801 PAGE MILL ROAD• PALO ALTO• CA.• PAGE 3

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
CHISTOCHINA	AIR TAXI-FIXED WING	5	5	0	0	340	0	0	340	85	89
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	5	5	0	0	340	0	0	340		
CHITINA	AIR TAXI-FIXED WING	166	282	803	13467	16022	0	0	16022	65	65
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	3	4	3000	0	1350	0	0	1350		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	169	286	3803	13467	17372	0	0	17372		
COOPER LANDING	AIR TAXI-FIXED WING	578	705	0	0	21570	0	0	21570	46	60
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	578	705	0	0	21570	0	0	21570		
CORDOVA	AIR TAXI-FIXED WING	2745	7438	334106	105679	255960	22435	0	278395	23	21
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	2745	7438	334106	105679	255960	22435	0	278395		
CURRY	AIR TAXI-FIXED WING	8	10	0	0	891	0	0	891	84	85
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	8	10	0	0	891	0	0	891		
DEADHORSE	AIR TAXI-FIXED WING	704	1687	286096	0	179823	116638	0	296461	20	7
	AIR TAXI-ROTARY WING	2376	6066	875926	0	612945	410175	0	1023120		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	3080	7753	1162022	0	792768	526813	0	1319581		

Table E.2
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 4

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
DELTA JUNCTION/FT GREELY	AIR TAXI-FIXED WING	126	157	3400	0	13248	0	0	13248	68	68
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	126	157	3400	0	13248	0	0	13248		
DENALI	AIR TAXI-FIXED WING	57	0	0	0	1750	605	0	2355	76	83
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	57	0	0	0	1750	605	0	2355		
DILLINGHAM	AIR TAXI-FIXED WING	5069	18530	15704	0	317113	50697	0	367810	12	17
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	5069	18530	15704	0	317113	50697	0	367810		
FAIRBANKS	AIR TAXI-FIXED WING	21752	49701	347274750	0	3374124	41254282	0	44628406	2	1
	AIR TAXI-ROTARY WING	50393	19050	5427858	0	3582540	1556502	0	5139042		
	CONTRACT-FIXED WING	516	849	10753921	0	32764	1463470	0	1496234		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	72661	69600	363456529	0	6989428	44274254	0	51263682		
FORT YUKON	AIR TAXI-FIXED WING	726	1601	200519	0	50583	0	0	50583	41	41
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	726	1601	200519	0	50583	0	0	50583		

Table E.2
(Continued)

SYSTEMS CONTROL INC. (VT.); 1801 PAGE MILL ROAD; PALO ALTO, CA.; PAGE 5

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
GAKONA	AIR TAXI-FIXED WING	19	19	0	0	3893	0	0	3893	80	80
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	19	19	0	0	3893	0	0	3893		
GALENA	AIR TAXI-FIXED WING	7570	14555	238782	591519	510602	28603	100179	639184	9	12
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	7570	14555	238782	591519	510602	28603	100179	639184		
GRAYLING	AIR TAXI-FIXED WING	148	677	0	0	13758	0	0	13758	61	59
	AIR TAXI-ROTARY WING	42	173	0	0	9071	0	0	9071		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	190	850	0	0	22829	0	0	22829		
GLENNALLEN	AIR TAXI-FIXED WING	625	1292	138540	0	136894	0	0	136894	35	20
	AIR TAXI-ROTARY WING	561	1620	78720	0	146205	0	0	146205		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	1186	2912	217260	0	283099	0	0	283099		
GRAYLING	AIR TAXI-FIXED WING	344	956	0	0	33457	0	0	33457	52	50
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	344	956	0	0	33457	0	0	33457		
GUNSIGHT MOUNTAIN LODGE	AIR TAXI-FIXED WING	13	29	1400	0	1920	480	0	2400	81	82
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	13	29	1400	0	1920	480	0	2400		

Table E.2
(Continued)

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
HOMER	AIR TAXI-FIXED WING	12712	15286	616348	150792	332748	50992	22176	405916	4	14
	AIR TAXI-ROTARY WING	291	1021	33118	0	107095	0	0	107095		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	13003	16307	649466	150792	439843	50992	22176	513011		
HOONAH	AIR TAXI-FIXED WING	709	2543	61410	17165	46698	7382	2307	56387	44	42
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	709	2543	61410	17165	46698	7382	2307	56387		
HYDER	AIR TAXI-FIXED WING	0	0	0	0	0	0	0	0	10	19
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	5973	0	10857	0	0	353516	0	353516		
	TOTAL	5973	0	10857	0	0	353516	0	353516		
IGIIGIG	AIR TAXI-FIXED WING	265	462	53000	0	17662	3445	0	21107	57	62
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	265	462	53000	0	17662	3445	0	21107		

Table E.2
(Continued)

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
JUNEAU	AIR TAXI-FIXED WING	10610	29600	531912	191866	961004	80613	37292	1078909	5	5
	AIR TAXI-ROTARY WING	1314	2979	597850	0	1233107	0	0	1233107		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	11924	32579	1129762	191866	2194111	80613	37292	2312016		
KENAI	AIR TAXI-FIXED WING	6392	13552	1052418	1200	922528	258372	0	1180900	8	4
	AIR TAXI-ROTARY WING	2723	6611	613995	0	1441080	209400	0	1650480		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	9115	20163	1666413	1200	2363608	467772	0	2831380		
KETCHIKAN	AIR TAXI-FIXED WING	17240	76558	69450238	41691	1835064	4033869	21110	5890043	3	3
	AIR TAXI-ROTARY WING	3653	1872	429685	0	225760	124993	0	350753		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	20893	78430	69879923	41691	1860824	4158862	21110	6040796		
KIANA	AIR TAXI-FIXED WING	0	1272	13788	0	33037	0	0	33037	87	51
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	0	1272	13788	0	33037	0	0	33037		
KING SALMON	AIR TAXI-FIXED WING	3186	5150	861270	20000	410359	86674	10800	507833	19	15
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	3186	5150	861270	20000	410359	86674	10800	507833		
KLAWOCK	AIR TAXI-FIXED WING	2080	5558	46411	0	155482	5783	0	161265	26	30
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	2080	5558	46411	0	155482	5783	0	161265		

Table E.2
(Continued)

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
KODIAK	AIR TAXI-FIXED WING	713	938	18120	0	47774	2098	0	49872	43	44
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	713	938	18120	0	47774	2098	0	49872		
KOTZEBUE	AIR TAXI-FIXED WING	3428	5548	1735376	0	449185	279436	0	728621	17	11
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	3428	5548	1735376	0	449185	279436	0	728621		
KULIK LAKE LODGE	AIR TAXI-FIXED WING	357	179	0	0	17918	615	0	18533	90	64
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	357	179	0	0	17918	615	0	18533		
LAKE LOUISE	AIR TAXI-FIXED WING	170	293	0	0	10115	0	0	10115	63	73
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	170	293	0	0	10115	0	0	10115		
MCCARTHY	AIR TAXI-FIXED WING	13	18	0	0	755	0	0	755	82	87
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	13	18	0	0	755	0	0	755		

Table E.2
(Continued)

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
MCGRATH	AIR TAXI-FIXED WING	1606	3965	148328	17323	138811	8052	3217	150080	30	32
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	1606	3965	148328	17323	138811	8052	3217	150080		
MCKINLEY PARK	AIR TAXI-FIXED WING	208	507	0	0	23877	0	0	23877	60	58
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	208	507	0	0	23877	0	0	23877		
MANLEY HOT SPRINGS	AIR TAXI-FIXED WING	65	113	16579	0	2695	585	0	3280	74	81
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	65	113	16579	0	2695	585	0	3280		
MILE 86 RICHARDSON HWY	AIR TAXI-FIXED WING	0	0	0	0	5485	0	0	5485	88	76
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	0	0	0	0	5485	0	0	5485		
MOORE PASS	AIR TAXI-FIXED WING	23	209	2300	0	13118	0	0	13118	78	69
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	23	209	2300	0	13118	0	0	13118		
NABESNA	AIR TAXI-FIXED WING	94	89	0	0	4570	0	0	4570	72	78
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	94	89	0	0	4570	0	0	4570		

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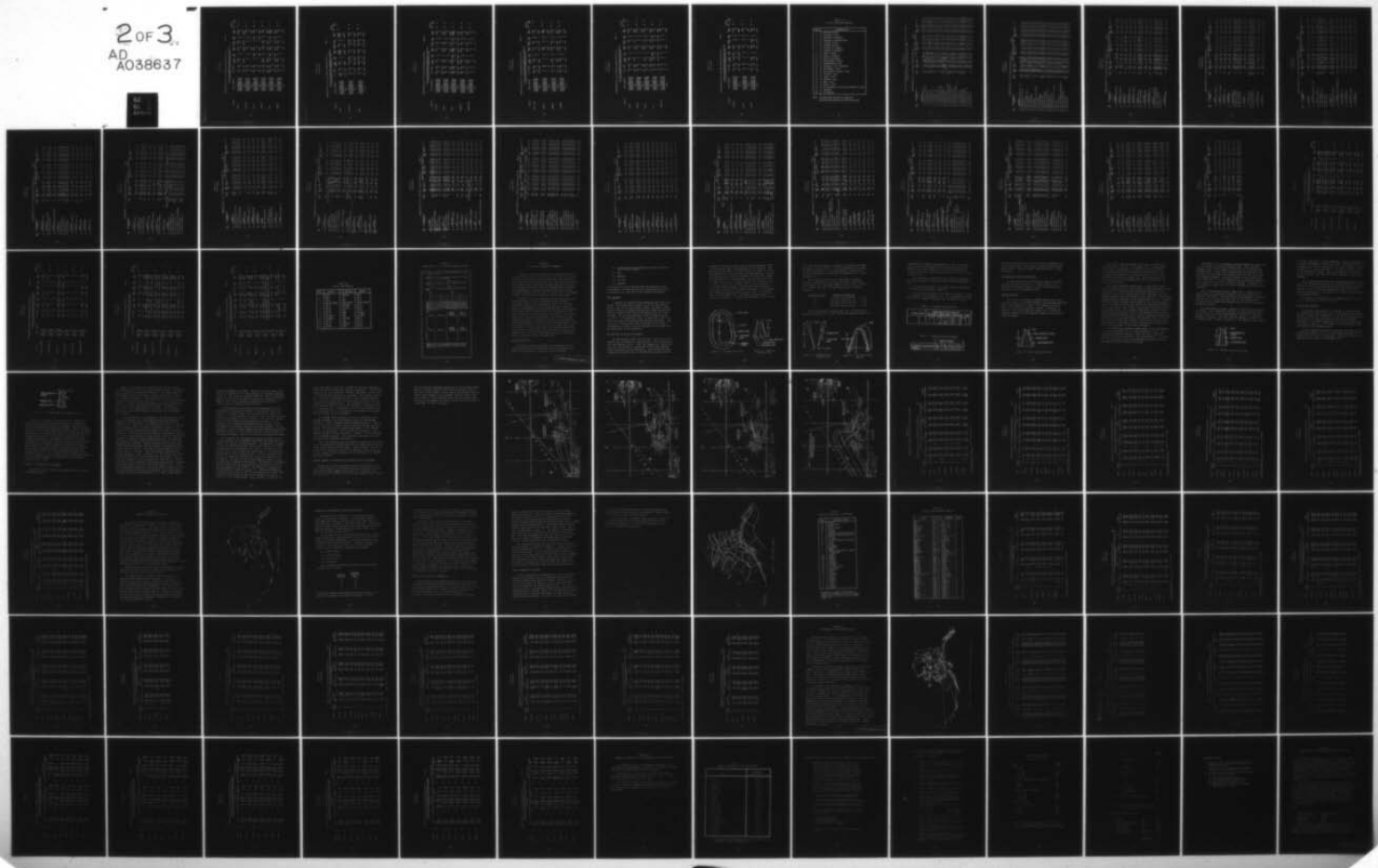

Table E.2
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 10

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
NANWEK	AIR TAXI-FIXED WING	1714	3114	310846	0	243785	25158	0	269143	28	22
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	1714	3114	310846	0	243785	25158	0	269143		
NANCY LAKE	AIR TAXI-FIXED WING	185	411	0	0	11349	0	0	11349	62	71
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	185	411	0	0	11349	0	0	11349		
NENANA	AIR TAXI-FIXED WING	249	297	0	2495	28001	0	2354	30355	58	55
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	249	297	0	2495	28001	0	2354	30355		
NIKISHKA	AIR TAXI-FIXED WING	0	0	0	0	0	0	0	0	33	37
	AIR TAXI-ROTARY WING	1531	2767	224550	0	70080	20876	0	90956		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	1531	2767	224550	0	70080	20876	0	90956		
NOME	AIR TAXI-FIXED WING	5091	13128	99475	36028	741231	12194	6377	759802	11	9
	AIR TAXI-ROTARY WING	18	0	0	0	12549	0	0	12549		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	5109	13128	99475	36028	753780	12194	6377	772351		
NORTHWAY	AIR TAXI-FIXED WING	446	544	263470	0	30640	18476	0	49116	48	45
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	446	544	263470	0	30640	18476	0	49116		

Table E.2
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 11

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
PALMER	AIR TAXI-FIXED WING	1658	1743	54860	0	123952	23097	0	147049	15	8
	AIR TAXI-ROTARY WING	2718	0	0	0	662715	0	0	662715		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	4376	1743	54860	0	786667	23097	0	809764		
PILOT POINT	AIR TAXI-FIXED WING	715	1316	43041	158632	96797	4735	17469	118981	42	36
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	715	1316	43041	158632	96797	4735	17469	118981		
RUBY	AIR TAXI-FIXED WING	636	1333	26530	65723	30460	3178	11130	44768	45	44
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	636	1333	26530	65723	30460	3178	11130	44768		

Table E.2
(Continued)

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
SELDOVIA	AIR TAXI-FIXED WING	2954	3135	9431	0	18467	659	0	19126	21	63
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	2954	3135	9431	0	18467	659	0	19126		
SEWARD	AIR TAXI-FIXED WING	216	362	3000	0	36207	2490	0	38697	99	89
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	216	362	3000	0	36207	2490	0	38697		
SITKA	AIR TAXI-FIXED WING	4729	15038	294692	32836	623185	57613	4086	684884	13	10
	AIR TAXI-ROTARY WING	157	740	0	0	58290	0	0	58290		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	4886	15778	294692	32836	681475	57613	4086	743174		
SLEETMUTE	AIR TAXI-FIXED WING	354	472	29025	0	29195	3218	0	32413	91	93
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	354	472	29025	0	29195	3218	0	32413		
SNOWSHOE LAKE	AIR TAXI-FIXED WING	9	14	540	0	710	80	0	790	83	86
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	9	14	540	0	710	80	0	790		

Table E.2
(Continued)

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
SOUTH NAKNEK	AIR TAXI-FIXED WING	9948	35690	22739	0	67113	4490	0	71603	7	38
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	9948	35690	22739	0	67113	4490	0	71603		
STERLING	AIR TAXI-FIXED WING	0	15	0	0	4717	0	0	4717	89	67
	AIR TAXI-ROTARY WING	0	65	0	0	8722	0	0	8722		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	0	80	0	0	13439	0	0	13439		
TALKEETNA	AIR TAXI-FIXED WING	763	1112	79650	0	89304	10574	0	99878	88	80
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	763	1112	79650	0	89304	10574	0	99878		
TANACROSS	AIR TAXI-FIXED WING	866	1766	7650	0	171243	785	0	172028	39	28
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	866	1766	7650	0	171243	785	0	172028		

Table E.2
(Continued)

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
TANANA	AIR TAXI-FIXED WING	573	2398	38050	0	51614	2124	0	53738	47	43
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	573	2398	38050	0	51614	2124	0	53738		
TAZLINA	AIR TAXI-FIXED WING	170	150	0	0	21500	0	0	21500	66	61
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	170	150	0	0	21500	0	0	21500		
TELLER	AIR TAXI-FIXED WING	971	2433	22752	0	62824	1692	0	64516	38	39
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	971	2433	22752	0	62824	1692	0	64516		
TOK	AIR TAXI-FIXED WING	311	570	3152	12395	28403	236	11359	39998	53	48
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	311	570	3152	12395	28403	236	11359	39998		
TOLSONA LAKE	AIR TAXI-FIXED WING	78	82	0	0	16533	0	0	16533	73	66
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	78	82	0	0	16533	0	0	16533		

Table E.2
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 15

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY COMMUNITY
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATOR	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
UNALAKLEET	AIR TAXI-FIXED WING	1560	2030	57500	368500	168433	0	0	168433	32	29
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	1560	2030	57500	368500	168433	0	0	168433		
WILLOW	AIR TAXI-FIXED WING	46	46	0	0	9097	0	0	9097	77	77
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	0	0	0	0	0	0	0	0		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	46	46	0	0	9097	0	0	9097		
YAKUTAT	AIR TAXI-FIXED WING	1082	1730	52788	0	76922	16042	0	92964	36	36
	AIR TAXI-ROTARY WING	0	0	0	0	0	0	0	0		
	CONTRACT-FIXED WING	6	10	1400	0	836	112	0	948		
	CONTRACT-ROTARY WING	0	0	0	0	0	0	0	0		
	TOTAL	1088	1740	54188	0	77758	16154	0	93912		

Table E.3

Air Taxi Operating Regions

INDEX	OPERATION TYPE
1	Anchorage to West
2	Anchorage to North
3	Anchorage to Southeast
4	Anchorage to Southwest Chain
5	Fairbanks to West
6	Fairbanks to North
7	Fairbanks to Southeast
8	Fairbanks to Southeast
9	Bethel to North
10	Bethel to Southeast
11	Bethel to Northwest
12	Kotzebue/Nome to North
13	Kotzebue/Nome to East
14	Anchorage - Local (150 Miles)
15	Aniak/Bethel - Local
16	King Salmon/Dillingham - Local
17	Fairbanks - Local
18	Galena - Local
19	Kotzebue - Local
20	Nome - Local
21	Barrow - Local
22	No Information or Local Only (150 Miles of Base)
23	Scheduled
24	121 Operator

NOTE: IFR marked when operator has capability
VFR marked when operations would continue same

Table E.4

Estimated Distribition of Individual Air Taxi Operators Operating Region by Destination Community Index

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 1

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION											
			DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	ANCHORAGE													
1	AERO TECH FLT SERVICE	1964	.1...	.15.	V	H	..2.	.20	V	H	.14.	61	V	H
2	AK AERONAUTICAL INDUS, INC	136	.23.	.2208	V	H	.....	.....	V	H	.....	.....	V	H
3	AK AIR GUIDES, INC.	1452	.34.	.100.	V	H	.....	.....	V	H	.....	.....	V	H
4	AK AIR SERVICE, INC.	1528	.1...	.20.	V	H	.13..	.3005	V	H	.3...	.10.	V	H
5	AK BUSH CARRIERS, INC.	1396	.24.	.100.	V	H	.....	.....	V	H	.....	.....	V	H
6	AK FLOAT PLANE, INC.	764	.22.	.100.	V	H	.....	.....	V	H	.....	.....	V	H
7	AK HELICOPTERS, INC.	64	.1...	.33.	V	H	.7...	.70..	V	H	.....	.....	V	H
8	AK INTERNATIONAL AIR, INC.	0	.34.	.100.	V	H	.....	.....	V	H	.....	.....	V	H
9	ALYESKA AIR SERVICE, INC.	1040	.14.	.1008	V	H	.....	.....	V	H	.....	.....	V	H
10	ANCHORAGE AIR SERVICE	1288	.22.	.10.	V	H	.....	.....	V	H	.....	.....	V	H
11	ANCHORAGE AIRWAYS	132	.22.	.60.	V	H	.....	.....	V	H	.....	.....	V	H
12	ANCHORAGE HELICOPTER SERV.INC	207124	.1...	.20	V	H	..7.	.75.	V	H	.3...	.10.	V	H
13	BIG REDIS FLYING SERV, INC.	3800	.24.	.....	V	H	.....	.....	V	H	.....	.....	V	H
14	CENTRAL AIRWAYS, INC.	328	.24.	.....	V	H	.....	.....	V	H	.....	.....	V	H
15	CHARLIE ALLEN FLYING SERV	112	.14.	.....	V	H	.....	.....	V	H	.....	.....	V	H
16	DZUITH AERO SER (SOLD TO ANCHO)	1804	.2...	.....	V	H	.3..	.....	V	H	.11.	.....	V	H
17	COLLINS AIR SERVICE	548	.22.	.....	V	H	.....	.....	V	H	.....	.....	V	H
18	ERA HELICOPTERS, INC.	15604	.1...	.10..	V	H	.2...	.75.	V	H	.2...	.10.	V	H
19	EVERGREEN HELICOPTERS	16344	.1...	.15..	V	H	.2...	.75.	V	H	.3...	.10.	V	H
20	FAIRBANKS AIR SERV, INC.	0	.23.	.....	V	H	.....	.....	V	H	.....	.....	V	H
21	GAY AIRWAYS, INC.	0	.22.	.....	V	H	.....	.....	V	H	.....	.....	V	H
22	GIFFORD AVIATION	216	.14.	.75.	V	H	.....	.....	V	H	.....	.....	V	H

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 2

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION											
			DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	ANCHORAGE													
23	ILIAMNA AIRWAYS (HUDSON AIR TAXI)	1492			V	H			V I	H L			V I	H L
24	INTERNATIONAL AIR TAXI, INC.	716			V	H			V I	H L			V I	H L
25	JET ALASKA, INC.	856			V	H			V I	H L			V I	H L
26	KETCHUM AIR SERVICE, INC.	12064			V	H			V I	H L			V I	H L
27	LEE'S AIR SERVICE	488			V	H			V I	H L			V I	H L
28	PATI'S FLYING SERVICE	0			V	H			V I	H L			V I	H L
29	PETCO AVIATION	1112			V	H			V I	H L			V I	H L
30	QUALITY AIRCRAFT MAINT + REPAIR	220			V	H			V I	H L			V I	H L
31	RAINY PASS LODGE	4			V	H			V I	H L			V I	H L
32	RUSTI'S FLYING SERVICE	1816			V	H			V I	H L			V I	H L
33	SEA AIRMOTIVE, INC.	14312			V	H			V I	H L			V I	H L
34	SAMSAL + SON FLYING SERV	84			V	H			V I	H L			V I	H L
35	SOUTHCENTRAL AVIATION, INC.	432			V	H			V I	H L			V I	H L
36	SPERNAK AIRWAYS, INC.	7692			V	H			V I	H L			V I	H L
37	STODDARD AERO SERV, INC.	120			V	H			V I	H L			V I	H L
38	HUDSON AIR TAXI (ILIAMNA AIRWAYS)	1220			V	H			V I	H L			V I	H L
39	SWISS, JOHN	500			V	H			V I	H L			V I	H L
40	TOTEM AIRWAYS, INC.	0			V	H			V I	H L			V I	H L
41	VICI'S FLYING SERVICE (CLIFFORD AVIATION)	28			V	H			V I	H L			V I	H L
42	WILBUR'S FLIGHT OPERATIONS	900			V	H			V I	H L			V I	H L
43	WINSHIP AIR SERVICE	20364			V	H			V I	H L			V I	H L
44	ALASKA TRAVEL AIR	120			V	H			V I	H L			V I	H L

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 3

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	INFORMATION NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	ANCHORAGE													
45	NORTHWESTERN AIR SERV, INC.	76	14		V (I)	H (L)			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	BEAR LAKE													
46	KENAI FLOAT PLANE SERVICE	248	22		(V) I	H (L)			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	BIRCHWOOD													
47	CHUGIAK AVIATION	248	1		(V) I	H (L)	14		(I) I	H (L)			V I	H L
					V I	H L			V I	H L			V I	H L
	BYERS LAKE													
48	DENALI AIR SERVICE, INC.	32	14		(V) I	H (L)			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	CHRISTOCHINA													
49	ALASKA FLOAT PLANE SERVICE	20	14		(V) I	H (L)			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	CHITINA													
50	CHITINA AIR SERV, INC.	448	14		(V) I	H (L)	3	10	V (I)	H (L)			V I	H L
					V I	H L			V I	H L			V I	H L
51	HOWARDS FLYING SERVICE	216	22		(V) I	H (L)			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	PORT HEIDEN													
52	AK FLOAT PLANE SERVICE	88	22		(V) I	H (L)			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	COOPER LANDING													
53	KENAI LAKE AIR TAXI, INC.	2312	22		(V) I	H (L)			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	CORDOVA													
54	CHARLIE ALLEN FLY SERVICE	0	22		(V) I	H (L)			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
55	CHITINA AIR SERVICE, INC.	6132	22		(V) I	H (L)			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
56	KENNEDY AIR SERVICE	20	22		(V) I	H (L)			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
57	PARKAIR, INC.	2828	22		(V) I	H (L)			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	EAGLE RIVER													
58	FIRE LAKE FLYING SERV	0	22		(V) I	H (L)			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.). 1801 PAGE MILL ROAD. PALO ALTO. CA.. PAGE 4

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION: DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	DENALI													
59	SUSITNA LODGE FLY SERV. INC.	228	22		V	H			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	GAKONA													
60	MCMAHAN GUIDE & FLY SERV. INC.	76	22		V	H			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	GIRDWOOD													
61	ALYESKA AIR SERV. INC.	592	22		V	H			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	GLENNALLEN													
62	WILSON AIR SERVICE	2500	22		V	H			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	GLENN HWY 101													
63	HOMESTEAD AIR SERVICE	0	22		V	H			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
64	BRANDTIS AIR SERVICE	52	22		V	H			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
65	FASSLER AIR SERVICE	0	22		V	H			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
66	LEEIR GUIDE SERVICE	680	22		V	H			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	GOLOVIN													
67	OLSON AIR SERVICE	0	20		V	H			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	HOMER													
68	C & L. DBA HOMER AIR	27692	22	60	V	H	1	40	V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
69	COOK INLET AVIATION	18932	22	60	V	H	1	40	V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
70	KACHEMAK AIR SERV. INC.	4224	22	50	V	H	1	45	V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	IRIUGIG													
71	HEDLUND AIR SERVICE	1060	22		V	H			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L
	ILIAMNA													
72	ILIAMNA AIR TAXI	6972	22		V	H			V I	H L			V I	H L
					V I	H L			V I	H L			V I	H L

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 5

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION											
			DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	ILIAMNA													
73	ILLAGKA AERO	0	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	JACK LAKE													
74	JACK LAKE FLY SERV/DEVIL MT. LODGE	0	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	KENAI													
75	ANDY'S FLYING SERVICE, INC.	17276	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
76	FALCON AVIATION	588	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
77	KENAI AIR SERVICE, INC.	3532	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
78	KENAI AVIATION	4128	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
79	DICKS FLY SERV	0	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	KODIAK													
80	KODIAK AIR TAXI	232	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
81	SOUTHCENTRAL AIR TAXI, INC.	2620	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	LAKE CREEK													
82	LAKE CREEK LODGE (SKS OUTFITTERS, INC.)	740	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	LAKE LOUISE													
83	CENTRAL NORTHERN, LTD.	680	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	LIME VILLAGE													
84	LIME VILLAGE AIR TAXI	516	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	MC CARTHY													
85	WRANGELL MT. AIR SERVICE	52	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	MAY CREEK													
86	WILSON AIR SERVICE	0	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 6

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION											
			DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	MEIERIS LAKE													
87	MCMAHAN GUIDE + FLY SERV	756	22		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
	MOORE PASS													
88	JOHN KINDA GUIDE + OUTFITTER	92	22		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
89	MOOSE PASS AIR JOCKEY	0	22		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
	NEBESNA													
90	DEVIL MT. LODGE/JACK LAKE FLY SERV.	376	22		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
	PALMER													
91	GEORGE CHAPMAN	644	22		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
92	KNIK AVIATION, INC.	0	22		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
93	LAZY MT. AVIATION, INC.	24	22		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
94	WIEDERKEHR, INC.	352	22		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
95	WOODS AIR SERVICE	5612	1	3	V I	M L	4	7	V I	M L	4	5	V I	M L
					V I	M L			V I	M L			V I	M L
	SALAMATOF													
96	KENAI FLOAT PLANE SERV. INC.	44	22		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
	SELDOVIA													
97	COOK INLET AVIATION, INC.	11816	22		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
	SEWARD													
98	HARBOR AIR SERVICE	864	22		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
	SNOWSHOE LAKE													
99	ALASKAN AIRVENTURES	36	22		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
	SOLDOTNA													
100	SOLDOTNA AIR SERVICE	0	1A		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 7

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION: DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	STERLING													
101	DICK'S FLYING SERVICE	0			V I	H L			V I	H L			V I	H L
	TALKEETNA													
102	HOLLAND AIR SERVICE	636			V I	H L			V I	H L			V I	H L
103	HUDSON AIR SERVICE	0			V I	H L			V I	H L			V I	H L
104	TALKEETNA AIR SERVICE	2416			V I	H L			V I	H L			V I	H L
	TANACROSS													
105	HARBELONS AIR VENTURES	1032			V I	H L			V I	H L			V I	H L
	TOLSONA LAKE													
106	SPORTSMANIS FLYING SERVICE	312			V I	H L			V I	H L			V I	H L
	VALDEZ													
107	KENNEDY AIR SERVICE	544			V I	H L			V I	H L			V I	H L
108	SPORTSMANIS FLY SERVICE	636			V I	H L			V I	H L			V I	H L
	WILLOW													
109	WILLOW AIR SERVICE	184			V I	H L			V I	H L			V I	H L

HELICOPTER OPERATIONS - ALL VFR - SHORT TRIPS

	ANCHORAGE													
110	AK HELICOPTERS, INC.	71076			V I	H L			V I	H L			V I	H L
111	ALYESKA AIR SERVICE, INC.	336			V I	H L			V I	H L			V I	H L
112	ANCH HELICOPTER SERV, INC.	229072			V I	H L			V I	H L			V I	H L
113	ARCTIC AIR SERV, INC.	12252			V I	H L			V I	H L			V I	H L
114	DEVIK AERO SERV, INC. (Ft Alaska)	0			V I	H L			V I	H L			V I	H L
115	ERA HELICOPTERS, INC.	240168			V I	H L			V I	H L			V I	H L
116	EVERGREEN HELICOPTERS, INC.	77556			V I	H L			V I	H L			V I	H L

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 8

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DEST. COMM. IDX	PCT TRAFFIC	DESTINATION COMMUNITY INFORMATION NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	ANCHORAGE													
117	GAY AIRWAYS, INC.	4780	*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
			*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
118	INTERNATIONAL AIR TAXI, INC.	13848	*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
			*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
119	JET ALASKA, INC.	0	*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
			*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
120	WILBURIS FLIGHT OPERATIONS	384	*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
			*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
	CORDOVA													
121	KENNEDY AIR SERVICE	0	*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
			*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
	BEAR LAKE													
122	KENAI FLOAT PLANE SERV, INC.	388	*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
			*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
	GIRDWOOD													
123	ALYESKA AIR SERVICE, INC.	168	*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
			*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
	GLENNALLEN													
124	WILSON AIR SERVICE	2244	*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
			*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
	HOMER													
125	TOTEM AIR	372	*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
			*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
126	TOTEM HELICOPTERS, INC.	792	*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
			*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
	KENAI													
127	KENAI AIR SERVICE, INC.	8348	*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
			*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
128	ANCH HELICOPTER SERV, INC.	2544	*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
			*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
	PALMER													
129	WOODS AIR SERVICE	10872	*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
			*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
	NIKISKI													
130	ANCHORAGE HELICOPTER SERV, INC	0	*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L
			*****	*****	V I	M L	*****	*****	V I	M L	*****	*****	V I	M L

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 9

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION: DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	NYKISKI													
131	ERA HELICOPTERS, INC.	6124	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	ANCHORAGE		CONTRACT CARRIERS											
132	CAROL R. NORTHCUTT	0	.22	.....	(V) I	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
133	DEERING GUIDE SERVICE	840	.22	.....	(V) I	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
134	ERA HELICOPTERS, INC.	0	.....	.....	V (I)	(M) L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
135	NORTHERN AIR CARGO, INC.	3392	.1...	.2...	V (I)	(M) L	.2...	.1...	V (I)	(M) L	.1...	.....	V (I)	(M) L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
136	SAMSAL + SON FLYING SERVICE	264	.22	.....	(V) I	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	CHITINA													
137	AK YUKON GUIDE + OUTFITTERS	12	.22	.....	(V) I	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	ANCHORAGE		Helicopter - Contract all VFR - Local											
138	HELI-LIFT, INC.	12	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
139	TRANS-AK HELICOPTERS, INC.	32676	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	AMBLER													
(140)	AMBLER AIR SERVICE	1604	.19..	.....	(V) I	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	GALENA													
141	GALENA AIR SERVICE	7348	.18..	.....	V (I)	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
142	HAROLDIS AIR SERVICE	22932	.18..	.....	V (I)	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	KIANA													
(143)	LEE'S SEA AIR	0	.19..	.....	(V) I	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	KOBUK													
(144)	BERNHARDT AIR SERVICE	444	.19..	.....	(V) I	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	KOTZEBUE													
(145)	BAKER AVIATION, INC.	4160	.19..	.....	(V) I	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 10

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION											
			DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	KOTZEBUE													
146	DENIS SAFAIR	0	.19..	.....	V (I)	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
147	MAXSON AVIATION	5428	.12..	.38.	V (I)	M (L)	.14..	.30.	V (I)	M (L)	.16..	.....	V (I)	M (L)
148	SHELLABARGER FLY SERVICE	3764	.19..	.....	V (I)	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
149	WALKER AIR	196	.19..	.....	(V) I	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
150	NORDLUM EQUIPMENT	164	.18..	.....	V (I)	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	NOME													
151	FOSTER AVIATION	9236	.19..	.....	V (I)	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
152	NOME FLYING SERVICE	11108	.19..	.....	V (I)	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
153	NORTHERN AVIATION, INC.	20	.23..	.....	V (I)	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	POINT HOPE													
154	AK FLOAT PLANE SERVICE	0	.22..	.....	(V) I	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	RUBY													
155	HAROLD'S AIR SERVICE	2544	.18..	.....	V (I)	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	TELLER													
156	TELLER AIR SERVICE	3884	.20..	.....	(V) I	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	UNALAKLEET													
157	UNALAKLEET AIR TAXI	6240	.20..	.....	(V) I	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	SHEDUAD SERVICE													
	KOTZEBUE													
158	SHELLABARGER FLYING SERVICE	0	.22..	.....	V (I)	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	NOME													
159	NORTHERN AVIATION, INC.	72	.20..	.....	V (I)	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	ANNETTE													
160	AK SOUTHCOAST AIRWAYS (TAMGASS AVIATION)	16028	.22..	.....	(V) I	M (L)	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA. PAGE 11

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION: DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
		SOUTHEAST OPERATORS — NO IFR N/A												
	BARTLETT COVE													
161	GLACIER BAY AIRWAYS	1168	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	HAINES													
162	LAB FLYING SERVICE, INC.	8012	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
163	CAPITAL AIR TAXI	3400	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
164	SOUTHEAST SKYWAYS, INC.	1048	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	HOONAH													
165	CHANNEL FLYING SERVICE	540	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
166	SOUTHEAST SKYWAYS, INC.	2296	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	JUNEAU													
167	CAPITAL AIR TAXI	7224	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
168	CHANNEL FLYING SERVICE	13588	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
169	LAB FLYING SERVICE, INC.	10480	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
170	S + M FLIGHT TRAINING	4632	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
171	SOUTHEAST SKYWAYS, INC.	6516	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	KETCHIKAN													
172	COAST AIR, INC.	11676	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
173	KETCHIKAN AIR SERV, INC.	4960	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
174	REVILLA FLYING SERVICE	10600	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
175	TEMSCO HELICOPTERS, INC.	524	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
176	TODDS AIR SERVICE	10964	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
177	WEBBER AIRLINES, INC.	30236	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	KLAWOCK													
178	FLAIR AIR	8320	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L

Table E.4

(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 12

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION											
			DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	PETERSBURG													
179	AK ISLAND AIR SERVICE	17400	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	SITKA													
180	EAGLE AIR, INC.	8424	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
181	CHANNEL FLYING SERVICE	10492	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	SKAGWAY													
182	SKAGWAY AIR SERVICE	4368	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
183	SOUTHEAST SKYWAYS	1452	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	WRANGELL													
184	STIKINE AIR SERVICE, INC.	10028	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	YAKUTAT													
185	GULF AIR TAXI	4328	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	JUNEAU													
187	LIVINGSTON COPTERS, INC.	5256	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	KETCHIKAN													
188	TEMSCO HELICOPTERS, INC.	14612	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	PETERSBURG													
189	TEMSCO HELICOPTERS, INC.	1868	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	SITKA													
190	EAGLE AIR, INC.	628	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	YAKUTAT													
191	B-LINE AVIATION	24	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	PORTLAND/METTA INLET													
192	COLUMBIA HELICOPTER	23892	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L

Table E.4
(Continued

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 13

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION: DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	BARROW													
193	ARCTIC GUIDE	2756												
194	FELAIR	3484												
	BETTLES FIELD													
195	MERRIC. INC.	7964												
	CANTWELL													
196	GOLDEN AIR NORTH SERVICE	72												
	COLVILLE RIVER DELTA													
197	ARCTIC TERN FISH FREIGHT	12												
	DEADHORSE													
198	AK INTERNATIONAL AIR, INC.	0												
199	GAY AIRWAYS, INC.	764												
200	JET ALASKA, INC.	0												
201	SEA AIRMOTIVE, INC.	2036												
202	DZUICK AERO SERV	16												
	DELTA JUNCTION													
203	ALASKA AVIATION UNLIMITED LTD.	504												
	FAIRBANKS													
204	AK AIR CHARTER	352												
205	AL WRIGHT AIR SERVICE	4856												
206	AK INTERNATIONAL AIR, INC	36324												
207	AURORA AIR SERVICE, INC.	5036												
208	FBKS FLY SERVICE, INC	1720												

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.,

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION: DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	FAIRBANKS													
209	FRONTIER FLY SERV, INC.	8988	.45.	.18.	V (I)	H (L)	.45.	.20.	V (I)	H (L)	.17.	.....	V (I)	H (L)
210	FRONTIER FLY SERV, INC.?	0	.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
211	MERRIC, INC.	22616	.25.	.18.	V (I)	H (L)	.16.	.50.	V (I)	H (L)	.17.	.....	V (I)	H (L)
212	NORTH STAR INDUS. INC. (DORMANT)	136	.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
213	PAN ALASKA AIRWAYS (PACIFIC AIR ALASKA)	0	.....	.....	V (I)	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
214	SEMELL AIRWAYS	0	.22.	.....	(V) I	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
215	AK CENTRAL AIRWAYS, INC	5252	.25.	.20.	V (I)	H (L)	.16.	.25.	V (I)	H (L)	.17.	.18.	V (I)	H (L)
216	TANANA AIR TAXI (AK CENTRAL AIRWAYS)	1728	.23.	.....	V (I)	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
			.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
	FORT YUKON													
217	AIR NORTH (YUKON AIR SERV)	736	.22.	.50.	V (I)	H (L)	.23.	.50.	V (I)	H (L)	.....	.....	V I	H L
218	ARCTIC CIRCLE AIR SERVICE	2168	.77.	.....	(V) I	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
			.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
	KATOVIK													
219	AUDI ENTERPRISES	1072	.22.	.....	(V) I	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
			.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
	MANLEY HOT SPRINGS													
220	MANLEY HOT SPRINTS	260	.22.	.....	(V) I	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
			.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
	MT MCKINLEY PARK													
221	DENALI FLYING SERVICE	832	.22.	.....	(V) I	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
			.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
	NENANA													
222	NENANA AIRPORT SERVICE	996	.22.	.....	(V) I	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
			.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
	NORTHWAY													
223	FLOYD MILLER ENTERPRISES	1784	.22.	.....	(V) I	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
			.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
	RICHARDSON HWY MI 195													
224	SUMMIT LAKE LODGE	496	.22.	.....	(V) I	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
			.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.)• 1801 PAGE MILL ROAD• PALO ALTO• CA.• PAGE 15

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DEST. COMM. IDX	PCT TRAFFIC	DESTINATION COMMUNITY INFORMATION NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	SAGWON													
225	AK INTERNATIONAL AIR• INC.	0	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	TANACROSS													
226	HARBELOWS AIR VENTURES	2432	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	TANANA													
227	ALASKA CENTRAL AIRWAYS• INC	4	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
228	GREGORY FLYING SERVICE	2244	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	TOK													
229	HARBELOWS AIR VENTURES	1088	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	FOKS MI 46/RICHARDSON HWY													
230	BEWELL AIRWAYS	0	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	MI 82.2 DENALI HWY (CANTWELL)													
231	GRACIOUS HOUSE FLYING SERV.	416	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	BETTLES FIELD													
232	MERRIC. INC.(Frontier Flying Service	3052	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	DEADHORSE		Helicopters - VFR only											
233	DZUICK AERO SERV	0	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
234	ERA HELICOPTERS• INC.	6464	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
235	GAY AIRWAYS• INC.	2048	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
236	JET ALASKA• INC.	0	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
237	SEA AIRMOTIVE• INC.	828	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
238	DZUIK AERO SERV INC.	164	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	FAIRBANKS													
239	ANCHORAGE HELICOP SERV• INC.	149756	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L

all Helicopters

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 16

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION: DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	FAIRBANKS													
240	MERRIC, INC.	35556	.60	.75	V	M			V I	M L			V I	M L
241	TUNDRA COPTERS, INC.	16260			V I	M L			V I	M L			V I	M L
242	AERO RETARDANT, INC. (PACIFIC AK AIRLINES)	2064	.24		V	L			V I	M L			V I	M L
243	COLCO AVIATION, INC. (Domest)	0			V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
	ANIAK													
244	ANIAK FLYING SERVICE	3752	.15		V	M			V I	M L			V I	M L
245	VANDERPOOL AIR TAXI	548	.25		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
	BETHEL													
246	BUSH SUPPORT SYSTEMS, INC.	15664	.15		V I	M L			V I	M L			V I	M L
247	BUSHMASTER AIR ALASKA	8228	.25		V I	M L			V I	M L			V I	M L
248	CHRISTIANSEN AIR SERVICE	3052	.05		V I	M L			V I	M L			V I	M L
249	DELAIRE CHARTER	7148	.25		V I	M L			V I	M L			V I	M L
250	SEA AIRMOTIVE, INC.	3972	.17		V	M	.25	.81	V I	M L			V I	M L
251	WEST AIR, INC.	4012	.25		V I	M L			V I	M L			V I	M L
252	EXECUTIVE CHARTER SERVICE	2484	.25		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
	DILLINGHAM													
253	ARMSTRONG AIR SERVICE	6212	.16		V	M			V I	M L			V I	M L
254	BOB HARRIS FLYING SERVICE	12716	.16		V I	M L			V I	M L			V I	M L
255	KRAUSE AIR TAXI	1348	.26		V I	M L			V I	M L			V I	M L
256	ROY SMITH FLYING SERVICE	0	.26		V I	M L			V I	M L			V I	M L
257	STOVALL AIR SERVICE	0	.26		V I	M L			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L
	EMMONAK													
258	DELTA AIR SERVICE	6612	.22		V	M			V I	M L			V I	M L
					V I	M L			V I	M L			V I	M L

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 17

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION											
			DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	GEORGETOWN													
259	VANDERPOOL FLYING SERVICE	0	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	GRAYING													
260	GRAYLINE AIR SERVICE	1376	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	KING SALMON													
261	AIR MARTEL, INC.	384	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
262	PENINSULA AIRWAYS	12360	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	KULIK LODGE													
263	KATMAI AIR SERVICE	1428	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	MC GRATH													
264	FLY BY NITE LINES	312	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
265	MUB AIR SERVICE	6112	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	NAKNEK													
266	KING FLYING SERVICE	164	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
267	LAKE CLARK LODGE, INC.	368	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
268	PENINSULA AIRWAYS, INC.	6324	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	PILOT POINT													
269	GRIECHEN AIR TAXI	284	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
270	PENINSULA AIRWAYS	2576	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	SAND POINT													
271	ST. MARYIS CHARTER SERVICE	7180	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
272	CHUGIAK AVIATION	732	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
	SLEETMUTE													
273	NIXEIS FLYING SERVICE	1416	.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L
			.....	.....	V I	M L	.....	.....	V I	M L	.....	.....	V I	M L

Table E.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 18

OP. IDX	(ORIGIN COMMUNITY) OPERATOR	NO. OF FLTS	DESTINATION COMMUNITY INFORMATION: DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT	DEST. COMM. IDX	PCT TRAFFIC	NAV	ALT
	SOUTH NAKNEK													
274	ROY SMITH FLYING SERVICE	39792	.16.	.....	V (I)	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
			.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
	BETHEL													
275	CHUGIAK AVIATION Helicopter	820	.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
			.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
	TOK													
276	MARBELOMS AIR VENTURER	156	.22.	.....	V (I)	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
			.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
	STERLING													
277	DICKS FLY SERV	0	.22.	.....	(V) I	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
			.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
	TANANA													
278	TANANA AIR SERV INC	44	.23.	.....	V (I)	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
			.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
	SAND POINT													
279	ISLAND FLYING SERVICE	588	.22.	.....	(V) I	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
			.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L
280	ST. MARYIS NOT at Sand Point	340	.22.	.....	(V) I	H (L)	.....	.....	V I	H L	.....	.....	V I	H L
	Should be Geo Kimball air Taxi		.....	.....	V I	H L	.....	.....	V I	H L	.....	.....	V I	H L

Table E.5

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 1

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY REGION
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATION	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
ANCHORAGE WESTWARD	IFR/ HIGH	747	1121	5623462	0	142242	782783	0	925024	3	4
	IFR/ LOW	16228	23510	4855665	0	2330742	1033380	0	3364121		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	5230	6272	254580	60317	145005	21722	8870	175597		
	TOTAL	22225	30903	10533707	60317	2617989	1837885	8870	4464742		
ANCHORAGE NORTH	IFR/ HIGH	4444	8741	3618043	0	1104563	556025	0	1660589	2	3
	IFR/ LOW	63041	51051	10272049	1187	3377174	1827962	360	5205496		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	60	35	4080	0	11360	36	0	11396		
	TOTAL	67605	59827	13894172	1187	4493097	2384023	360	6877477		
ANCHORAGE SOUTHEAST	IFR/ HIGH	175	325	30973	0	36640	14197	0	50836	16	15
	IFR/ LOW	1328	1934	285206	1347	227623	73459	0	301081		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	1503	2259	316179	1347	264263	87656	0	351917		
ANCHORAGE SOUTHWEST CHATA	IFR/ HIGH	175	325	30973	0	36640	14197	0	50836	7	9
	IFR/ LOW	9859	9429	1524763	0	1139537	224383	0	1363919		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	10034	9754	1555736	0	1176177	238580	0	1414755		
FAIRBANKS WESTWARD	IFR/ HIGH	0	0	0	0	0	0	0	0	14	13
	IFR/ LOW	1629	6531	541917	0	531254	64802	0	596057		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	1629	6531	541917	0	531254	64802	0	596057		
FAIRBANKS NORTH	IFR/ HIGH	0	0	0	0	0	0	0	0	5	5
	IFR/ LOW	13322	19289	1964104	0	3286102	1166403	0	4452508		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	13322	19289	1964104	0	3286102	1166403	0	4452508		

Table E.5
(Continued)

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY REGION
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATION	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
FAIRBANKS SOUTHWEST	IFR/ HIGH	0	0	0	0	0	0	0	0	18	17
	IFR/ LOW	577	1956	209370	0	241074	0	0	241074		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	577	1956	209370	0	241074	0	0	241074		
FAIRBANKS SOUTHEAST	IFR/ HIGH	0	0	0	0	0	0	0	0	22	22
	IFR/ LOW	0	0	0	0	0	0	0	0		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	0	0	0	0	0	0	0	0		
BETHEL NORTH	IFR/ HIGH	0	0	0	0	0	0	0	0	19	21
	IFR/ LOW	498	1818	765029	75525	62276	26848	12939	102061		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	498	1818	765029	75525	62276	26848	12939	102061		
BETHEL SOUTHEAST	IFR/ HIGH	0	0	0	0	0	0	0	0	23	23
	IFR/ LOW	0	0	0	0	0	0	0	0		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	0	0	0	0	0	0	0	0		
BETHEL NORTHWEST	IFR/ HIGH	0	0	0	0	0	0	0	0	24	24
	IFR/ LOW	0	0	0	0	0	0	0	0		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	0	0	0	0	0	0	0	0		
KOTZEBUE-NOME NORTH	IFR/ HIGH	0	0	0	0	0	0	0	0	20	19
	IFR/ LOW	406	491	474983	0	37908	73256	0	111165		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	406	491	474983	0	37908	73256	0	111165		

Table E.5
(Continued)

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY REGION
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATION	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
KOTZEBUE-NOME EAST	IFR/ HIGH	0	0	0	0	0	0	0	0	21	20
	IFR/ LOW	406	491	474983	0	37908	73256	0	111165		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	406	491	474983	0	37908	73256	0	111165		
ANCHORAGE-LOCAL	IFR/ HIGH	509	0	13422552	0	0	1853729	0	1853729	11	6
	IFR/ LOW	1680	7934	1299871	6724	698295	352667	2040	1053002		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	4394	10890	704922	12120	358089	75039	0	433128		
	TOTAL	6583	18824	15427345	18844	1056384	2281435	2040	3339859		
BETHEL-ANIAK LOCAL	IFR/ HIGH	0	0	0	0	0	0	0	0	6	8
	IFR/ LOW	938	2390	57390	0	151688	7380	0	159068		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	10782	30748	1153151	675040	1189115	107771103205		1400089		
	TOTAL	11720	33138	1210541	675040	1340803	115151103205		1559157		
KING SALMON-DILLINGHAM LO	IFR/ HIGH	0	0	0	0	0	0	0	0	4	11
	IFR/ LOW	16172	46998	1149359	20000	736253	139039	10800	886092		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	3745	15486	61200	0	302117	27980	0	330297		
	TOTAL	19917	62484	1210559	20000	1038370	167019	10800	1216389		
FAIRBANKS LOCAL	IFR/ HIGH	0	0	0	0	0	0	0	0	12	7
	IFR/ LOW	5079	19740	2708478	0	1181547	1305362	0	2486908		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	649	2497	38050	0	70865	2124	0	72989		
	TOTAL	6128	22237	2746528	0	1252412	1307486	0	2559897		
GALENA LOCAL	IFR/ HIGH	0	0	0	0	0	0	0	0	10	12
	IFR/ LOW	8206	15888	265312	657242	541062	31781111309		683952		
	VFR/ HIGH	0	0	0	0	0	0	0	0		
	VFR/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	8206	15888	265312	657242	541062	31781111309		683952		

Table E.5
(Continued)

SYSTEMS CONTROL INC. (VT.) 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 4

ALASKA AIR TAXI OPERATIONS AND REVENUE DATA BY REGION
(THIRD QUARTER 1974 THRU SECOND QUARTER 1975)

COMMUNITY	TYPE OF OPERATION	FLTS	PASS.	LBS FREIGHT	LBS MAIL	PASS. REV.	FREIGHT REV.	MAIL REV.	TOTAL REV.	RANKING FLTS	RANKING TOTAL REV.
KOTZEBUE LOCAL	TER/ HIGH	0	0	0	0	0	0	0	0	9	10
	TER/ LOW	6068	15491	168775	36028	886382	28701	6377	921460		
	VER/ HIGH	0	0	0	0	0	0	0	0		
	VER/ LOW	2144	5116	747089	0	303549	117462	0	421009		
	TOTAL	8212	20607	915864	36028	1189931	146163	6377	1342469		
NOME LOCAL	TER/ HIGH	0	0	0	0	0	0	0	0	13	16
	TER/ LOW	18	0	0	0	12549	0	0	12549		
	VER/ HIGH	0	0	0	0	0	0	0	0		
	VER/ LOW	2531	4463	80252	368500	231257	1692	0	232949		
	TOTAL	2549	4463	80252	368500	243806	1692	0	245498		
BARROW LOCAL	TER/ HIGH	0	0	0	0	0	0	0	0	15	14
	TER/ LOW	1560	8398	747821	0	485407	85649	0	571056		
	VER/ HIGH	0	0	0	0	0	0	0	0		
	VER/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	1560	8398	747821	0	485407	85649	0	571056		
LOCAL	TER/ HIGH	214	536	36700	0	102753	11460	0	114213	1	2
	TER/ LOW	5517	11123	223863	365081	736302	15997	42063	794362		
	VER/ HIGH	0	0	0	0	0	0	0	0		
	VER/ LOW	327946	588566	146984268	1402489	25450304	1236990	4169464	37989672		
	TOTAL	333677	600225	147244831	1767570	26289359	1263961	211527	38898247		
SCHEDULED	TER/ HIGH	0	0	0	0	0	0	0	0	17	18
	TER/ LOW	634	2797	38913	0	236364	3821	0	240185		
	VER/ HIGH	0	0	0	0	0	0	0	0		
	VER/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	634	2797	38913	0	236364	3821	0	240185		
121 OPERATOR	TER/ HIGH	9597	849	352604316	0	2453	41040179	0	41042632	8	1
	TER/ LOW	0	0	0	0	0	0	0	0		
	VER/ HIGH	0	0	0	0	0	0	0	0		
	VER/ LOW	0	0	0	0	0	0	0	0		
	TOTAL	9597	849	352604316	0	2453	41040179	0	41042632		

Table E.6
Traffic Flow Ranking

RANK	FLIGHTS	VICTOR ROUTE	REVENUE
1	ANC-N	V436,438	ANC-N
2	ANC-W	G-9	ANC-W
3	FAI-N	V347	FAI-N
4	ANC-SW (CHAIN)	V456,438,427	ANC-SW (CHAIN)
5	FAI-W	V452,488	FAI-W
6	ANC-SE	V317,440	ANC-SE
7	FAI-SW	V480	FAI-SW
8	BET-N	V506	KTZ-OME-N
9	KTZ-OME-N	V506	KTZ-OME-E
10	KTZ-OME-E	V452,498	BET-N
11	FAI-SE	V444	FAI-SE
12	BET-SE	V506,453	BET-SE
13	BET-NE	V480	BET-NE

Table E.7

Questionnaire - Air Taxi and Charter Carriers

NOTE: In answering the questions, include only unscheduled (air taxi, charter, or contract) operations.

1. According to your records or best estimates, how many pounds of freight did you carry in each of the following years?

   a) 1970 _____ b) 1973 _____

2. According to your records or best estimates, how many passengers did you carry in those same years?

   a) 1970 _____ b) 1973 _____

3. Please list the aircraft you had in operation in each of the following years.

1970		1973	
N_____	N_____	N_____	N_____
N_____	N_____	N_____	N_____
N_____	N_____	N_____	N_____
N_____	N_____	N_____	N_____

4. If your activities are concentrated among several cities or villages, try to estimate as close as possible either the tonnages and numbers of passengers or the per cent of total passengers, and freight moving between points. (We realize that your records may not give such information, however, we are simply looking for your own best estimates, whether they be from records or memory. We would like to get precise origins and destinations, but even broad areas (i.e., Kobuk Valley, North Slope, etc.) would be useful information.)

1970

Origin	Destination	Number or % of Total Passengers	Pounds or % of Total Freight
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

1973

Origin	Destination	Number of % of Total Passengers	Pounds or % of Total Freight
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

5. Additional comments. (Please add any additional information you feel we should know about, or comments concerning what you feel are the most important issues in Alaskan transportation, or anything else you want to tell us. Thank you.)

APPENDIX F
CEILING AND VISIBILITY MINIMUMS

In order to determine the benefits that would be derived from the installation of terminal navaids, it was necessary to determine the minimum descent altitude (MDA) and visibilities that could be obtained through the use of the specified NAVAID. The procedures for developing instrument approach procedures are thoroughly described in the FAA Handbook 8260.3A, United States Standard for Terminal Instrument Procedures (TERPS). The TERPS handbook thus was used as a basis for the development of MDA's and visibilities which were used in this study.

In order to use the procedures that are contained in the TERPS handbook, a source of altitude and terrain data is necessary. Large-scale topographical charts are typically used in the development of instrument approach procedures. However, the problems associated with obtaining and assembling these charts into a useful aid for the 50-60 airports that were analyzed was beyond the scope of the study. As an alternative, spot elevations and contour lines on VFR Sectional Aeronautical Charts were used as the basis for altitude and terrain information. Templates of the pertinent approach areas described in TERPS were constructed to sectional chart scale (1:500,000). In those areas where an instrument approach procedure already exists, spot elevations from the approach procedure chart were used to supplement the terrain information that was contained on the sectional chart.

DESIGN PROCEDURES

Instrument approach procedures were developed for five different categories of NAVAIDS at each of the selected airports. These categories consisted of the following:

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(1) minimum obstruction clearance altitude from an en-route facility (MOCA);

(2) NDB;

(3) NDB/DME;

(4) VOR; and

(5) VOR/DME.

A description of the techniques that were employed in the development of the MDA and visibility determination for the listed airport is contained in the following paragraphs.

MOCA Approach

A template was created which represented the width of an airway. This width was ±4 nm up to 51 nm for the facility. Beyond 51 nm, a 4.5° route width is used. The MOCA is determined by finding the highest obstruction between the facility and the vicinity of the airport and adding 1,000 ft to this altitude. The resulting altitude is then rounded up to the next 100 ft. In mountainous areas, an additional 1,000 ft is added to account for turbulence and pressure variations. The visibility is determined from the minimum VFR visibility requirement of 3 miles since the remainder of the flight must be accomplished in VFR conditions.

NDB Approach (Facility on Airport)

The NDB approach begins over the NDB. The aircraft flies outward from the beacon on a bearing that is the reciprocal of the final approach course. After the completion of the procedure turn, the aircraft is established on the final approach course and descent to the MDA begins. Once the MDA has been reached, the aircraft flies at the MDA until contact with the

airfield is obtained or until the missed approach point (MAP) is reached where upon the missed approach is initiated. The MAP for this procedure is the NDB unless some other fix can be determined from a crossing radial or beacon bearing. In all of the Alaska airports that were studied, the beacon was assumed to be the MAP for the NDB approach. The procedure turn area is shown in Figure F.1; terrain clearance in the primary area is 1,000 ft and in the secondary area is 500 ft tapering to 0 ft at the outer boundary. The procedure turn gradient is 250 ft/mile (optimum) to 500 ft/mile (maximum). The procedure turn completion altitude must be within 1,500 ft of the MDA for a 10 nm procedure turn. The final approach segment is depicted in Figure F.2. If the final approach course is within

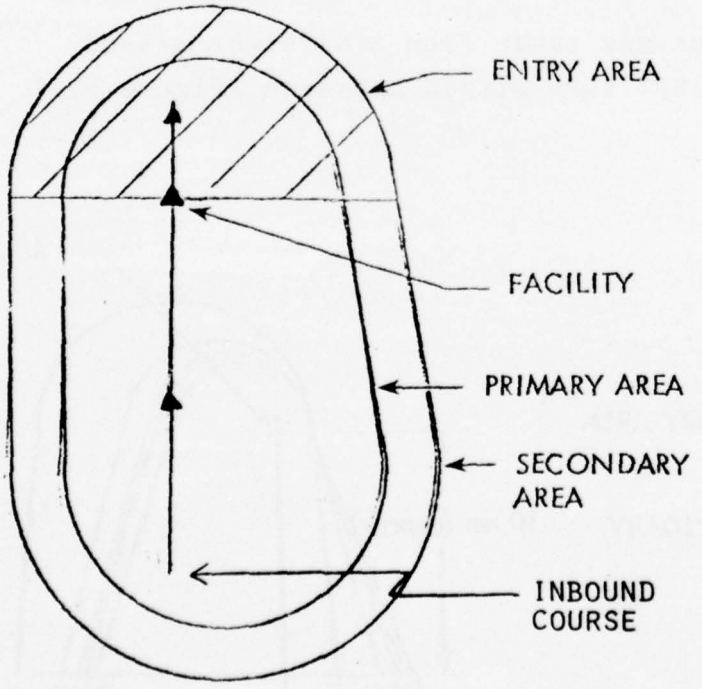

Figure F.1 Procedure Turn Area

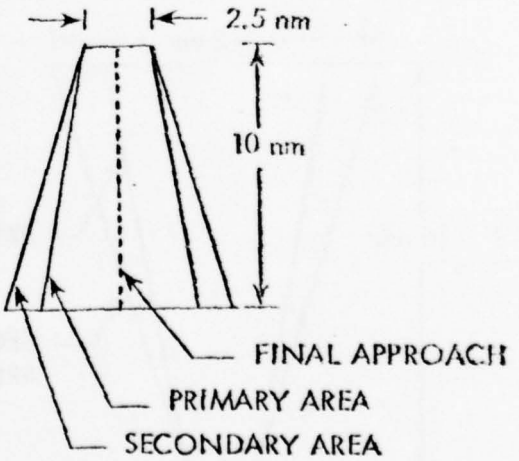

Figure F.2 NDB Final Approach Area

30° of the runway heading, a straight-in approach can be made. For angles in excess of 30°, a circling approach must be made. Obstruction clearance in the final approach segment must be 350 ft in the primary area and 350 ft tapering to 0 ft in the secondary area.

The circling approach area is determined by drawing circles of a specified radius about the end of each runway. Then straight lines are drawn tangent to the circles to enclose the airfield. The radii are determined by the following criteria:

AIRCRAFT CATEGORY	APPROACH SPEED/WEIGHT	
A	<91 knots and 30,001 lbs	1.3 nm
B	<121 knots and 60,001 lbs	1.5 nm
C	<141 knots and 150,001 lbs	1.7 nm
D	<166 knots and any weight	2.3 nm

The missed approach area may range from a straight missed approach (Figure F.3) to a 180° turn missed approach (Figure F.4).

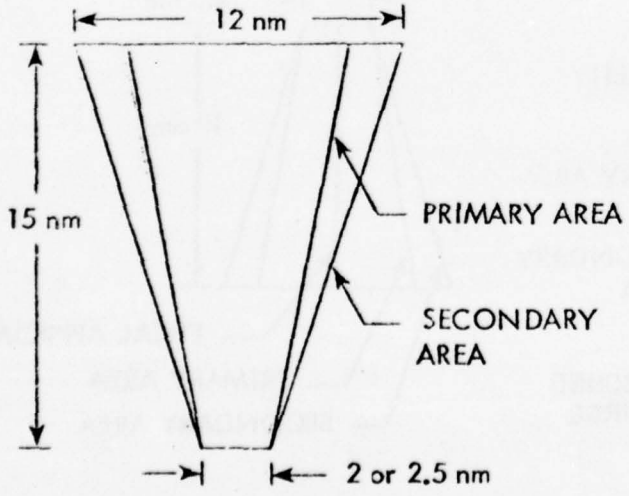

Figure F.3 Straight Missed Approach Area

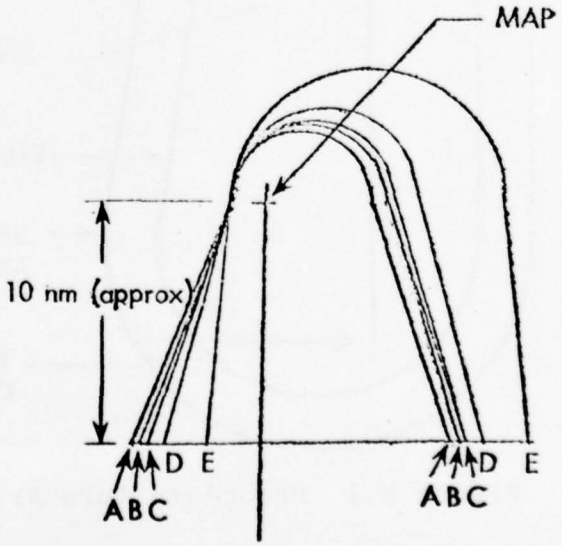

Figure F.4 180° Turn Missed Approach

The obstruction clearance requirements in this area are the same as for the final approach area except that the missed approach area slopes upward at a rate of 152 ft/mile (40:1 slope) in the primary area and 506 ft/mile (12:1 slope) in the secondary area.

The visibilities required for the straight-in approach were based on Table F.1 which was taken from the TERPS handbook.

For circling approaches, the heights above airport (HAA) and visibilities are shown in Table F.2.

An additional adjustment to the MDA may be made to account for turbulence in mountainous areas. This adjustment may range up to 500 ft. Another adjustment must be added at airports

Table F.1 Straight-In Visibilities

Aircraft Category	Height Above Terrain or Airport (ft)					
	250-500	501-625	626-750	751-875	876-1000	>1000
A	1 nm	1 nm	1 nm	1 nm	1.25 nm	2
B	1	1	1	1.25	1.50	2
C	1	1	1.25	1.50	1.75	2
D	1	1.25	1.50	1.75	2.00	2

Table F.2 Standard Circling Minimums

	Approach Category			
	A	B	C	D
Height Above Airport (HAA)	350 ft	450 ft	450 ft	550 ft
Visibility	1 mi	1 mi	1.5 mi	2 mi

which have no weather service to account for barometric pressure setting errors. This value is 5 ft/mile for each mile greater than 5, that the weather reporting station is from the airport.

VOR Approach (Facility on Airport)

All descriptions of the NDB approach apply to the VOR approach with the exception of a slightly smaller final approach area shown in Figure F.5 and a 300 ft obstruction clearance in the final approach area.

NDB/DME Approach

The criteria for making an NDB/DME approach were taken from the section of the TERPS Handbook concerning NDB approaches with a final approach fix (FAF). This approach procedure makes use of up to four approach segments. These are, in sequence: the initial approach segment, the intermediate approach segment, the final approach segment, and the missed approach segment.

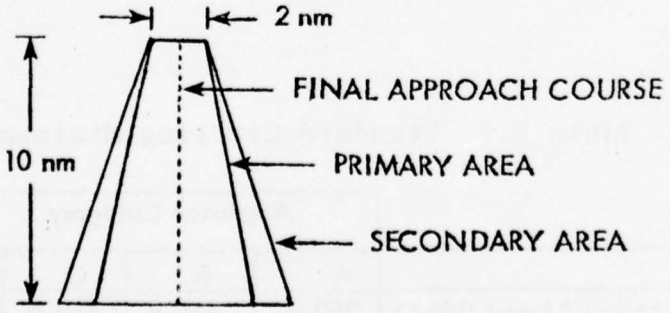

Figure F.5 VOR Final Approach Area

The initial approach segment may be a VOR or TACAN radial, an NDB bearing, a DME arc or a procedure turn. The procedure turn airspace requirements are identical to those discussed in the NDB approach section with one exception; that is, the procedure turn completion altitude may be up to 2,000 ft above the MDA for a 10 mile procedure turn. The procedure turn segment begins at the final approach fix (FAF), intermediate fix (IF), or the facility.

The initial approach segment which is based upon a radio course or a DME arc may be up to 50 nm in length in order to permit the aircraft to transition from the enroute structure to the approach. The initial approach course must intersect the intermediate approach course at an angle of less than 120°. The initial approach segment terminates at the intermediate fix (IF). The route width and terrain clearance requirements in the initial approach area are divided into two areas, the primary area and the secondary areas. The primary area is that airspace that lies within 4 nm of the desired course. The secondary area extends outward from the primary area an additional 2 miles, thus making the route width to be $\pm$6 nm from the desired course. Terrain clearance in the primary area is 1,000 ft or greater and in the secondary area is 500 ft at the primary-secondary area boundary sloping to 0 ft at the route width boundary. Gradients in the initial approach may range from 250 ft/mile (optimum) to 500 ft/mile (maximum).

The intermediate approach segment begins at the intermediate fix (IF) and terminates at the final approach fix (FAF). The intermediate approach course is always the same as the final approach course unless the FAF is the NAVAID facility. The latter case did not occur for any of the approach procedures that were developed during the course of the study.

The length of the intermediate approach segment may range from 5 to 15 nm with 10 nm being an optimum value. The obstruction clearance areas in this segment are divided into the primary and secondary areas. These areas are determined by joining the boundary points of the primary and secondary areas for the initial and final approach segments. Obstacle clearance in the primary area is at least 500 ft. In the secondary area, the obstacle clearance tapers from 500 ft to 0 ft at the outer boundary. Gradients in this segment may range from 150 ft/mile (optimum) up to 300 ft/mile (maximum).

For an intermediate approach segment that is based on a procedure turn, the intermediate segment is the same length as the procedure turn length. The total width of the primary and secondary areas at the IF is 6 miles on each side of the desired course. The ratio of the primary and secondary areas at the IF is the same as that at the FAF.

The final approach segment commences at the FAF and terminates at the MAP. For a straight-in approach, the final approach course must be within 30° of the runway heading; otherwise, a circling approach is required. The final approach segment is a portion of a trapezoid that is shown in Figure F.6. The length of this segment

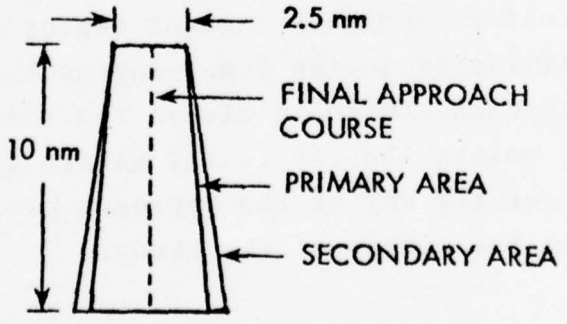

Figure F.6 NDB/DME Final Approach Area

is 5 miles (optimum) to 10 miles (maximum). Obstacle clearance for a straight-in approach in the primary area is 300 ft and in the secondary area is 300 ft tapering to 0 ft at the boundary. Obstacle clearance for a circling approach is identical to that discussed in the NDB approach section. The descent gradient in the final approach area may range from 300 ft/mile (optimum) to 400 ft/mile (maximum).

Missed approach requirements for the NDB/DME approach are the same as for the NDB approach with the exception that 300 ft (rather than 350 ft) terrain clearance above the missed approach floor is required. Also, a 500 ft adjustment may be made to the MDA to account for turbulence in the approach area which should be applied in mountainous regions.

The visibility requirements for an NDB/DME approach are the same as those shown in Tables F.1 and F.2.

VOR/DME-TACAN Approach

The airspace requirements for a VOR/DME or TACAN approach are generally the same as those that are described in the NDB/DME section. The two basic differences are in the final approach area description and in the final approach obstruction clearance requirements. The final approach area is a portion of the trapezoid shown in Figure F.7. The length of the final approach area is described in the NDB/DME section.

The final approach obstruction clearance requirement for the VOR/DME-TACAN approach is 250 ft in the primary area and 250 ft tapering to 0 ft in the secondary area. All other features of the approach are described in the NDB/DME section.

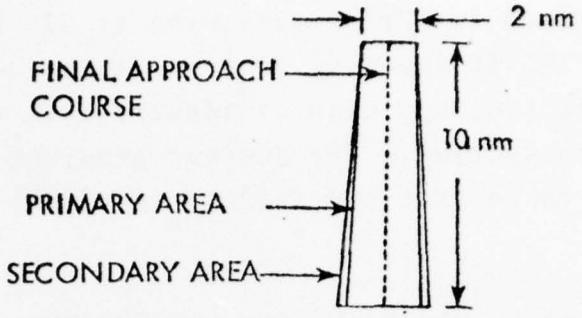

Figure F.7 VOR/DME-TACAN Final Approach Area

Insofar as the design considerations for a VOR/DME and TACAN approach are concerned, the procedures are identical. However, the propagation and siting problems associated with these two NAVAIDS are considerably different. Due to the multi-lobe nature of the TACAN radiation pattern and the use of pulses rather than the CW signals that VOR uses, a TACAN facility can sometimes be utilized at sites that are impossible for even a Doppler VOR facility. In addition, the use of the higher frequencies of TACAN reduces the area around the facility which must be prepared in order to produce a satisfactory signal. Due to these site-related problems, qualitative evaluation of each airport was made relative to the potential VOR siting problems that could exist. These potential problems are discussed in Appendix J of this report, which includes descriptions of the instrument approach considerations at each airport analyzed in this study.

EXAMPLE: DETERMINATION OF MINIMUMS

Akutan was chosen to illustrate application of the aforementioned procedures.

Akutan is a seaplane base located in the Aleutian Islands, in a sheltered cove on the east side of Akutan Island. The nearest existing navaid is an NDB at Driftwood Bay. The determination of the minimum obstruction clearance altitude (MOCA) from Driftwood Bay is shown in Figure F.8. The controlling obstruction in the protected airspace shown in Figure F.8, is a 4,275 ft peak on Akutan Island. A 1,000 ft obstruction clearance altitude is applied to this tallest obstruction and resulting value is rounded up to the next 100 ft. The resulting MOCA is 5,300 ft. The visibility associated with this MOCA value is determined from VFR minimums and is 3 miles.

The determination of the minimums for the NDB approach involves the use of procedure turn, final approach and missed approach templates. The NDB facility is assumed to be located near the seaplane base. If possible, the final approach course is selected in such a manner that a straight-in approach is possible. The application of the procedure turn template at Akutan is shown in Figure F.9. The controlling obstruction in the procedure turn area is a 1,545 ft peak southeast of the seaport; 1,000 ft of obstruction clearance is required in the procedure turn area. The procedure turn completion altitude must be no more than 1,500 ft above the minimum descent altitude. Adding the obstruction clearance and subtracting the permissible descent produces a minimum descent altitude value of 1,045 ft. This value is then rounded up to the nearest 100 ft or 1,100 ft. The final approach template where the NDB approach is shown in Figure F.10. The controlling obstruction in this area is a 1,750 ft ridge near the airport. The obstruction clearance in this area must be a least 350 ft. Adding this value to the controlling obstruction height produces a minimum descent altitude of 2,100 ft in the final approach area. A 180° missed approach procedure was selected at Akutan in order to avoid the high terrain to the west of the seaport. The controlling obstruction in the missed approach area is a 1,885 ft peak located

1.5 miles southwest of the MAP. Using the 152 ft per mile (40:1) ratio at a distance of 1.5 miles produces an altitude difference of 228 ft. This value is subtracted from the 1,885 ft obstruction height. The 350 ft final approach obstruction clearance is then added to this value to produce a minimum descent altitude of 2,020 ft which is rounded out from 2,007 ft.

The minimum descent altitude for the NDB approach is then determined by selecting the greatest of the minimum descent altitude for the procedure turn, the final approach and the missed approach. For this procedure, a value of 2,100 ft, which was based on the final approach area, was obtained. The visibility requirements for this procedure are determined from Table F.1. The procedure for determining the minimum descent altitude for the VOR approach is virtually identical to the NDB approach. The one exception is that the final approach and missed approach obstruction clearance altitude is 300 ft rather than 350 ft, which makes the VOR approach minimums slightly less than the NDP approach minimums.

The procedure for developing the approach minimums for the NDB/DME procedure are considerably different than those which were used for the VOR and the NDB approaches. The approach is assumed to begin at Driftwood Bay NDB. The aircraft proceeds on an NDB bearing toward the intermediate fix, which is determined by the intersection of the Driftwood Bay NDB bearing and the Akutan NDB bearing for the final approach course. For this procedure, the facility at Akutan was assumed to be located four miles east of the seaport. In order to obtain low minimums at Akutan, a point in space type of approach was selected. The approach is essentially made over water with the missed approach being made over the low terrain southeast of the airport. The templates as applied for this procedure are shown in Figure F.11. There are virtually no terrain problems in any of the critical approach areas other than on an 820 ft obstruction in the missed approach area which is located 5.5 miles from the MAP. Since the MAP is located at sea

level, over water in this case, the MDA for the final approach is simply the 300 ft obstruction clearance requirement. In the missed approach area, the obstruction clearance requirements at the 820 ft controlling obstruction must be considered. The gradient value of 152 ft per mile is multiplied by the 5.5 mile distance from the MAP to obtain a value of 836 ft which may be subtracted from the controlling obstruction height. This produces a value of -16 ft, which indicates that the obstruction will not be a problem in the missed approach area. Consequently, the 300 ft obstruction clearance requirement in the final approach area produces the minimum descent altitude for this procedure.

The VOR/DME-TACAN procedure is virtually identical to the NDB/DME procedure. The final approach area for the VOR/DME approach is slightly smaller than the NDB/DME procedure. However, in this case this will have no effect upon the minimum descent altitude. The obstruction clearance requirements for the VOR/DME approach are based upon a 250 ft obstruction clearance. Consequently, the MDA for this procedure is slightly less than the MDA for the NDB/DME procedure. The visibility requirements for both procedures are determined from Table F.1.

Due to the numerous peaks and generally rugged terrain in this area, some potential siting problems may be encountered in locating a VOR in the vicinity of the seaport. Fewer problems would be expected if the VOR were located on the adjacent island to the east at the location that was selected for the NDB/DME and the VOR/DME approach procedure.

TABULAR SUMMARY OF PROJECTED CEILING AND VISIBILITY MINIMUMS

Replication of the procedures described for Akutan for each of the other approach aid candidate airports produced the ceiling and visibility data summarized in Table F.3. These MDA's are based on the best estimates of the terrain elevations that could be

obtained from the information presented on the sectional charts. The use of higher reolution charts with more detail and the inclusion of obstructions such as towers and buildings near the airport could somewhat alter the MDA's that are shown in this table; however, these estimates should provide suitable data towards the development of economic benefits associated with increased MDA's at these locations.

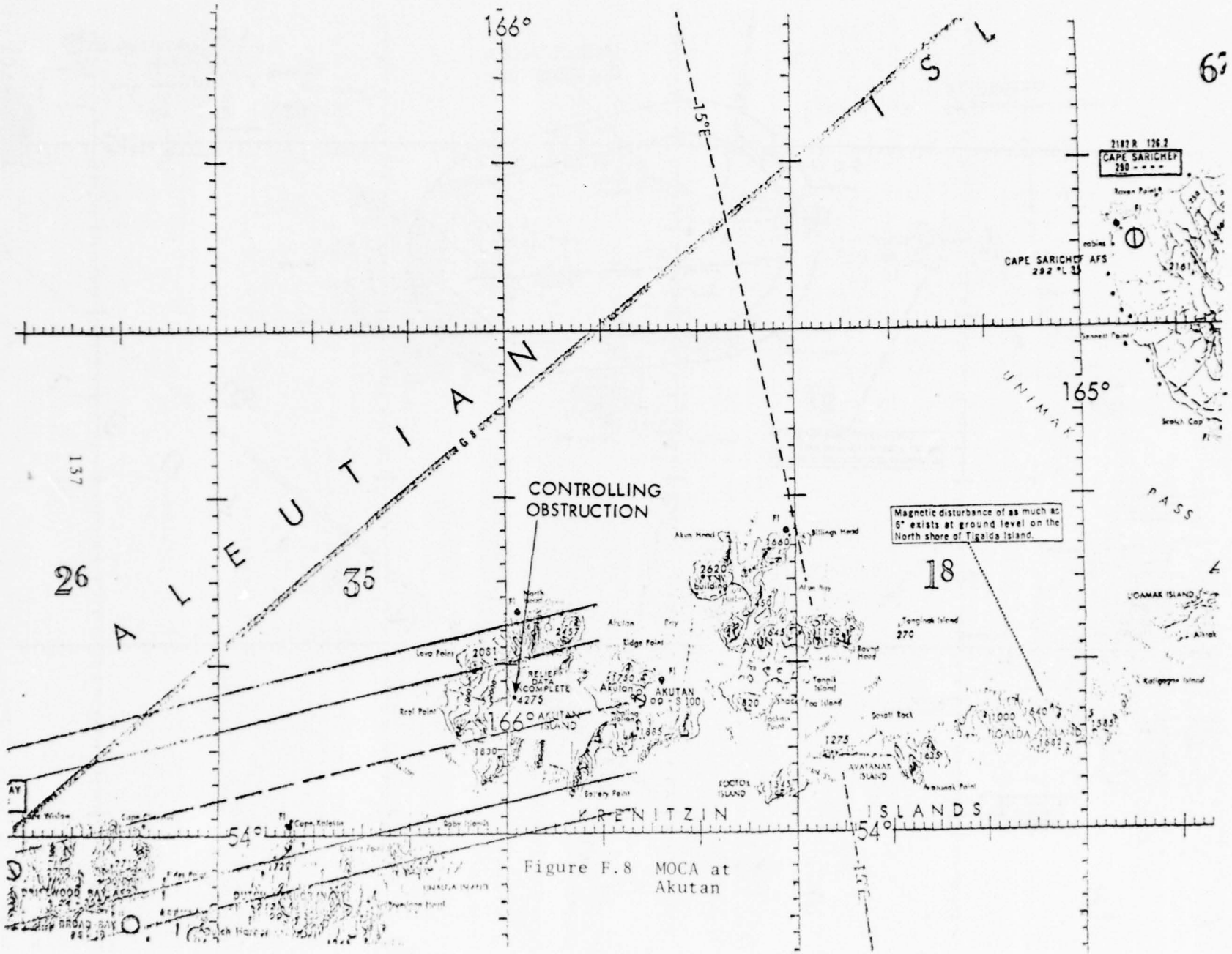

Figure F.8 MOCA at Akutan

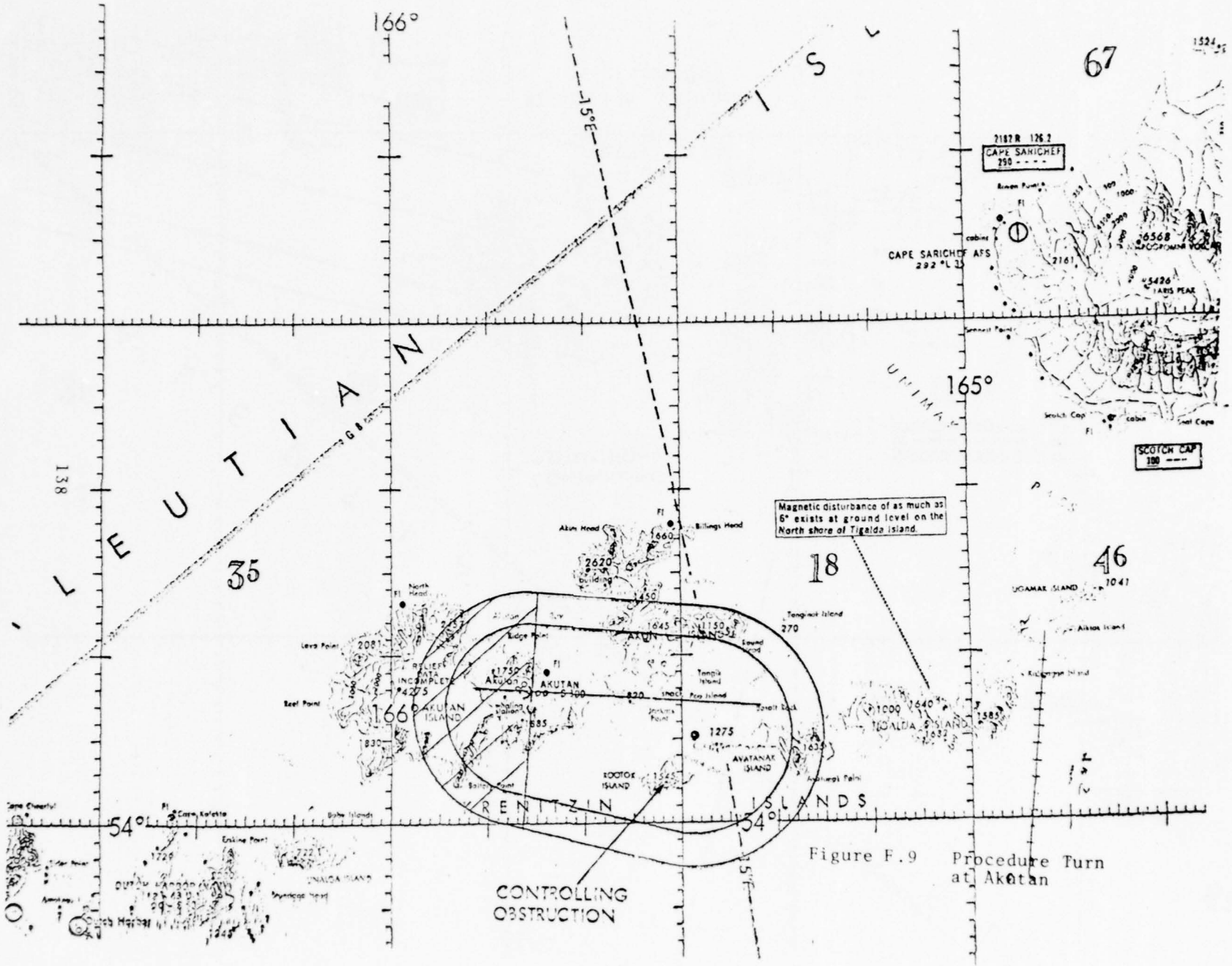

Figure F.9 Procedure Turn at Akutan

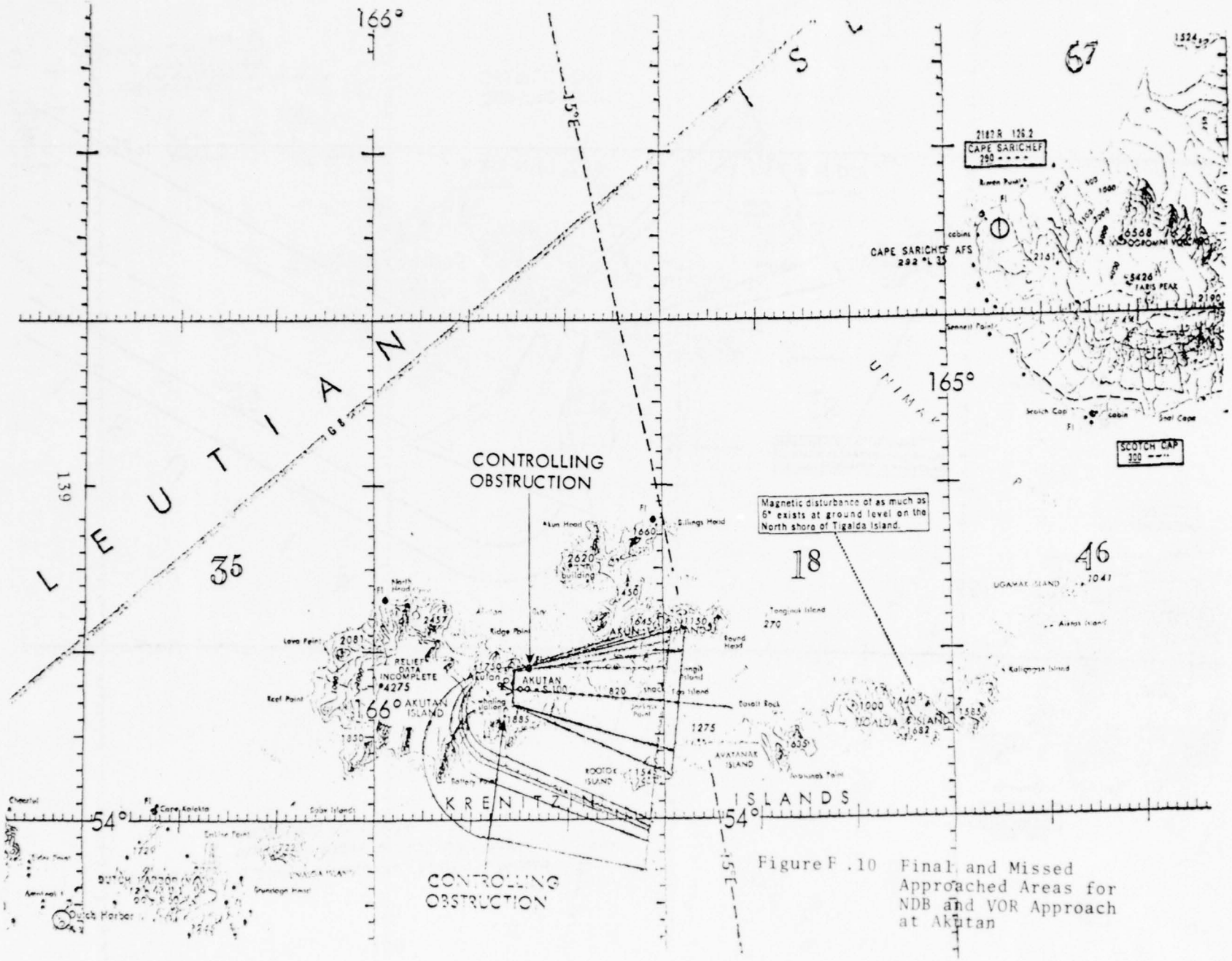

Figure F .10 Final and Missed Approached Areas for NDB and VOR Approach at Akutan

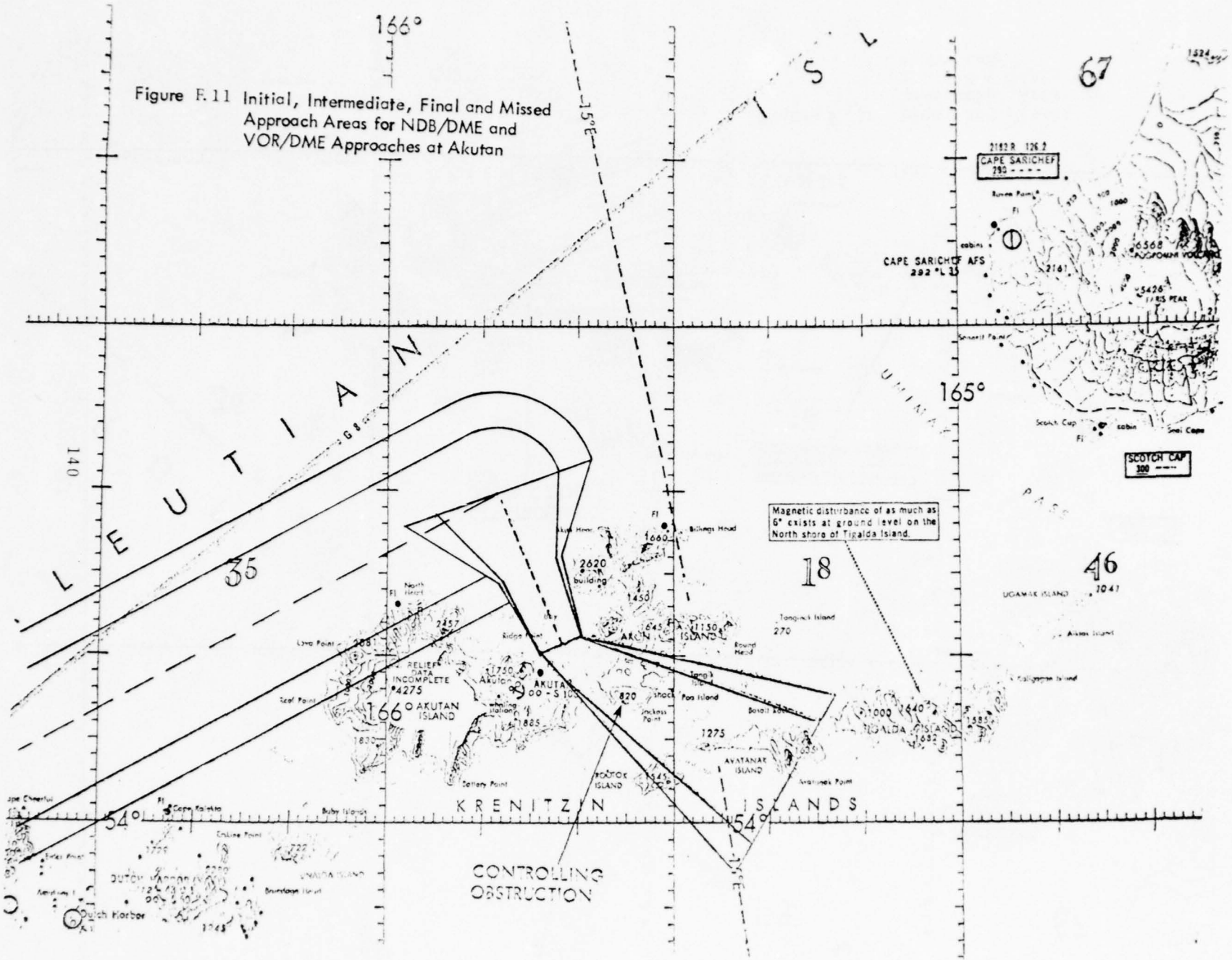

Figure F.11 Initial, Intermediate, Final and Missed Approach Areas for NDB/DME and VOR/DME Approaches at Akutan

Table F.3
Projected Ceiling (AGL) and Visibility Minimums

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 1

PROJECTED LANDING MINIMUMS BY APPROACH CATEGORY AND AVAILABLE NAVAIDS

AIRPORT	APPROACH CATEGORY		NONE CEILING	NONE VISIBILITY		NDB CEILING	NDB VISIBILITY	NDB-DME CEILING	NDB-DME VISIBILITY	VOR CEILING	VOR VISIBILITY	VOR-DME CEILING	VOR-DME VISIBILITY	
AKUTAN	A	*	5300	3.00		2100	2.00	300	1.00	2060	2.00	260	1.00	1
	B	*	5300	3.00		2100	2.00	300	1.00	2060	2.00	260	1.00	
	C	*	5300	3.00		2100	2.00	300	1.00	2060	2.00	260	1.00	
ANIAK	A		1700	3.00	*	720	1.00	400	1.00	400	1.00	340	1.00	1
	B		1700	3.00	*	720	1.00	400	1.00	400	1.00	340	1.00	
	C		1700	3.00	*	720	1.25	400	1.00	400	1.00	340	1.00	
	D		1700	3.00	*	720	1.50	400	1.00	400	1.00	340	1.00	
ATTU ISLND	A	*	4100	3.00		1520	2.00	300	1.00	1260	2.00	260	1.00	1
	B	*	4100	3.00		1520	2.00	300	1.00	1260	2.00	260	1.00	
	C	*	4100	3.00		1320	2.00	300	1.00	1260	2.00	260	1.00	
	D	*	4100	3.00		1520	2.00	300	1.00	1460	2.00	260	1.00	
BARTER IS	A		1300	3.00	*	520	1.00	320	1.00	320	1.00	260	1.00	
	B		1300	3.00	*	520	1.00	320	1.00	320	1.00	260	1.00	
	C		1300	3.00	*	520	1.00	320	1.00	320	1.00	260	1.00	
	D		1300	3.00	*	520	1.25	320	1.00	320	1.00	260	1.00	
C.LISBURNE	A		2600	3.00	*	380	3.00	380	1.00	380	3.00	380	1.00	2
	B		2600	3.00	*	480	3.00	480	1.00	480	3.00	480	1.00	
	C		2600	3.00	*	480	3.00	480	1.50	480	3.00	480	1.50	
	D		2600	3.00	*	580	3.00	580	2.00	580	3.00	580	2.00	
C.SARICHEF	A		7400	3.00	*	520	1.00	380	1.00	320	1.00	280	1.00	
	B		7400	3.00	*	520	1.00	480	1.00	320	1.00	280	1.00	
	C		7400	3.00	*	520	1.50	480	1.50	320	1.00	280	1.00	
	D		7400	3.00	*	580	2.00	580	2.00	320	1.00	280	1.00	
C.SPENCER	A	*	2900	3.00		960	1.25	300	1.00	900	1.25	260	1.00	1
CHANDALAR	A	*	7200	3.00		3420	2.00	2920	2.00	3380	2.00	2880	2.00	2
	B	*	7200	3.00		3420	2.00	2920	2.00	3380	2.00	2880	2.00	
	C	*	7200	3.00		3420	2.00	2920	2.00	3380	2.00	2880	2.00	
	D	*	7200	3.00		3420	2.00	2920	2.00	3380	2.00	2880	2.00	

1= POTENTIAL VOR SITING PROBLEMS. 2= SEVERE VOR SITING PROBLEMS.
* INDICATES CURRENT AVAILABLE NAVAIDS

Table F.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 2

PROJECTED LANDING MINIMUMS BY APPROACH CATEGORY AND AVAILABLE NAVAIDS

AIRPORT	APPROACH CATEGORY		NONE		NDB		NDB-DME		VOR		VOR-DME		
			CEILING	VISIBILITY	CEILING	VISIBILITY	CEILING	VISIBILITY	CEILING	VISIBILITY	CEILING	VISIBILITY	
CHEVAK	A	*	1400	3.00	400	1.00	340	1.00	340	1.00	300	1.00	
	B	*	1400	3.00	400	1.00	340	1.00	340	1.00	300	1.00	
DAHL CREEK	A	*	4300	3.00	600	1.00	540	1.00	540	1.00	500	1.00	1
	B	*	4300	3.00	600	1.00	540	1.00	540	1.00	500	1.00	
	C	*	4300	3.00	600	1.00	540	1.00	540	1.00	500	1.00	
	D	*	4300	3.00	600	1.25	540	1.25	540	1.25	500	1.00	
DORTAD BAY	A	*	7700	3.00	380	4.00	380	4.00	380	4.00	280	1.00	2
	B	*	7700	3.00	480	4.00	480	4.00	480	4.00	280	1.00	
	C	*	7700	3.00	480	4.00	480	4.00	480	4.00	280	1.00	
	D	*	7700	3.00	580	4.00	580	4.00	580	4.00	280	1.00	
DUTCH HARB	A	*	5500	3.00	2380	2.00	320	1.00	2380	2.00	280	1.00	1
	B	*	5500	3.00	2380	2.00	320	1.00	2380	2.00	280	1.00	
	C	*	5500	3.00	2380	2.00	320	1.00	2380	2.00	280	1.00	
EMMONAK	A	*	1200	3.00	360	1.00	320	1.00	320	1.00	280	1.00	
	B	*	1200	3.00	360	1.00	320	1.00	320	1.00	280	1.00	
FALSE PASS	A	*	4800	3.00	2340	2.00	2280	2.00	2280	2.00	2240	2.00	2
	B	*	4800	3.00	2340	2.00	2280	2.00	2280	2.00	2240	2.00	
GAMBELL	A	*	3300	3.00	940	1.25	320	1.00	880	1.25	280	1.00	1
	B	*	3300	3.00	940	1.50	320	1.00	880	1.50	280	1.00	
	C	*	3300	3.00	940	1.75	320	1.00	880	1.75	280	1.00	
HAINES	A	*	7900	3.00	5900	2.00	4600	2.00	5860	2.00	4560	2.00	2
	B	*	7900	3.00	5900	2.00	4600	2.00	5860	2.00	4560	2.00	
	C	*	7900	3.00	5900	2.00	4600	2.00	5860	2.00	4560	2.00	
	D	*	7900	3.00	5900	2.00	4600	2.00	5860	2.00	4560	2.00	
HOLY CROSS	A	*	1500	3.00	380	1.00	320	1.00	320	1.00	280	1.00	
	B	*	1500	3.00	380	1.00	320	1.00	320	1.00	280	1.00	
HOOPER BAY	A	*	1200	3.00	380	1.00	320	1.00	320	1.00	280	1.00	
	B	*	1200	3.00	380	1.00	320	1.00	320	1.00	280	1.00	
	C	*	1200	3.00	380	1.00	320	1.00	320	1.00	280	1.00	

1= POTENTIAL VOR SITING PROBLEMS. 2= SEVERE VOR SITING PROBLEMS.
* INDICATES CURRENT AVAILABLE NAVAIDS

Table F.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 3

PROJECTED LANDING MINIMUMS BY APPROACH CATEGORY AND AVAILABLE NAVAIDS

AIRPORT	APPROACH CATEGORY		NONE CEILING	NONE VISIBILITY		NDB CEILING	NDB VISIBILITY	NDB-DME CEILING	NDB-DME VISIBILITY	VOR CEILING	VOR VISIBILITY	VOR-DME CEILING	VOR-DME VISIBILITY	
ILIAMNA	A		1200	3.00	*	400	1.00	360	1.00	320	1.00	260	1.00	
	B		1200	3.00	*	460	1.00	460	1.00	320	1.00	260	1.00	
	C		1200	3.00	*	480	1.50	460	1.50	320	1.00	260	1.00	
	D		1200	3.00	*	560	2.00	560	2.00	320	1.00	260	1.00	
KING COVE	A	*	6900	3.00		2360	2.00	320	1.00	2320	2.00	260	1.00	2
	B	*	6900	3.00		2360	2.00	320	1.00	2320	2.00	260	1.00	
	C	*	6900	3.00		2360	2.00	320	1.00	2320	2.00	260	1.00	
C.NEWENHAM	A		2900	3.00	*	360	4.00	320	1.00	320	4.00	260	1.00	2
	B		2900	3.00	*	360	4.00	320	1.00	320	4.00	260	1.00	
	C		2900	3.00	*	360	4.00	320	1.00	320	4.00	260	1.00	
	D		2900	3.00	*	360	4.00	320	1.00	320	4.00	260	1.00	
KIPNUK	A	*	1500	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
	B	*	1500	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
KOBUK	A	*	5100	3.00		760	1.25	320	1.00	760	1.25	260	1.00	1
	B	*	5100	3.00		760	1.25	320	1.00	760	1.25	260	1.00	
LONELY	A		1200	3.00	*	460	1.00	320	1.00	320	1.00	260	1.00	
	B		1200	3.00	*	460	1.00	320	1.00	320	1.00	260	1.00	
	C		1200	3.00	*	480	1.00	320	1.00	320	1.00	260	1.00	
	D		1200	3.00	*	480	1.00	320	1.00	320	1.00	260	1.00	
MEKORYUK	A	*	1400	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
	B	*	1400	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
MINCHUMINA	A		2300	3.00	*	1260	1.75	320	1.00	320	1.00	260	1.00	
	B		2300	3.00	*	1260	2.00	320	1.00	320	1.00	260	1.00	
	C		2300	3.00	*	1260	2.00	320	1.00	320	1.00	260	1.00	
	D		2300	3.00	*	1260	2.00	320	1.00	320	1.00	260	1.00	
NIKOLSKI	A		8100	3.00	*	840	1.00	580	1.00	320	1.00	280	1.00	
	B		8100	3.00	*	840	1.25	480	1.00	320	1.00	280	1.00	
	C		8100	3.00	*	840	1.50	480	1.50	320	1.00	280	1.00	
	D		8100	3.00	*	1000	2.00	580	2.00	320	1.00	280	1.00	

1= POTENTIAL VOR SITING PROBLEMS. 2= SEVERE VOR SITING PROBLEMS.
* INDICATES CURRENT AVAILABLE NAVAIDS

Table F.3
(Continued)

SYSTEMS CONTROL INC. (VT.)• 1801 PAGE MILL ROAD• PALO ALTO• CA.• PAGE 4

PROJECTED LANDING MINIMUMS BY APPROACH CATEGORY AND AVAILABLE NAVAIDS

AIRPORT	APPROACH CATEGORY		NONE CEILING	NONE VISIBILITY		NDB CEILING	NDB VISIBILITY	NDB-DME CEILING	NDB-DME VISIBILITY	VOR CEILING	VOR VISIBILITY	VOR-DME CEILING	VOR-DME VISIBILITY	
OLD HARBOR	A	*	5600	3.00		3340	2.00	2740	2.00	3340	2.00	2700	2.00	2
	B	*	5600	3.00		3340	2.00	2740	2.00	3340	2.00	2700	2.00	
QUZINKIE	A	*	3800	3.00		1980	2.00	300	1.00	1940	2.00	260	1.00	1
	B	*	3800	3.00		1980	2.00	300	1.00	1940	2.00	260	1.00	
PETERSBURG	A		5900	3.00	*	3300	2.00	2520	2.00	3300	2.00	2460	2.00	2
	B		5900	3.00	*	3300	2.00	2520	2.00	3300	2.00	2460	2.00	
	C		5900	3.00	*	3300	2.00	2520	2.00	3300	2.00	2460	2.00	
	D		5900	3.00	*	3300	2.00	2520	2.00	3300	2.00	2460	2.00	
PLATINUM	A	*	2900	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
	B	*	2900	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
	C	*	2900	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
POINT HOPE	A	*	500	3.00		360	1.00	300	1.00	300	1.00	260	1.00	
	B	*	500	3.00		360	1.00	300	1.00	300	1.00	260	1.00	
	C	*	500	3.00		360	1.00	300	1.00	300	1.00	260	1.00	
P.HEIDEN	A		1300	3.00	*	520	1.00	460	1.00	460	1.00	420	1.00	
	B		1300	3.00	*	520	1.00	460	1.00	460	1.00	420	1.00	
	C		1300	3.00	*	520	1.00	460	1.00	460	1.00	420	1.00	
	D		1300	3.00	*	520	1.25	460	1.25	460	1.25	420	1.00	
PORT LIONS	A	*	4500	3.00		3060	2.00	760	1.00	3060	2.00	710	1.00	2
	B	*	4500	3.00		3060	2.00	760	1.25	3060	2.00	710	1.00	
P.MOLLER	A		8000	3.00	*	400	1.00	360	1.00	320	1.00	260	1.00	1
	B		8000	3.00	*	460	1.00	460	1.00	320	1.00	260	1.00	
	C		8000	3.00	*	460	1.50	460	1.50	320	1.00	260	1.00	
	D		8000	3.00	*	560	2.00	560	2.00	320	1.00	260	1.00	
KWINHAGAK	A	*	1200	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
	B	*	1200	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
RAINY PASS	A	*	8300	3.00		5120	2.00	4320	2.00	5120	2.00	4280	2.00	2
	B	*	8300	3.00		5120	2.00	4320	2.00	5120	2.00	4280	2.00	

1= POTENTIAL VOR SITING PROBLEMS. 2= SEVERE VOR SITING PROBLEMS.
* INDICATES CURRENT AVAILABLE NAVAIDS

Table F.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 5

PROJECTED LANDING MINIMUMS BY APPROACH CATEGORY AND AVAILABLE NAVAIDS

AIRPORT	APPROACH CATEGORY		NONE CEILING	NONE VISIBILITY		NDB CEILING	NDB VISIBILITY	NDB-DME CEILING	NDB-DME VISIBILITY	VOR CEILING	VOR VISIBILITY	VOR-DME CEILING	VOR-DME VISIBILITY	
ST.MARYS	A	*	2700	3.00		650	1.00	600	1.00	600	1.00	550	1.00	
	B	*	2700	3.00		650	1.00	600	1.00	600	1.00	550	1.00	
	C	*	2700	3.00		650	1.25	600	1.25	600	1.25	550	1.25	
	D	*	2700	3.00		650	1.50	600	1.50	600	1.50	550	1.50	
ST.PAUL IS	A		1700	3.00	*	420	1.00	420	1.00	420	1.00	320	1.00	
	B		1700	3.00	*	420	1.00	420	1.00	420	1.00	320	1.00	
	C		1700	3.00	*	420	1.00	420	1.00	420	1.00	320	1.00	
	D		1700	3.00	*	420	1.00	420	1.00	420	1.00	320	1.00	
SAGWON	A	*	2000	3.00		740	1.00	320	1.00	700	1.00	260	1.00	
	B	*	2000	3.00		740	1.00	320	1.00	700	1.00	260	1.00	
	C	*	2000	3.00		740	1.25	320	1.00	700	1.25	260	1.00	
	D	*	2000	3.00		740	1.50	320	1.00	700	1.50	260	1.00	
SAND POINT	A	*	5800	3.00		930	1.25	320	1.00	880	1.25	260	1.00	1
	B	*	5800	3.00		930	1.50	320	1.00	880	1.50	260	1.00	
SAVONGA	A	*	3300	3.00		620	1.00	320	1.00	560	1.00	280	1.00	1
	B	*	3300	3.00		620	1.00	320	1.00	560	1.00	280	1.00	
	C	*	3300	3.00		620	1.25	320	1.00	560	1.00	280	1.00	
SELDOVIA	A	*	1600	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
	B	*	1600	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
SKAGWAY	A	*	8700	3.00		6980	2.00	6980	2.00	6980	2.00	5760	2.00	2
	B	*	8700	3.00		6980	2.00	6980	2.00	6980	2.00	5760	2.00	
	C	*	8700	3.00		6980	2.00	6980	2.00	6980	2.00	5760	2.00	
SPARREVOHN	A		2900	3.00	*	1440	5.00	500	1.00	1400	5.00	440	1.00	2
	B		2900	3.00	*	1440	5.00	500	1.00	1400	5.00	440	1.00	
	C		2900	3.00	*	1440	5.00	500	1.00	1400	5.00	440	1.00	
	D		2900	3.00	*	1440	5.00	500	1.00	1400	5.00	440	1.00	
STEVENS VT	A	*	3900	3.00		380	1.00	320	1.00	320	1.00	280	1.00	
	B	*	3900	3.00		380	1.00	320	1.00	320	1.00	280	1.00	

1: POTENTIAL VOR SITING PROBLEMS. 2: SEVERE VOR SITING PROBLEMS.
* INDICATES CURRENT AVAILABLE NAVAIDS

Table F.3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 6

PROJECTED LANDING MINIMUMS BY APPROACH CATEGORY AND AVAILABLE NAVAIDS

AIRPORT	APPROACH CATEGORY		NONE CEILING	NONE VISIBILITY		NDB CEILING	NDB VISIBILITY	NDB-DME CEILING	NDB-DME VISIBILITY	VOR CEILING	VOR VISIBILITY	VOR-DME CEILING	VOR-DME VISIBILITY	
SUMMIT	A		4600	3.00	*	3140	2.00	1960	2.00	3100	2.00	1900	2.00	2
	B		4600	3.00	*	3140	2.00	1960	2.00	3100	2.00	1900	2.00	
TOGIAK	A	*	3500	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
	B	*	3500	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
TOKCOK	A	*	2500	3.00		720	1.00	680	1.00	680	1.00	620	1.00	1
	B	*	2500	3.00		720	1.25	680	1.25	680	1.25	620	1.00	
UMIAT	A		1800	3.00	*	380	1.00	320	1.00	320	1.00	280	1.00	
	B		1800	3.00	*	380	1.00	320	1.00	320	1.00	260	1.00	
	C		1800	3.00	*	380	1.00	320	1.00	320	1.00	260	1.00	
	D		1800	3.00	*	380	1.00	320	1.00	320	1.00	260	1.00	
UNYAK	A	*	5100	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
	B	*	5100	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
	C	*	5100	3.00		360	1.00	320	1.00	320	1.00	260	1.00	
VALDEZ	A	*	9100	3.00		5300	2.00	3560	2.00	5300	2.00	3500	2.00	2
	B	*	9100	3.00		5300	2.00	3560	2.00	5300	2.00	3500	2.00	
	C	*	9100	3.00		5300	2.00	3560	2.00	5300	2.00	3500	2.00	
	D	*	9100	3.00		5300	2.00	3560	2.00	5300	2.00	3500	2.00	
WAINWRIGHT	A		1400	3.00	*	500	1.00	320	1.00	320	1.00	260	1.00	
	B		1400	3.00	*	500	1.00	320	1.00	320	1.00	260	1.00	
	C		1400	3.00	*	500	1.00	320	1.00	320	1.00	260	1.00	
	D		1400	3.00	*	500	1.00	320	1.00	320	1.00	260	1.00	
WTEN ARCTC	A	*	4600	3.00		1700	2.00	300	1.00	1700	2.00	260	1.00	2
	B	*	4600	3.00		1700	2.00	300	1.00	1700	2.00	260	1.00	
	C	*	4600	3.00		1700	2.00	300	1.00	1700	2.00	260	1.00	
	D	*	4600	3.00		1700	2.00	300	1.00	1700	2.00	260	1.00	
YAKUTAGA	A	*	5500	3.00		1840	2.00	340	1.00	400	1.00	300	1.00	1
	B	*	5500	3.00		1840	2.00	340	1.00	500	1.00	300	1.00	
	C	*	5500	3.00		1840	2.00	340	1.00	500	1.50	300	1.00	
	D	*	5500	3.00		1840	2.00	340	1.00	600	2.00	300	1.00	

1: POTENTIAL VOR SITING PROBLEMS. 2: SEVERE VOR SITING PROBLEMS.
* INDICATES CURRENT AVAILABLE NAVAIDS

APPENDIX G
ESTIMATED LANDING PROBABILITIES

The weather data utilized for this study was obtained from the U.S. Department of Commerce, National Climatic Center, located in Asheville, N.C. This agency possesses data tapes containing detailed weather information for a vast number of U.S. operated weather stations. Their general method of operation is to accept from their requestors detailed data processing specifications and outputs formats, to perform in-house processing and, subsequently, provide the requestors with the desired results. The lead times necessary for the development of the ceiling/visibility data and for the generation of the weather data was such that sequential performance of these tasks could not be accomplished in a manner compatible with this study's schedule. As a result, the data was obtained from the National Climatic Center in virtually "raw" form. The computer capability necessary to merge and process the weather and minimum data was developed at the Contractors facility simultaneously with the data generation efforts.

Weather data was available from 48 Alaska weather stations. These are plotted in Figure G.1, where the stations are identified by the ID of the co-located airport.

Two separate areas of analysis were necessary in the acquisition and application of this data. The first, described in the next section, pertained to developing the specific weather data processing logic and, hence, formed the basis for the weather data requirements. The second task was to establish which weather stations would be used to derive data for each of the selected airports. Lastly, the results of these two tasks are merged with the previously referenced ceiling and visibility requirements (Appendix F) to produce the landing probability results.

Figure G.1 Alaska Weather Stations

WEATHER DATA REQUIREMENTS AND PROCESSING LOGIC

The weather data available from the National Climatic Center is exceedingly voluminous. A considerable number of individual data items are recorded and saved eight times per day (three hour increments), each day of the year. The National Climatic Center sorted the data so that only the necessary raw data was provided. Further processing of this basic set of data was performed by the Contractor.

The rationale for the selection of the data items stemmed from the processing logic which was to be used for the determination of landing feasibility. This logic involved consideration of three essential factors: crosswind, ceiling, and visibility. The data items requested from the National Climatic Center, therefore, included the following:

(1) wind velocity;

(2) wind direction;

(3) ceiling; and

(4) visibility.

The crosswind requirements developed for each approach category were as follows:

APPROACH CATEGORY	MAXIMUM CROSSWIND (MPH)
A	15
B	20
C	25
D	30

The wind and runway orientation and the wind velocity can be combined to determine the crosswind component. If the

crosswind is too great or either the ceiling or visibility too low, relative to the specific airport/aircraft/NAVAID requirements, then for the purposes of this study, landing is assumed not to be feasible.

Relative to the volume of data potentially available, virtually any statistical analysis would indicate that only a small percentage would have to be processed in order to provide adequate probability estimates. However, to minimize the possibility of obtaining a biased sample, it was considered important to obtain weather encompassing at least several years. In fact, for almost all of the stations, ten years of data were available and utilized. The use of a ten year sample essentially assured that an abnormal year or season would not unduly influence the results. The processing of the complet set of data (i.e., 3,650 days), however, was both economically impractical and unnecessary. Hence, the processing was structured to consider four days per month. The weather data analyzed was, thereby, evenly distributed throughout the ten year period. This sampling rate produced a total of 480 samples for each 3 hour time increment (i.e., a total of 3,840 samples per airport). Even when confining the weather analysis to the summer season (5 months), 200 samples for each time of day are available, 800 during the daylight hours, and a high level of estimation accuracy is assumed.

WEATHER STATION/AIRPORT CORRELATION

The next phase of the weather analysis was to develop the rationale by which to determine which weather station(s) data to use as representative statistics for each of the sites. For many of the proposed sites, weather data was available from a co-located station; thus, no further analysis was necessary. This was not always the case, however, and some

means to establish the region of influence of each weather station was necessary. The assistance of the National Weather Service/Environmental Services at Anchorage was solicited. Personnel in the Anchorage Office of the National Weather Service developed and provided the Contractor with a map of Alaska showing zones of common weather. Also identified were the 48 stations appropriate to use with each of these zones. These zones are depicted in Figure G.2. The intent of establishing these zones was not to imply that the weather on any given day is the same throughout the zone, but rather that, in the long run, similar frequencies of various types of weather (such as ceilings and visibilities) would be observed.

The correlation between the zones and their respective weather stations is presented in Table G.1. Table G.2 presents the final NAVAID location (i.e., airport location/weather station association). As previously mentioned, weather stations located at the airport of interest were utilized whenever possible. In the other instances, the weather station deemed most appropriate for the region containing the airport was utilized. In certain cases, the data from two stations were utilized when no individual station was totally appropriate.

LANDING PROBABILITY RESULTS

Having established the methodology by which to determine whether or not landing can be accomplished (based upon the available weather data) and which weather station(s) to utilize for each airport of interest, it was a straightforward process to generate the landing probabilities. For each selected airport, each approach category and potential NAVAID configuration, all weather samples from the appropriate station were processed to determine the number of times successful landing would be expected. The results are presented in Table

G.3. While the probabilities were recorded for each of the eight three-hour time intervals, for purposes of brevity they are presented in terms of daily averages.

Table G.4 presents comparable data expressed in terms of incremental probability of landing afforded by each of the postulated improvements. The associated rankings, best to worst, are included in both tables.

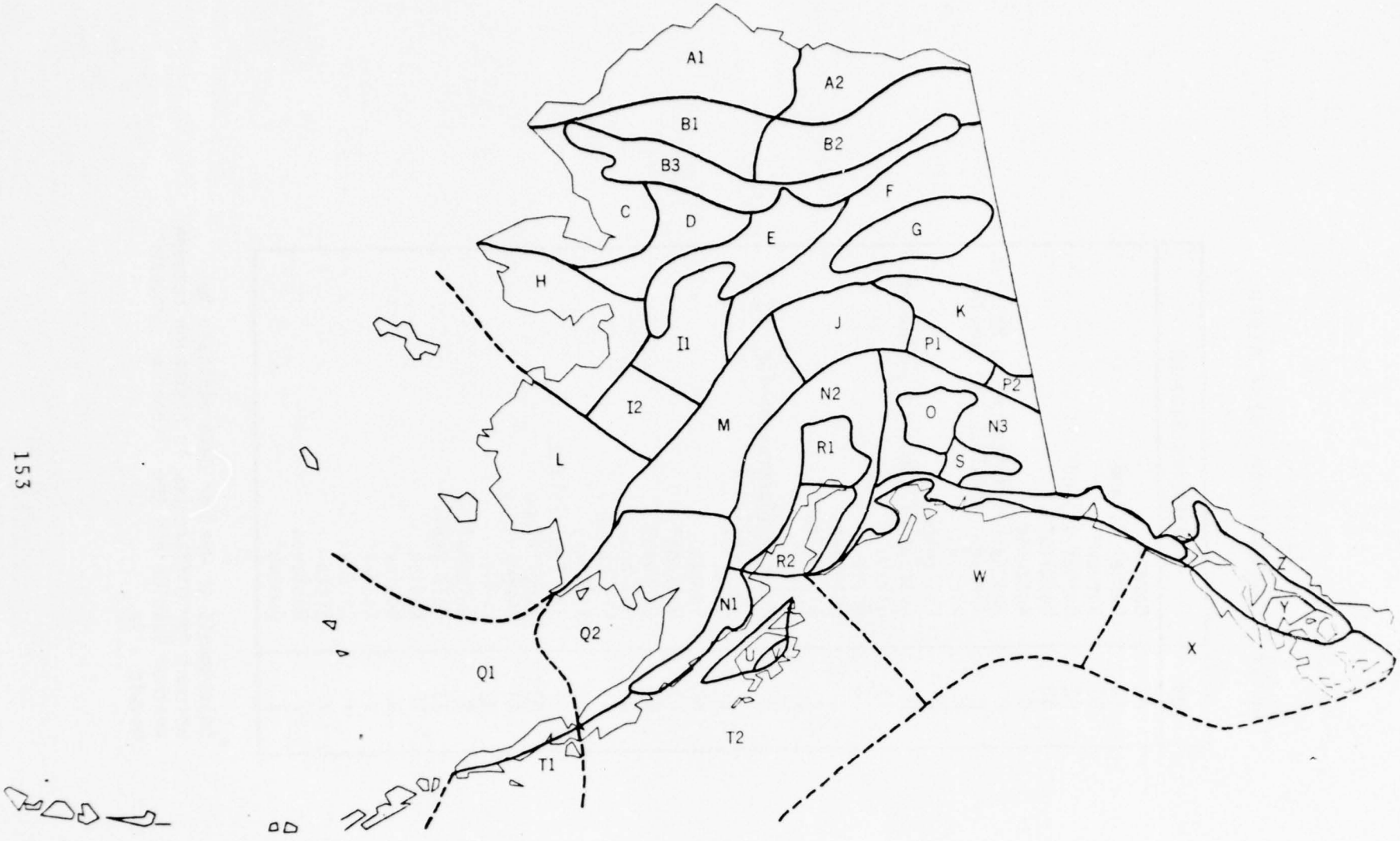

Figure G.2 Alaska Weather Regions

Table G.1

Weather Station/Zone Correlation

ZONE	REFERENCE STATION
A1	Barrow
A2	Barter Island
B1	Barrow*
B2	Barter Island*
B3	Bettles*
C	Kotzebue
D	Average of Kotzebue and Bettles
E	Average of Galena and Bettles
F	Bettles
G	Ft. Yukon
H	Average of Nome and Unalakleet
I1	Galena
I2	Aniak
J	Fairbanks
K	Big Delta*
L	Bethel
M	McGarth (Sparrevohn for Higher Elevations)
N1	Cordova*
N2	Summit
N3	Gulkana*
N4	Cordova*
O	Gulkana
P1	Big Delta
P2	Northway
Q1	St. Paul Island
Q2	King Salmon
R1	Skwentna
R2	Kenai
S	Gulkana*
T1	Cold Bay
T2	Kodiak
U	Kodiak*
V	Kodiak*
W	Cordova
X	Sitka
Y	Gustavas
Z	Juneau*

*Adjustments to weather data utilized to account for differences in elevation between weather station and the airport at proposed navaid site.

Table G.2
Alaska Airport Weather Analysis

AIRPORT	SYM	ZONE	CORRESPONDING WEATHER STATION	COLOCATED STATION
Adak Island	ADK	Q1	Adak	✓
Akutan	KQA	Q1	St. Paul Island	
Aniak	ANI	L	Aniak	✓
Attu	ATU	Q1	Shemya Island	
Barter Island		A2	Barter Island	✓
Cape Lisburne	LUR	A1	Cape Lisburne	✓
Cape Sarichef	OSH	Q1	St. Paul Island	
Cape Spencer	CSP	X	Sitka	
Cape Yakataga		W	Cordova	
Chandalar	WCR	B3	Bettles (643)	
Chevak		L	Bethel	
Cold Bay	CDB	Q1	Cold Bay	✓
Cordova	CDV	W	Cordova	✓
Dahl Creek (Bornite)	DCK	D	Average of Kotzebue and Bettles	
Dillingham	DLG	Q2	King Salmon	
Driftwood Bay		Q1	Driftwood Bay	✓
Dutch Harbor	DUT	Q1	Driftwood Bay	
Emmonak		L	Bethel	
False Pass	KFP	Q1	Cold Bay (78)	
Gambell	GAM	L	Bethel	
Haines	HNS	Y	Gustavas	
Holy Cross		I2	Aniak	
Hooper Bay	HPB	L	Bethel	
Iliama	ILI	Q2	Iliama	✓
King Cove	KVC	T1	Cold Bay	
King Salmon	AKN	Q2	King Salmon	✓
Cape Newenham	EHM	L	Cape Newenham	✓
Kipnuk		L	Bethel	
Kobuk	OBU	D	Average of Kotzebue and Bettles	
Kotzebue	OTZ	C	Kotzebue	✓
Lonely (Dew Sta.)	LNI	A	Pt. Barrow	
McGrath	MCG	M	McGrath	✓
Mekoryuk	MYU	L	Bethel	
Minchumina	MHM	M	McGrath (337)	
Nikolski	IKO	Q1	Nikolski	✓
Old Harbor	OLH	T2	Kodiak	
Ouzinkie	KOZ	T2	Kodiak	
Petersburg	PSG	Y	Gustavas	
Platinum	PTU	L	Bethel	
Point Hope	PHO	C	Kotzebue	
Port Heiden	PTH	Q2	King Salmon	
Port Lions	ORI	T2	Kodiak	
Port Moller	PML	Q1	Port Moller	✓
Quinhagak	KWN	L	Bethel	
Rainy Pass Ldg. (Puntilla Lk.)		N2	Summit (2409)	
St. Mary's	KSM	L	Bethel (131)	
St. Paul Island	SNP	Q1	St. Paul Island	✓
Salwon		A	Barter Island (5)	
Sands Point	SDP	T2	Cold Bay	
Savoonga	SVA	L	Bethel	
Selawick	WLK	C	Kotzebue	
Shemya Island	SYA	Q1	Shemya Island	✓
Skagway	SGY	Z	Juneau	
Sparrevohn	SVW	M	Sparrevohn	✓
Stevens Village	SVS	G	Ft. Yukon	
Summit	UMM	N2	Summit	✓
Togiak	TOG	Q2	King Salmon	
Tooksook	OOK	L	Bethel	
Umiat	UMT	A	Barrow (44)	
Umnak	UNS	Q1	Nikolski	
Unalakleet	UNK	H	Unalakleet	✓
Valdez	VDZ	W	Cordova	
Wainwright	AIN	A	Barrow	
Wien Arctic Village	ARC	B	Bettles (643)	
Wrangel	WRG	Y	Gustavas	
Yakataga	CYT	W	Cordova	

Table G.3

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 1

ESTIMATED LANDING PROBABILITY AND ASSOCIATED RANKING BASED ON AVAILABLE NAVAIDS
SUMMER WEATHER (MAY-SEPT)

AIRPORT	APPROACH CATEGORY		NONE PROB	NONE RANK/TOTAL		NDB PROB	NDB RANK/TOTAL	NDB-DME PROB	NDB-DME RANK/TOTAL	VOR PROB	VOR RANK/TOTAL	VOR-DME PROB	VOR-DME RANK/TOTAL	
ANUPAK	A	*	.10	50/55		.25	55/55	.77	39/55	.25	55/55	.77	41/55	1
	B	*	.10	50/54		.26	54/54	.82	36/54	.26	54/54	.82	38/54	
	C	*	.15	32/34		.26	36/36	.84	21/36	.26	36/36	.84	22/36	
ANIAK	A		.94	6/55	*	.97	3/55	1.00	1/55	1.00	1/55	1.00	1/55	1
	B		.94	11/54	*	.97	5/54	1.00	1/54	1.00	1/54	1.00	1/54	
	C		.94	6/34	*	.97	4/36	1.00	1/36	1.00	1/36	1.00	1/36	
	D		.94	4/24	*	.97	3/26	1.00	1/26	1.00	1/26	1.00	1/26	
ATTU ISLND	A	*	.18	55/55		.29	54/55	.62	47/55	.30	53/55	.62	47/55	1
	B	*	.18	54/54		.32	53/54	.71	42/54	.33	53/54	.71	46/54	
	C	*	.18	34/34		.33	35/36	.73	26/36	.34	35/36	.73	29/36	
	D	*	.18	24/24		.28	26/26	.73	19/26	.31	26/26	.73	22/26	
BARTER ISL	A		.71	16/55	*	.92	17/55	.96	9/55	.96	7/55	.96	12/55	
	B		.71	16/54	*	.92	19/54	.96	20/54	.96	18/54	.96	21/54	
	C		.71	8/34	*	.92	9/36	.96	11/36	.96	9/36	.96	11/36	
	D		.71	6/24	*	.92	6/26	.96	6/26	.96	5/26	.96	6/26	
CLEARWATER	A		.81	37/55	*	.85	27/55	.90	28/55	.85	29/55	.90	29/55	2
	B		.83	34/54	*	.87	25/54	.91	27/54	.87	26/54	.91	29/54	
	C		.83	19/34	*	.88	12/36	.91	17/36	.88	14/36	.91	18/36	
	D		.83	14/24	*	.87	9/26	.89	13/26	.87	10/26	.89	14/26	
CLEARTCHEF	A		.12	52/55	*	.59	42/55	.71	42/55	.71	36/55	.79	38/55	
	B		.13	52/54	*	.62	41/54	.67	44/54	.75	33/54	.84	34/54	
	C		.13	34/34	*	.62	27/36	.67	30/36	.76	22/36	.85	21/36	
	D		.13	24/24	*	.62	22/26	.62	23/26	.76	17/26	.85	15/26	
CLARENCE	A	*	.48	20/55		.93	16/55	.99	5/55	.93	18/55	.99	6/55	1
CHANDALAR	A	*	.81	30/55		.76	31/55	.78	37/55	.76	32/55	.78	39/55	2
	B	*	.81	29/54		.78	30/54	.79	38/54	.76	31/54	.79	40/54	
	C	*	.81	17/34		.78	19/36	.79	23/36	.76	20/36	.79	25/36	
	D	*	.81	12/24		.76	14/26	.79	16/26	.76	15/26	.79	18/26	
CHEVAK	A	*	.81	12/55		.95	5/55	.95	11/55	.95	8/55	.97	8/55	
	B	*	.82	12/54		.96	8/54	.96	11/54	.96	10/54	.97	11/54	

1= POTENTIAL VOR SITING PROBLEMS. 2= SEVERE VOR SITING PROBLEMS.
* INDICATES CURRENT AVAILABLE NAVAIDS

Table G.3

(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 2

ESTIMATED LANDING PROBABILITY AND ASSOCIATED RANKING BASED ON AVAILABLE NAVAIDS
SUMMER WEATHER (MAY-SEPT)

AIRPORT	APPROACH CATEGORY		NONE PROB	NONE RANK/TOTAL		NDB PROB	NDB RANK/TOTAL	NDB+DME PROB	NDB+DME RANK/TOTAL	VOR PROB	VOR RANK/TOTAL	VOR+DME PROB	VOR+DME RANK/TOTAL	
DAHL CREEK	A	*	.92	15/55		.95	8/55	.95	15/55	.95	11/55	.96	10/55	1
	B	*	.93	15/54		.97	7/54	.97	10/54	.97	9/54	.98	8/54	
	C	*	.93	7/36		.98	3/36	.98	6/36	.98	5/36	.99	6/36	
	D	*	.93	5/26		.97	1/26	.97	4/26	.97	4/26	.99	5/26	
DORAN BAY	A	*	.37	49/55		.67	40/55	.67	45/55	.67	41/55	.70	45/55	2
	B	*	.37	48/54		.67	40/54	.67	46/54	.67	41/54	.71	44/54	
	C	*	.37	30/36		.67	26/36	.67	31/36	.67	27/36	.71	30/36	
	D	*	.37	23/26		.67	21/26	.67	22/26	.67	22/26	.71	23/26	
DUTCH HARB	A	*	.91	46/55		.49	46/55	.70	43/55	.49	46/55	.70	46/55	1
	B	*	.91	45/54		.50	45/54	.71	41/54	.50	46/54	.71	45/54	
	C	*	.91	29/36		.50	30/36	.71	27/36	.50	30/36	.71	31/36	
EMMONAK	A	*	.93	7/55		.95	7/55	.95	14/55	.95	10/55	.97	11/55	
	B	*	.94	8/54		.96	10/54	.96	14/54	.96	12/54	.97	14/54	
FALSE PASS	A	*	.38	47/55		.38	50/55	.38	54/55	.38	50/55	.39	55/55	2
	B	*	.39	46/54		.39	49/54	.39	53/54	.39	49/54	.40	53/54	
GAMBELL	A	*	.68	28/55		.87	25/55	.95	12/55	.87	26/55	.97	9/55	1
	B	*	.68	26/54		.87	24/54	.96	12/54	.88	25/54	.97	12/54	
	C	*	.68	15/36		.87	14/36	.96	7/36	.88	15/36	.97	7/36	
HAINES	A	*	.35	42/55		.42	49/55	.50	50/55	.42	49/55	.50	50/55	2
	B	*	.35	42/54		.42	48/54	.50	51/54	.42	48/54	.50	51/54	
	C	*	.35	26/36		.42	31/36	.50	34/36	.42	31/36	.50	34/36	
	D	*	.35	21/26		.42	24/26	.50	25/26	.42	24/26	.50	25/26	
HOLY CROSS	A	*	.88	3/55		.99	2/55	.99	3/55	.99	3/55	.99	3/55	
	B	*	.88	4/54		1.00	2/54	1.00	3/54	1.00	3/54	1.00	3/54	
HOOPER BAY	A	*	.83	8/55		.94	13/55	.94	20/55	.94	15/55	.95	19/55	
	B	*	.84	9/54		.96	11/54	.96	15/54	.96	13/54	.97	15/54	
	C	*	.84	5/36		.96	5/36	.96	8/36	.96	7/36	.97	8/36	
IVANOF BAY	A		.00	1/55	*	.94	4/55	.96	8/55	.96	6/55	.96	15/55	
	B		.02	2/54	*	.98	3/54	.98	7/54	.99	5/54	.99	6/54	
	C		.02	2/36	*	.98	2/36	.98	5/36	.99	4/36	.99	3/36	
	D		.02	1/26	*	.97	2/26	.97	5/26	.99	3/26	.99	3/26	

1: POTENTIAL VOR SITING PROBLEMS. 2: SEVERE VOR SITING PROBLEMS.
* INDICATES CURRENT AVAILABLE NAVAIDS

Table G.3
(Continued)

SYSTEMS CONTROL INC. (VT.1, 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 3

ESTIMATED LANDING PROBABILITY AND ASSOCIATED RANKING BASED ON AVAILABLE NAVAIDS
SUMMER WEATHER (MAY-SEPT)

AIRPORT	APPROACH CATEGORY	NONE		NDB		NDB-DME		VOR		VOR-DME		
		PROB	RANK/TOTAL	PROB	RANK/TOTAL	PROB	RANK/TOTAL	PROB	RANK/TOTAL	PROB	RANK/TOTAL	
KING COVE	A	* .12	53/55	.30	53/55	.77	40/55	.30	54/55	.78	40/55	2
	B	* .15	49/54	.35	51/54	.89	30/54	.35	51/54	.91	30/54	
	C	* .15	31/36	.38	32/36	.94	14/36	.38	32/36	.95	13/36	
CINEBANAW	A	.19	40/55	* .78	30/55	.89	32/55	.78	31/55	.92	26/55	2
	B	.19	39/54	* .78	29/54	.89	32/54	.78	30/54	.93	27/54	
	C	.19	23/36	* .78	14/36	.89	19/36	.78	19/36	.93	17/36	
	D	.19	18/26	* .78	13/26	.89	12/26	.78	14/26	.93	11/26	
KIPNUK	A	* .80	13/55	.95	6/55	.95	13/55	.95	9/55	.97	10/55	
	B	* .81	13/54	.94	9/54	.96	13/54	.96	11/54	.97	13/54	
KODIK	A	* .45	21/55	.94	12/55	.97	7/55	.94	14/55	.97	7/55	1
	B	* .46	20/54	.96	15/54	.99	5/54	.96	17/54	.99	7/54	
LONELY	A	.46	19/55	* .88	23/55	.90	27/55	.90	22/55	.92	27/55	
	B	.47	19/54	* .89	22/54	.91	28/54	.91	22/54	.92	26/54	
	C	.47	10/36	* .90	11/36	.92	16/36	.92	12/36	.93	15/36	
	D	.47	8/26	* .90	7/26	.92	10/26	.92	8/26	.93	9/26	
MEKORYUK	A	* .75	14/55	.94	10/55	.94	18/55	.94	13/55	.96	16/55	
	B	* .76	14/54	.96	14/54	.96	18/54	.96	16/54	.97	18/54	
MINCHUMINA	A	.88	2/55	* .94	11/55	.99	4/55	.99	4/55	.99	4/55	
	B	.89	3/54	* .94	17/54	.99	4/54	.99	4/54	.99	4/54	
	C	.89	3/36	* .94	7/36	.99	2/36	.99	2/36	.99	2/36	
	D	.89	2/26	* .94	4/26	.99	2/26	.99	2/26	.99	2/26	
NIKOLSKI	A	.10	54/55	* .46	48/55	.49	51/55	.49	47/55	.49	51/55	
	B	.10	53/54	* .50	46/54	.53	50/54	.53	42/54	.53	49/54	
	C	.10	35/36	* .51	29/36	.53	33/36	.54	29/36	.54	33/36	
	D	.10	25/26	* .51	23/26	.53	24/26	.54	23/26	.55	24/26	
OLD HARBOR	A	* .40	39/55	.50	45/55	.57	49/55	.50	45/55	.57	49/55	2
	B	* .40	38/54	.50	47/54	.58	48/54	.50	47/54	.58	48/54	
QUINHAGAK	A	* .06	32/55	.67	39/55	.95	17/55	.67	40/55	.95	21/55	1
	B	* .06	31/54	.67	38/54	.95	23/54	.67	39/54	.95	20/54	

1# POTENTIAL VOR SITING PROBLEMS. 2# SEVERE VOR SITING PROBLEMS.
* INDICATES CURRENT AVAILABLE NAVAIDS

Table G.3
(Continued)

SYSTEMS CONTROL INC. (VT.)• 1801 PAGE MILL ROAD• PALO ALTO• CA.• PAGE 4

ESTIMATED LANDING PROBABILITY AND ASSOCIATED RANKING BASED ON AVAILABLE NAVAIDS
SUMMER WEATHER (MAY-SEPT)

AIRPORT	APPROACH CATEGORY	NONE PROB	NONE RANK/TOTAL		NDB PROB	NDB RANK/TOTAL	NDB-DME PROB	NDB-DME RANK/TOTAL	VOR PROB	VOR RANK/TOTAL	VOR-DME PROB	VOR-DME RANK/TOTAL	
PETERSBURG	A	.02	35/55	*	.70	35/55	.78	38/55	.70	37/55	.81	37/55	2
	B	.02	35/54	*	.70	35/54	.78	39/54	.70	36/54	.81	39/54	
	C	.02	21/36	*	.70	23/36	.78	24/36	.70	24/36	.82	24/36	
	D	.02	16/26	*	.70	18/26	.78	17/26	.70	19/26	.82	17/26	
PLATINUM	A	* .43	22/55		.94	14/55	.94	21/55	.94	16/55	.95	20/55	
	B	* .44	22/54		.96	12/54	.96	16/54	.96	14/54	.97	16/54	
	C	* .44	11/36		.96	6/36	.96	9/36	.96	8/36	.97	9/36	
POINT HOPE	A	* .07	4/55		.89	20/55	.90	29/55	.90	23/55	.90	30/55	
	B	* .04	1/54		.97	6/54	.98	8/54	.98	6/54	.98	10/54	
	C	* .05	1/36		.98	1/36	.99	3/36	.99	3/36	.99	5/36	
P.HEIDEN	A	.82	10/55	*	.90	19/55	.91	26/55	.91	20/55	.91	28/55	
	B	.84	7/54	*	.93	18/54	.94	25/54	.94	20/54	.94	25/54	
	C	.85	4/36	*	.93	8/36	.94	13/36	.94	10/36	.94	14/36	
	D	.85	3/26	*	.93	5/26	.94	8/26	.94	7/26	.94	8/26	
PORT LIONS	A	* .03	33/55		.50	44/55	.82	35/55	.50	44/55	.82	35/55	2
	B	* .03	33/54		.50	44/54	.82	35/54	.50	45/54	.82	37/54	
P.MOLLER	A	.03	34/55	*	.75	32/55	.75	41/55	.75	33/55	.75	43/55	1
	B	.03	32/54	*	.76	31/54	.76	40/54	.76	32/54	.76	41/54	
	C	.03	20/36	*	.75	20/36	.75	25/36	.76	21/36	.76	26/36	
	D	.03	15/26	*	.75	15/26	.75	18/26	.76	16/26	.76	19/26	
KWIGNAGAK	A	* .07	9/55		.95	9/55	.95	16/55	.95	12/55	.96	13/55	
	B	* .04	10/54		.96	13/54	.96	17/54	.96	15/54	.97	17/54	
RAINY PASS	A	* .01	36/55		.52	43/55	.61	48/55	.52	43/55	.62	48/55	2
	B	* .01	36/54		.52	43/54	.62	47/54	.52	44/54	.63	47/54	
ST.MARYS	A	* .43	23/55		.87	24/55	.89	31/55	.89	25/55	.89	33/55	
	B	* .44	23/54		.88	23/54	.89	31/54	.89	24/54	.89	32/54	
	C	* .44	12/36		.88	13/36	.89	18/36	.89	13/36	.89	19/36	
	D	* .44	9/26		.88	8/26	.89	11/26	.89	9/26	.89	12/26	
ST.PAUL IS	A	.24	43/55	*	.63	41/55	.63	46/55	.63	42/55	.70	44/55	
	B	.26	40/54	*	.67	39/54	.67	45/54	.67	40/54	.75	43/54	
	C	.26	24/36	*	.68	25/36	.68	29/36	.68	26/36	.76	28/36	
	D	.26	19/26	*	.68	20/26	.68	21/26	.68	21/26	.76	21/26	

1: POTENTIAL VOR SITING PROBLEMS. 2: SEVERE VOR SITING PROBLEMS.
* INDICATES CURRENT AVAILABLE NAVAIDS

Table G.3
(Continued)

SYSTEMS CONTROL INC. (VT.)• 1801 PAGE MILL ROAD• PALO ALTO• CA.• PAGE 5

ESTIMATED LANDING PROBABILITY AND ASSOCIATED RANKING BASED ON AVAILABLE NAVAIDS
SUMMER WEATHER (MAY-SEPT)

AIRPORT	APPROACH CATEGORY		NONE PROB	NONE RANK/TOTAL		NDB PROB	NDB RANK/TOTAL	NDB-DME PROB	NDB-DME RANK/TOTAL	VOR PROB	VOR RANK/TOTAL	VOR-DME PROB	VOR-DME RANK/TOTAL	
SAGLOK	A	*	.69	26/55		.72	34/55	.82	36/55	.72	34/55	.82	36/55	
	B	*	.69	25/54		.72	33/54	.84	34/54	.72	35/54	.84	35/54	
	C	*	.69	14/34		.72	22/36	.84	22/36	.72	23/36	.84	23/36	
	D	*	.69	11/24		.72	17/26	.84	15/26	.72	18/26	.84	16/26	
SAN POINT	A	*	.77	46/55		.69	37/55	.92	24/55	.72	35/55	.93	23/55	1
	B	*	.77	47/54		.71	34/54	.94	24/54	.73	34/54	.96	22/54	
SAVONGA	A	*	.68	27/55		.89	21/55	.94	19/55	.91	21/55	.96	17/55	1
	B	*	.68	27/54		.90	20/54	.96	19/54	.92	21/54	.97	19/54	
	C	*	.68	16/34		.90	10/36	.96	10/36	.92	11/36	.97	10/36	
SELMAN	A	*	.81	11/55		.94	15/55	.94	22/55	.94	17/55	.94	22/55	
	B	*	.85	5/54		.98	4/54	.98	9/54	.98	7/54	.98	9/54	
SKAGWAY	A	*	.70	48/55		.35	52/55	.35	55/55	.35	52/55	.39	54/55	2
	B	*	.70	43/54		.35	52/54	.35	54/54	.35	52/54	.39	54/54	
	C	*	.70	27/34		.35	34/36	.35	36/36	.35	34/36	.39	36/36	
SPARREVOHN	A		.69	17/55	*	.82	29/55	.96	10/55	.82	30/55	.96	10/55	2
	B		.69	17/54	*	.82	29/54	.96	21/54	.82	29/54	.96	23/54	
	C		.69	9/34	*	.82	17/36	.96	12/36	.82	18/36	.96	12/36	
	D		.69	7/24	*	.82	12/26	.96	7/26	.82	13/26	.96	7/26	
STEVENS VT	A	*	.85	5/55		1.00	1/55	1.00	2/55	1.00	2/55	1.00	2/55	
	B	*	.85	6/54		1.00	1/54	1.00	2/54	1.00	2/54	1.00	2/54	
SUMMIT	A		.62	29/55	*	.70	36/55	.82	34/55	.70	38/55	.82	34/55	2
	B		.62	28/54	*	.70	36/54	.82	37/54	.70	37/54	.82	36/54	
TOGIAK	A	*	.63	24/55		.92	18/55	.92	25/55	.92	19/55	.93	24/55	
	B	*	.66	21/54		.95	16/54	.95	22/54	.95	19/54	.96	20/54	
TOKEOK	A	*	.68	18/55		.89	22/55	.90	30/55	.90	24/55	.90	31/55	1
	B	*	.69	18/54		.89	21/54	.90	29/54	.90	23/54	.91	31/54	
UMIAT	A		.00	38/55	*	.68	38/55	.68	44/55	.68	39/55	.76	42/55	
	B		.00	37/54	*	.69	37/54	.69	43/54	.69	38/54	.76	42/54	
	C		.00	22/34	*	.69	24/36	.69	28/36	.69	25/36	.76	27/36	
	D		.00	17/24	*	.69	19/26	.69	20/26	.69	20/26	.76	20/26	

1: POTENTIAL VOR SITING PROBLEMS. 2: SEVERE VOR SITING PROBLEMS.
* INDICATES CURRENT AVAILABLE NAVAIDS

Table G.3
(Continued)

SYSTEMS CONTROL INC. (VT.)• 1801 PAGE MILL ROAD• PALO ALTO• CA.• PAGE 6

ESTIMATED LANDING PROBABILITY AND ASSOCIATED RANKING BASED ON AVAILABLE NAVAIDS
SUMMER WEATHER (MAY-SEPT)

AIRPORT	APPROACH CATEGORY	NONE		NDB		NDB-DME		VOR		VOR-DME		
		PROB	RANK/TOTAL	PROB	RANK/TOTAL	PROB	RANK/TOTAL	PROB	RANK/TOTAL	PROB	RANK/TOTAL	
UMNAK	A	* .13	51/55	.47	47/55	.47	52/55	.47	48/55	.48	52/55	
	B	* .13	51/54	.53	42/54	.53	49/54	.53	43/54	.53	50/54	
	C	* .13	33/36	.54	28/36	.54	32/36	.54	28/36	.54	32/36	
VALDEZ	A	* .37	45/55	.35	51/55	.43	53/55	.35	51/55	.45	53/55	2
	B	* .37	44/54	.35	50/54	.43	52/54	.35	50/54	.45	52/54	
	C	* .37	28/36	.35	33/36	.43	35/36	.35	33/36	.45	35/36	
	D	* .37	22/26	.35	25/26	.43	26/26	.35	25/26	.45	26/26	
MAINRIGHT	A	.07	31/55	* .82	28/55	.86	33/55	.86	27/55	.89	32/55	
	B	.07	30/54	* .82	27/54	.87	33/54	.87	27/54	.89	33/54	
	C	.07	18/36	* .82	16/36	.87	20/36	.87	16/36	.89	20/36	
	D	.07	13/26	* .82	11/26	.87	14/26	.87	11/26	.89	13/26	
NTEL ARCTP	A	* .42	25/55	.86	26/55	.93	23/55	.86	28/55	.93	25/55	2
	B	* .42	24/54	.86	26/54	.93	26/54	.86	26/54	.93	26/54	
	C	* .42	13/36	.86	15/36	.93	15/36	.86	17/36	.93	16/36	
	D	* .42	10/26	.86	10/26	.93	9/26	.86	12/26	.93	10/26	
WAKATAGA	A	* .75	41/55	.74	33/55	.98	6/55	.98	5/55	.99	5/55	1
	B	* .75	41/54	.74	32/54	.98	6/54	.97	8/54	.99	5/54	
	C	* .75	25/36	.74	21/36	.98	4/36	.97	6/36	.99	4/36	
	D	* .75	20/26	.74	16/26	.98	3/26	.95	6/26	.99	4/26	

Table G.4

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 1

INCREMENTAL LANDING PROBABILITY RELATIVE TO BASELINE CASE (MOCA) AND ASSOCIATED RANKING
SUMMER WEATHER (MAY-SEPT)

AIRPORT	APPROACH CATEGORY	CURRENT PROB	CURRENT RANK/TOTAL	NDB INC PROB	NDB RANK/TOTAL	NDB-DME INC PROB	NDB-DME RANK/TOTAL	VOR INC PROB	VOR RANK/TOTAL	VOR-DME INC PROB	VOR-DME RANK/TOTAL	
AKUTAN	A	.10	52/55	.11	30/38	.64	3/55	.11	31/55	.64	4/55	1
	B	.10	52/50	.12	30/37	.68	3/54	.12	31/54	.68	3/54	
	C	.15	34/34	.12	16/20	.70	2/36	.12	17/36	.70	2/36	
ANIAK	A	.07	1/55	****	**/**	.02	48/55	.02	43/55	.02	52/55	1
	B	.07	2/50	****	**/**	.02	48/54	.02	43/54	.02	51/54	
	C	.07	2/34	****	**/**	.03	24/36	.03	26/36	.03	33/36	
	D	.07	2/24	****	**/**	.03	17/26	.03	16/26	.03	22/26	
ATTU ISLND	A	.08	55/55	.22	16/38	.55	5/55	.22	16/55	.55	5/55	1
	B	.08	54/50	.20	13/37	.62	5/54	.25	13/54	.62	5/54	
	C	.08	36/34	.25	9/20	.64	3/36	.25	9/36	.64	3/36	
	D	.08	26/24	.20	7/10	.65	1/26	.23	7/26	.65	1/26	
BARTER ISL	A	.02	4/55	****	**/**	.03	48/55	.03	41/55	.04	48/55	
	B	.02	6/50	****	**/**	.03	46/54	.03	41/54	.04	47/54	
	C	.02	6/34	****	**/**	.03	27/36	.03	24/36	.04	28/36	
	D	.02	5/24	****	**/**	.04	16/26	.04	14/26	.04	19/26	
C.LISBURNE	A	.05	9/55	****	**/**	.05	43/55	.00	49/55	.05	46/55	2
	B	.07	9/50	****	**/**	.04	40/54	.00	50/54	.04	46/54	
	C	.08	6/34	****	**/**	.03	28/36	.00	32/36	.03	32/36	
	D	.07	7/24	****	**/**	.02	20/26	.00	22/26	.02	24/26	
C.SARICHEF	A	.54	35/55	****	**/**	.12	35/55	.12	27/55	.21	23/55	
	B	.42	35/50	****	**/**	.06	40/54	.13	24/54	.22	21/54	
	C	.42	21/34	****	**/**	.05	22/36	.14	14/36	.23	16/36	
	D	.42	18/24	****	**/**	.00	22/26	.14	8/26	.23	9/26	
C.SPENCER	A	.46	27/55	.27	11/38	.33	13/55	.27	11/55	.33	13/55	1
CHANDALAR	A	.51	36/55	.24	12/38	.28	18/55	.26	12/55	.28	18/55	2
	B	.51	37/50	.26	11/37	.28	17/54	.26	11/54	.28	17/54	
	C	.51	29/34	.26	8/20	.28	12/36	.26	8/36	.28	12/36	
	D	.51	21/24	.26	3/10	.28	5/26	.26	3/26	.28	5/26	
CHEVAK	A	.21	17/55	.14	24/38	.14	31/55	.14	24/55	.16	31/55	
	B	.22	16/50	.14	23/37	.14	30/54	.14	23/54	.16	30/54	

11 POTENTIAL VOR SITING PROBLEMS. 21 SEVERE VOR SITING PROBLEMS.

Table G.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 2

INCREMENTAL LANDING PROBABILITY RELATIVE TO BASELINE CASE (MOCA) AND ASSOCIATED RANKING
SUMMER WEATHER (MAY-SEPT)

AIRPORT	APPROACH CATEGORY	CURRENT BASE PROB	CURRENT RANK/TOTAL	NDB INC PROB	NDB RANK/TOTAL	NDB-DME INC PROB	NDB-DME RANK/TOTAL	VOR INC PROB	VOR RANK/TOTAL	VOR-DME INC PROB	VOR-DME RANK/TOTAL	
DAHL CREEK	A	.72	22/55	.24	15/38	.24	20/55	.24	15/55	.25	20/55	1
	B	.73	22/54	.24	12/37	.24	19/54	.24	14/54	.25	19/54	
	C	.73	14/36	.25	10/20	.25	14/36	.25	11/36	.26	13/36	
	D	.73	12/26	.24	4/10	.24	8/26	.24	5/26	.26	6/26	
DRFT.C BAY	A	.17	51/55	.50	2/38	.50	6/55	.50	3/55	.54	6/55	2
	B	.17	50/54	.50	2/37	.50	6/54	.50	3/54	.54	6/54	
	C	.17	32/36	.50	1/20	.50	5/36	.50	2/36	.54	5/36	
	D	.17	25/26	.50	1/10	.50	3/26	.50	2/26	.54	3/26	
DUTCH HARB	A	.21	48/55	.28	10/38	.49	7/55	.28	10/55	.49	7/55	1
	B	.21	47/54	.29	10/37	.49	7/54	.29	10/54	.49	7/54	
	C	.21	31/36	.29	7/20	.49	6/36	.29	7/36	.49	6/36	
EMMONAK	A	.83	11/55	.12	27/38	.12	36/55	.12	28/55	.13	35/55	
	B	.84	12/54	.12	26/37	.12	34/54	.12	27/54	.13	35/54	
FALSE PASS	A	.18	49/55	.19	19/38	.19	24/55	.19	19/55	.21	26/55	2
	B	.19	48/54	.20	19/37	.20	23/54	.20	19/54	.21	23/54	
GAMBELL	A	.68	37/55	.29	7/38	.37	10/55	.30	7/55	.39	10/55	1
	B	.68	35/54	.29	9/37	.38	11/54	.30	7/54	.39	11/54	
	C	.68	23/36	.29	6/20	.38	8/36	.29	6/36	.39	8/36	
HAINES	A	.75	45/55	.07	36/38	.16	27/55	.07	37/55	.16	30/55	2
	B	.75	44/54	.07	35/37	.16	26/54	.07	36/54	.16	29/54	
	C	.75	20/36	.07	18/20	.16	16/36	.07	19/36	.16	18/36	
	D	.75	23/26	.07	10/10	.16	9/26	.07	11/26	.16	11/26	
HOLY CROSS	A	.88	7/55	.12	29/38	.12	38/55	.12	30/55	.12	40/55	
	B	.88	8/54	.12	29/37	.12	37/54	.12	30/54	.12	39/54	
HOOPER BAY	A	.83	12/55	.11	31/38	.11	39/55	.11	32/55	.12	39/55	
	B	.84	13/54	.12	27/37	.12	35/54	.12	28/54	.13	36/54	
	C	.84	9/36	.12	15/20	.12	19/36	.12	16/36	.14	21/36	
ILIAMNA	A	.06	2/55	****	**/**	.00	52/55	.00	50/55	.00	54/55	
	B	.08	1/54	****	**/**	.00	51/54	.00	47/54	.01	53/54	
	C	.08	1/36	****	**/**	.00	33/36	.01	29/36	.01	35/36	
	D	.07	1/26	****	**/**	.00	23/26	.02	16/26	.02	23/26	

1: POTENTIAL VOR SITING PROBLEMS. 2: SEVERE VOR SITING PROBLEMS.

Table G.4
(Continued)

SYSTEMS CONTROL INC. (VT.)• 1801 PAGE MILL ROAD• PALO ALTO• CA.• PAGE 3

INCREMENTAL LANDING PROBABILITY RELATIVE TO BASELINE CASE (MODA) AND ASSOCIATED RANKING
SUMMER WEATHER (MAY-SEPT)

AIRPORT	APPROACH CATEGORY	CURRENT BASE PROB	CURRENT RANK/TOTAL	NDB INC PROB	NDB RANK/TOTAL	NDB-DME INC PROB	NDB-DME RANK/TOTAL	VOR INC PROB	VOR RANK/TOTAL	VOR-DME INC PROB	VOR-DME RANK/TOTAL	
KING COVE	A	.12	50/55	.18	21/38	.65	2/55	.18	21/55	.66	2/55	2
	B	.15	51/54	.21	17/37	.75	2/54	.21	18/54	.76	2/54	
	C	.15	33/34	.22	13/20	.79	1/36	.22	13/36	.80	1/36	
C.NENANA	A	.78	19/55	****	**/**	.11	40/55	.00	51/55	.14	33/55	2
	B	.78	19/50	****	**/**	.11	38/54	.00	51/54	.14	32/54	
	C	.78	12/34	****	**/**	.11	20/36	.00	33/36	.14	19/36	
	D	.78	10/24	****	**/**	.11	12/26	.00	23/26	.14	12/26	
KIPNUK	A	.80	18/55	.15	23/38	.15	30/55	.15	23/55	.16	29/55	
	B	.81	16/50	.15	22/37	.15	29/54	.15	22/54	.17	28/54	
KOBUK	A	.45	28/55	.29	9/38	.31	14/55	.29	9/55	.32	15/55	1
	B	.46	28/50	.29	7/37	.32	14/54	.24	8/54	.32	14/54	
LONELY	A	.88	6/55	****	**/**	.02	50/55	.02	45/55	.03	49/55	
	B	.89	7/50	****	**/**	.02	49/54	.02	44/54	.03	49/54	
	C	.90	7/34	****	**/**	.02	31/36	.02	27/36	.03	30/36	
	D	.90	6/24	****	**/**	.02	18/26	.02	17/26	.03	21/26	
MEKORYUK	A	.75	20/55	.19	20/38	.19	25/55	.19	20/55	.21	24/55	
	B	.76	20/50	.20	20/37	.20	24/54	.20	20/54	.21	24/54	
MINCHUMINA	A	.04	3/55	****	**/**	.05	44/55	.05	39/55	.05	47/55	
	B	.04	3/50	****	**/**	.05	42/54	.05	38/54	.05	45/54	
	C	.04	4/34	****	**/**	.05	24/36	.05	21/36	.05	27/36	
	D	.04	3/24	****	**/**	.05	14/26	.05	12/26	.05	18/26	
NIKOLSKI	A	.00	40/55	****	**/**	.02	49/55	.02	44/55	.03	50/55	
	B	.00	38/50	****	**/**	.03	47/54	.03	42/54	.03	50/54	
	C	.01	25/34	****	**/**	.02	30/36	.03	25/36	.03	31/36	
	D	.01	20/24	****	**/**	.02	19/26	.03	15/26	.04	20/26	
OLD HARBOR	A	.00	43/55	.10	33/38	.18	26/55	.10	34/55	.18	28/55	2
	B	.00	42/50	.10	32/37	.18	25/54	.10	33/54	.18	27/54	
QUZINKIE	A	.46	34/55	.21	17/38	.48	8/55	.21	18/55	.48	8/55	1
	B	.46	34/50	.21	16/37	.48	8/54	.21	17/54	.48	8/54	

1: POTENTIAL VOR SITING PROBLEMS. 2: SEVERE VOR SITING PROBLEMS.

Table G.4
(Continued)

SYSTEMS CONTROL INC. (VT.)• 1801 PAGE MILL ROAD• PALO ALTO• CA.• PAGE 4

INCREMENTAL LANDING PROBABILITY RELATIVE TO BASELINE CASE (MOCA) AND ASSOCIATED RANKING
SUMMER WEATHER (MAY-SEPT)

AIRPORT	APPROACH CATEGORY	CURRENT BASE PROB	CURRENT RANK/TOTAL	NDB INC PROB	NDB RANK/TOTAL	NDB-DME INC PROB	NDB-DME RANK/TOTAL	VOR INC PROB	VOR RANK/TOTAL	VOR-DME INC PROB	VOR-DME RANK/TOTAL	
PETERSBURG	A	.70	23/55	****	**/**	.08	41/55	.00	52/55	.11	41/55	2
	B	.70	23/54	****	**/**	.08	39/54	.00	52/54	.11	40/54	
	C	.70	15/36	****	**/**	.08	21/36	.00	34/36	.11	22/36	
	D	.70	13/26	****	**/**	.08	13/26	.00	24/26	.11	14/26	
PLATINUM	A	.43	30/55	.31	6/38	.31	16/55	.31	6/55	.32	14/55	
	B	.44	30/54	.32	5/37	.32	13/54	.32	6/54	.34	13/54	
	C	.44	18/36	.32	4/20	.32	10/36	.32	5/36	.34	10/36	
POINT HOPE	A	.87	8/55	.02	38/38	.03	47/55	.03	42/55	.03	51/55	
	B	.94	4/54	.03	37/37	.04	45/54	.04	40/54	.04	48/54	
	C	.95	3/36	.03	20/20	.04	26/36	.04	23/36	.04	29/36	
P.HEIDEN	A	.90	5/55	****	**/**	.01	51/55	.01	46/55	.01	53/55	
	B	.93	5/54	****	**/**	.01	50/54	.01	45/54	.01	52/54	
	C	.93	3/36	****	**/**	.01	32/36	.01	28/36	.01	34/36	
	D	.93	4/26	****	**/**	.01	21/26	.01	20/26	.01	26/26	
PORT LIONS	A	.43	41/55	.08	35/38	.39	9/55	.08	36/55	.39	9/55	2
	B	.43	40/54	.08	34/37	.40	9/54	.08	35/54	.40	10/54	
P.MOLLER	A	.75	21/55	****	**/**	.00	53/55	.00	53/55	.00	55/55	1
	B	.76	21/54	****	**/**	.00	52/54	.00	48/54	.00	54/54	
	C	.75	13/36	****	**/**	.00	34/36	.01	30/36	.01	36/36	
	D	.75	11/26	****	**/**	.00	24/26	.01	14/26	.02	25/26	
KWIKHAGAK	A	.83	13/55	.12	28/38	.12	37/55	.12	29/55	.13	36/55	
	B	.84	14/54	.12	28/37	.12	36/54	.12	29/54	.13	37/54	
RAINY PASS	A	.41	42/55	.10	32/38	.20	23/55	.10	33/55	.21	25/55	2
	B	.41	41/54	.11	31/37	.21	22/54	.11	32/54	.21	25/54	
ST.MARYS	A	.43	31/55	.24	13/38	.26	19/55	.26	13/55	.26	19/55	
	B	.44	31/54	.24	14/37	.26	18/54	.26	12/54	.26	18/54	
	C	.44	19/36	.24	11/20	.25	13/36	.25	10/36	.25	14/36	
	D	.44	16/26	.24	5/10	.25	6/26	.25	4/26	.25	7/26	
ST.PAUL IS	A	.43	29/55	****	**/**	.00	54/55	.00	54/55	.07	45/55	
	B	.47	27/54	****	**/**	.00	53/54	.00	53/54	.08	42/54	
	C	.48	17/36	****	**/**	.00	35/36	.00	35/36	.08	24/36	
	D	.48	15/26	****	**/**	.00	25/26	.00	25/26	.08	15/26	

1! POTENTIAL VOR SITING PROBLEMS. 2! SEVERE VOR SITING PROBLEMS.

Table G.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 5

INCREMENTAL LANDING PROBABILITY RELATIVE TO BASELINE CASE (MOCA) AND ASSOCIATED RANKING
SUMMER WEATHER (MAY-SEPT)

AIRPORT	APPROACH CATEGORY	CURRENT BASE PROB	CURRENT RANK/TOTAL	NDB INC PROB	NDB RANK/TOTAL	NDB-DME INC PROB	NDB-DME RANK/TOTAL	VOR INC PROB	VOR RANK/TOTAL	VOR-DME INC PROB	VOR-DME RANK/TOTAL	
SAGDON	A	.69	34/55	.13	25/38	.23	21/55	.13	25/55	.23	21/55	
	B	.69	34/54	.13	24/37	.24	20/54	.13	25/54	.24	20/54	
	C	.69	22/36	.13	14/20	.24	15/36	.13	15/36	.24	15/36	
	D	.69	19/26	.13	8/10	.24	7/26	.13	9/26	.24	8/26	
SAND POINT	A	.17	50/55	.53	1/38	.75	1/55	.55	2/55	.76	1/55	1
	B	.17	49/54	.54	1/37	.77	1/54	.56	2/54	.79	1/54	
SAVONGA	A	.68	36/55	.31	5/38	.37	11/55	.33	5/55	.38	11/55	1
	B	.68	36/54	.32	6/37	.38	12/54	.34	5/54	.39	12/54	
	C	.68	24/36	.32	5/20	.38	9/36	.34	4/36	.39	9/36	
SELAWIK	A	.81	16/55	.12	26/38	.12	34/55	.12	26/55	.13	37/55	
	B	.85	10/54	.13	25/37	.13	32/54	.13	26/54	.14	34/54	
SHAKTAY	A	.30	46/55	.05	37/38	.05	42/55	.05	36/55	.09	42/55	2
	B	.30	45/54	.05	36/37	.05	41/54	.05	37/54	.09	41/54	
	C	.30	29/36	.05	19/20	.05	23/36	.05	20/36	.09	23/36	
SPARREVOHN	A	.82	15/55	****	**/**	.14	32/55	.00	47/55	.14	34/55	2
	B	.82	17/54	****	**/**	.14	31/54	.00	46/54	.14	33/54	
	C	.82	11/36	****	**/**	.14	18/36	.00	31/36	.14	20/36	
	D	.82	9/26	****	**/**	.14	11/26	.00	21/26	.14	13/26	
STEVENS VT	A	.85	10/55	.15	22/38	.15	29/55	.15	22/55	.15	32/55	
	B	.85	11/54	.15	21/37	.15	28/54	.15	21/54	.15	31/54	
SUMMIT	A	.70	24/55	****	**/**	.13	33/55	.00	48/55	.13	38/55	2
	B	.70	24/54	****	**/**	.13	33/54	.00	49/54	.13	38/54	
TOGTAK	A	.63	32/55	.29	8/38	.29	17/55	.29	8/55	.31	17/55	
	B	.66	29/54	.29	8/37	.29	16/54	.29	9/54	.31	15/54	
TOKSOOK	A	.68	26/55	.21	18/38	.22	22/55	.22	17/55	.22	22/55	1
	B	.69	25/54	.21	18/37	.22	21/54	.22	16/54	.22	22/54	
UMIAT	A	.48	25/55	****	**/**	.00	55/55	.00	55/55	.07	43/55	
	B	.49	26/54	****	**/**	.00	54/54	.00	54/54	.08	43/54	
	C	.49	16/36	****	**/**	.00	36/36	.00	36/36	.08	25/36	
	D	.49	14/26	****	**/**	.00	26/26	.00	26/26	.08	16/26	

1: POTENTIAL VOR SITING PROBLEMS. 2: SEVERE VOR SITING PROBLEMS.

Table G.4
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 6

INCREMENTAL LANDING PROBABILITY RELATIVE TO BASELINE CASE (MOCA) AND ASSOCIATED RANKING
SUMMER WEATHER (MAY-SEPT)

AIRPORT	APPROACH CATEGORY	CURRENT BASE PROB	CURRENT RANK/TOTAL	NDB INC PROB	NDB RANK/TOTAL	NDB-DME INC PROB	NDB-DME RANK/TOTAL	VOR INC PROB	VOR RANK/TOTAL	VOR-DME INC PROB	VOR-DME RANK/TOTAL	
UMNAK	A	.13	53/55	.34	4/38	.34	12/55	.34	4/55	.35	12/55	
	B	.13	53/54	.39	3/37	.39	10/54	.39	4/54	.40	9/54	
	C	.13	35/36	.40	2/20	.40	7/36	.40	3/36	.41	7/36	
VALDEZ	A	.27	47/55	.08	34/38	.15	28/55	.08	35/55	.18	27/55	2
	B	.27	46/54	.08	33/37	.15	27/54	.08	34/54	.18	26/54	
	C	.27	30/36	.08	17/20	.15	17/36	.08	16/36	.18	17/36	
	D	.27	24/26	.08	9/10	.15	10/26	.08	10/26	.18	10/26	
MAINWRIGHT	A	.82	14/55	****	**/**	.05	45/55	.05	40/55	.07	44/55	
	B	.82	15/54	****	**/**	.05	43/54	.05	39/54	.07	44/54	
	C	.82	10/36	****	**/**	.05	25/36	.05	22/36	.07	26/36	
	D	.82	8/26	****	**/**	.05	15/26	.05	13/26	.07	17/26	
WTEN ANCTC	A	.62	33/55	.24	14/38	.31	15/55	.24	14/55	.31	16/55	2
	B	.62	32/54	.24	15/37	.31	15/54	.24	15/54	.31	16/54	
	C	.62	20/36	.24	12/20	.31	11/36	.24	12/36	.31	11/36	
	D	.62	17/26	.24	6/10	.31	4/26	.24	6/26	.31	4/26	
VAKUTAGA	A	.35	44/55	.39	3/38	.63	4/55	.63	1/55	.64	3/55	1
	B	.35	43/54	.39	4/37	.63	4/54	.62	1/54	.64	4/54	
	C	.35	27/36	.39	3/20	.63	4/36	.61	1/36	.64	4/36	
	D	.35	22/26	.39	2/10	.63	2/26	.60	1/26	.64	2/26	

APPENDIX H
DISTRIBUTION OF AIR CARRIER TRAFFIC

The development of the air carrier data was a straightforward process. The Official Airline Guide (OAG) for August 15, 1975 supplied almost all of the necessary information. The data for every Alaskan intra-state flight was extracted. The items of interest included the origin and destination airports, the departure times, aircraft type and number of flights per week. Since seating configurations vary, each air carrier was contacted and an estimate of the number of available seats on each flight was obtained. (Many aircraft have flexible seating configurations reflecting the importance of air freight in the Alaskan market.)

This process resulted in identifying 322 individual flight numbers, most of which encompassed at least several stops (all of which were recorded) and were flown several times per week. This data was organized into bi-directional airport pairs, the results of which are presented in Table H.1 and plotted in Figure H.1. A total of 313 distinct bi-directional airport pairs were obtained.

With regard to the evaluation of approach aids, the arrivals at each airport are of primary interest. The numbers of arriving flights and seats are presented in Table H.2. This listing is alphabetical, but the ranking of the flights and seats are also included. It is appropriate to note that the FAA Airport Directory Tape designated 68 airports as having scheduled service, while 200 airports are listed in the OAG. The difference between these figures is assumed to stem from the fact that the OAG includes air carrier contract flights while the airport tape does not. The landing probabilities described in Appendix G are combined with the traffic data of Table H-2 to produce scheduled weekly number of arriving flights and seats, their ranking, the anticipated number completed, its rank, percent and incremental values for the candidate improvements. These results are listed in Table H-3 for those airports in common to both Tables G-3 and H-2.

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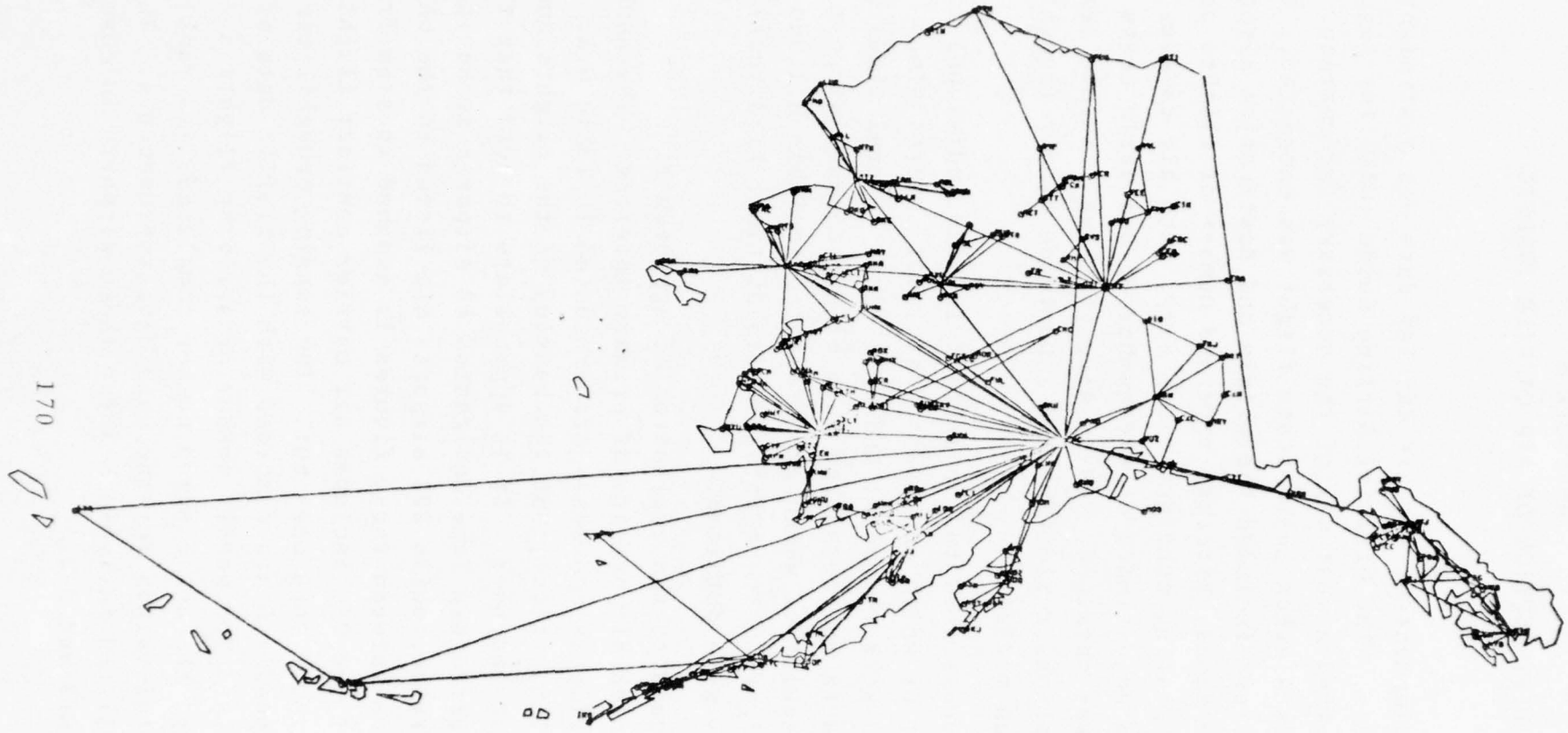

Figure H.1 Bi-directional Airport Pairs with Scheduled Service

Table H.1

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 1

FLIGHT AND AVAILABLE SEAT DATA FOR BI-DIRECTIONAL AIRPORT PAIRS WITH SCHEDULED SERVICE - BASED ON AUG 15,75 OAG

AIRPORT PAIR	WKLY FLTS	AVAIL SEATS	AIRPORT PAIR	WKLY FLTS	AVAIL SEATS	AIRPORT PAIR	WKLY FLTS	AVAIL SEATS	AIRPORT PAIR	WKLY FLTS	AVAIL SEATS	AIRPORT PAIR	WKLY FLTS	AVAIL SEATS
ABL-DRJ	1	19	ABL-DTZ	3	57	ABL-SMG	2	38	ADK-ANC	6	408	ADK-CDB	3	204
ADN-DYA	2	136	ADN-ANC	21	2300	ADQ-HOM	5	200	ADQ-KDY	4	36	ADQ-KDZ	12	108
ADT-DTT	4	76	ADQ-KVK	6	54	ADQ-OLH	31	279	ADQ-ORI	12	108	ADQ-SKJ	7	63
AEX-AVL	21	1974	AGN-JNU	10	90	AIN-BRW	4	36	AKI-BET	2	18	AKI-TLT	2	18
AFW-ALL	6	30	AKN-DLG	18	90	AKN-EGX	6	30	AKN-LGU	2	10	AKN-LGA	1	5
ANW-WSN	12	60	AKN-PTU	7	35	AKN-SCP	1	56	AMT-NUP	3	27	ANC-ANI	3	266
ANC-BET	26	2978	AKP-DTT	6	54	AMT-NUP	3	27	ANC-DFA	7	567	ANC-DLG	26	1040
ANC-DUT	1	56	ANC-CDV	14	877	ANC-CDV	54	2256	ANC-FAI	178	18326	ANC-GAL	4	452
ANC-HOM	2	38	ANC-FNA	200	3800	ANC-FAI	178	18326	ANC-GAL	4	452	ANC-GKN	12	120
ANC-HOM	2	38	ANC-HOM	5	200	ANC-ILI	6	240	ANC-JNU	26	2106	ANC-KGX	2	38
ANC-KEN	5	492	ANC-KNG	3	339	ANC-OME	18	2034	ANC-OTZ	14	1582	ANC-PAG	2	20
ANC-PUU	29	3277	ANC-SFA	63	4195	ANC-SKA	2	18	ANC-SNP	2	150	ANC-SVW	4	76
ANC-SXQ	10	50	ANC-SVA	2	136	ANC-UNK	3	339	ANC-VDZ	62	1330	ANI-BET	3	120
ANI-CKD	4	58	ANI-HOM	5	95	ANI-KLG	7	133	ANI-KSM	2	80	ANI-MCG	4	264
ANI-SMK	5	95	ANV-HOM	3	57	ANV-KGX	3	57	ARC-FYU	26	234	ALK-EMK	8	134
ANK-KOU	4	116	AUK-OME	2	20	BET-CYF	3	27	BET-CZF	2	38	BET-EEK	2	18
BET-EMK	2	38	BET-FNA	3	57	BET-HPB	5	137	BET-KKH	3	57	BET-KKI	2	18
BET-KLG	7	133	BET-KOK	3	27	BET-KSM	4	118	BET-KWK	3	57	BET-KWN	5	95
BET-KWI	2	18	BET-KVU	4	118	BET-NUP	3	27	BET-LCK	4	76	BET-PKA	2	18
BET-KOJ	4	116	BET-PTU	3	57	BET-SCM	3	57	BET-SCM	3	57	BET-TLT	2	18
BET-TKA	0	76	BET-VWK	2	38	BET-WNA	2	18	BET-WTL	2	18	BET-WWT	2	18
BIG-FAI	4	80	BIG-UKN	4	40	BIG-TKJ	2	20	BKC-CRG	2	38	BKC-CTZ	2	38
BRW-FAI	21	2373	BRW-PUO	7	791	BTI-FAI	4	160	BTI-FAI	4	160	BTI-MCK	10	90
BTT-WRH	10	90	CDB-CSM	1	56	CDB-DUT	8	448	CDB-KBC	1	9	CDB-KFF	2	18
CDB-KOA	1	9	CIG-KVC	4	36	CDB-SDP	4	224	CDB-SNP	3	225	CDV-LKC	1	5
CDV-CXT	4	20	CDV-VNZ	54	830	CDV-YAK	14	1496	CEM-CHP	3	27	CEM-CHC	3	27
CGA-HYU	4	60	CGA-KLN	13	96	CHP-KXA	3	27	CIK-FYU	14	126	CLP-KKC	5	25
CIL-HBY	5	45	CIL-SNL	5	45	CLP-OLG	5	25	CZF-FFB	2	38	CZF-FFB	2	38
CXC-GKN	3	27	CSF-DUT	1	56	CYF-KFN	3	27	DFB-KFP	1	9	DLG-KEK	13	113
CYF-KBY	1	6	CZF-DUT	1	5	DFB-DUT	1	9	DLG-KKH	10	50	DLG-KKN	7	59
DLG-KOA	4	58	DLG-KKU	5	25	DLG-KLL	6	30	DRG-OTZ	2	38	DLT-INC	2	112
DLG-TOG	38	204	DLG-UGS	6	30	DLG-KKK	6	30	EGA-HIP	6	30	EMK-KKN	2	38
DTT-KOA	1	6	FAA-UVA	6	54	EEK-KTL	2	18	ELV-JNU	3	27	EMK-KCT	6	54
ELI-OTZ	4	56	ELI-KKA	6	54	EMK-SKP	6	54	ENA-HOM	58	1102	EXI-MNP	14	126
EMK-KSM	4	116	EMK-SMK	2	20	FAI-MCG	2	38	FAI-MLY	2	18	FAI-MAT	2	18
EXI-JNU	10	126	FAI-GAL	4	452	FAI-PUO	26	2938	FAI-TAL	12	108	FAI-YKY	20	1822
FAI-OME	7	791	FAI-OTZ	7	791	FCA-HSH	3	57	FNL-MCG	2	18	FYU-KBC	4	36
FYU-MYI	1	6	FMN-JNU	1	9	FYU-KXA	14	266	GAL-MGZ	1	9	GAL-MSL	12	108
FYU-OTZ	14	126	GAL-KAL	5	45	GAL-KKA	2	18	GAL-KYU	9	81	GAL-MBY	2	18

BEST AVAILABLE COPY

Table H.1
(Continued)

FLIGHT AND AVAILABLE SEAT DATA FOR BI-DIRECTIONAL AIRPORT PAIRS WITH SCHEDULED SERVICE - BASED ON AUG 15-75 DAG

AIRPORT PAIR	WKLY FLTS	AVAIL SEATS	AIRPORT PAIR	WKLY FLTS	AVAIL SEATS	AIRPORT PAIR	WKLY FLTS	AVAIL SEATS	AIRPORT PAIR	WKLY FLTS	AVAIL SEATS	AIRPORT PAIR	WKLY FLTS	AVAIL SEATS
GAL-UTU	2	18	GAM-OME	9	112	GAM-SVA	3	58	GKN-KXY	1	5	GKN-GNT	2	20
GKN-PAQ	2	20	GKN-TKJ	12	120	GKN-VDZ	4	40	GLV-KMO	6	54	GNC-KWA	3	57
GNU-PTU	3	57	GST-JNU	14	1134	HAY-OME	5	45	HGZ-HSL	1	9	HNH-JNC	28	252
HNS-JNU	21	189	HNS-SCC	21	189	HPB-HYU	2	80	HPB-VAK	1	19	HSL-HUS	1	9
HUS-UTU	2	18	HYI-JNU	1	9	HYG-KLM	7	42	HYG-KTN	13	96	IAN-UNV	5	95
IAT-KLK	5	95	JNC-KTN	28	2996	JNU-PEL	7	63	JNU-PSG	21	399	JNU-SEA	12	972
JNU-SCC	21	189	JNU-STT	38	2458	JNU-WRG	7	133	JNU-YAK	14	1498	JNU-YAT	6	240
KBL-KNL	5	95	KMC-KEH	1	9	KEK-KNN	13	113	KGK-KNN	6	54	KGX-SHX	5	95
KKA-OME	12	108	KKA-SKK	4	36	KKH-KKK	3	57	KKI-KNT	2	18	KKK-KBY	2	18
KLW-KTK	4	90	KOT-KSI	8	76	KOT-SMK	2	18	KOZ-ORI	12	108	KPC-KTS	3	27
KPC-OME	3	27	KSM-MOU	6	114	KSM-POJ	6	114	KTN-PSG	7	133	KTN-SEA	42	8130
KTW-STT	18	1134	KTW-WRG	21	399	KTS-TLA	3	27	KVL-OTZ	3	57	KVL-PPC	2	36
KWL-WTA	1	19	KYU-WNL	5	45	LUR-OTZ	3	57	LUR-PPC	3	57	MCG-MCR	2	18
MCW-TOT	4	76	MCG-UNK	1	113	MOD-SMO	10	50	MLY-MNT	2	18	OBU-OTZ	2	38
OHU-SHU	3	57	OLT-SKJ	7	83	OME-OTZ	42	4746	OME-SMH	8	72	OME-SNA	2	18
OME-SOL	6	96	OME-SWF	9	112	OME-TLA	3	27	OME-TNC	3	27	OME-UNK	5	565
OME-WBB	3	27	OME-WSN	2	20	OME-WMO	6	54	OOK-TNK	4	76	ONT-TKJ	2	20
OTZ-UTZ	6	96	OTZ-PHO	9	171	OTZ-SHG	1	19	OTZ-WLK	5	95	OTZ-WTA	1	19
PDX-WRH	10	90	PIR-UDA	1	5	PKA-WNA	2	18	PPL-PTH	2	112	PPL-SDP	2	112
PSG-STT	18	256	PSG-WRG	42	798	PTH-SDP	1	56	RDV-SLG	3	27	RDV-SRV	3	27
PWL-SVS	7	83	PWT-WXA	7	83	SCM-VAK	3	57	SEA-SIT	14	1134	SKK-UNK	4	36
SJC-SRV	3	27	SMX-WBB	8	76	SVS-WXA	7	83	TNC-WAA	3	27	UNK-WBB	6	54
WDG-WYA	14	126	WDH-WRH	10	90	WXA-YOC	2	18						

Table H.2

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 1

ARRIVALS AND AVAILABLE SEAT DATA BY AIRPORT - FOR SCHEDULED SERVICE BASED ON AUG 15,75 OAG

AP ID	NUMBER ARRIVALS	RANK	ARRIVING SEATS	RANK	AP ID	NUMBER ARRIVALS	RANK	ARRIVING SEATS	RANK	AP ID	NUMBER ARRIVALS	RANK	ARRIVING SEATS	RANK
AFL	3	112	57	91	AUK	5	85	340	32	ADG	51	12	1592	14
AET	2	153	18	144	AGN	5	86	45	116	AIN	2	154	10	165
AKI	2	156	18	160	ANN	40	15	1313	16	AKP	3	113	27	135
ART	3	110	27	136	ANC	418	1	27034	1	ANI	18	30	563	28
ATV	3	116	57	96	ANC	13	38	117	53	AUK	8	53	134	97
AET	41	9	2332	11	BIG	6	68	60	90	BKC	2	150	38	125
BRA	16	53	1000	13	BTI	2	157	80	77	BTI	17	31	215	35
CDB	22	22	1137	17	CDV	61	10	2293	12	CEM	3	116	27	137
CGA	13	39	90	85	CHP	3	117	27	138	CIK	7	56	63	83
CIL	5	97	45	117	CKD	6	89	54	108	CLP	5	88	25	150
CRC	3	118	27	139	CSH	1	163	56	105	CXC	1	184	5	190
CYA	3	119	27	140	CYT	6	107	20	161	CZF	2	158	38	126
CZL	1	195	5	197	DFA	1	166	9	166	DFA	0	201	0	201
DLG	73	6	2024	20	DRG	2	159	38	127	DUT	7	57	345	31
EAA	3	120	27	141	FEK	2	160	18	167	EGX	6	70	30	132
EFT	2	161	32	120	FLI	6	71	54	109	ELV	3	121	27	142
EKA	14	35	198	34	FNA	127	4	2413	10	EXI	14	36	126	50
FAI	148	2	16084	2	FNR	1	187	9	187	FCA	3	122	57	93
FYL	1	188	9	188	FYU	39	17	421	29	GAL	22	23	614	25
GAM	6	72	45	75	GKN	19	27	185	40	GLV	6	73	54	110
GNU	3	123	57	94	GST	7	58	567	27	HAY	5	89	45	118
HCR	5	90	95	68	HGZ	1	189	9	189	HNH	21	24	189	38
HOB	61	26	180	37	HOM	34	19	751	22	HPB	5	91	137	44
HSL	7	59	63	82	HUS	3	124	27	143	HAI	1	190	9	190
HYG	13	40	45	84	IAN	5	42	95	67	IGG	1	191	5	198
IKO	1	192	54	100	ILI	3	125	120	52	JNU	136	3	6445	4
KAL	5	91	85	114	KBC	3	126	27	144	KEK	13	41	113	56
KFP	2	162	18	168	KGA	6	74	54	111	KGX	5	94	95	68
KKA	11	47	99	81	KKH	3	127	57	95	KKI	2	163	18	169
KKK	2	164	18	170	KKU	5	95	25	157	KLG	7	60	133	48
KLL	6	75	30	133	KLN	13	42	96	65	KMO	5	96	25	158
KNA	13	43	113	57	KOT	6	76	74	81	KOY	2	165	18	171
KPZ	12	45	104	64	KPC	3	128	27	145	KPN	3	129	27	146
KRH	2	166	18	172	KUA	1	193	9	191	KSM	17	32	574	20
KTN	69	7	8192	8	KTS	3	130	27	147	KVC	2	167	18	173
KVL	3	131	57	98	KWK	3	132	57	97	KWN	5	97	95	69
KWT	2	168	18	174	KYK	3	133	27	148	KYU	7	61	63	85
LUR	3	134	57	98	MCG	9	52	413	30	MDO	5	98	25	159
MOH	1	194	9	192	MLY	2	169	18	175	MNT	2	170	18	176
MOU	0	77	110	54	MXY	1	195	5	199	MYU	3	135	99	62

BEST AVAILABLE COPY

Table H.2
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 2

ARRIVALS AND AVAILABLE SEAT DATA BY AIRPORT - FOR SCHEDULED SERVICE BASED ON AUG 15,75 DAG

AP ID	NUMBER ARRIVALS	RANK	ARRIVING SEATS	RANK	AP ID	NUMBER ARRIVALS	RANK	ARRIVING SEATS	RANK	AP ID	NUMBER ARRIVALS	RANK	ARRIVING SEATS	RANK
ALL	5	96	65	120	AUP	3	136	27	149	OBU	3	137	57	99
CLM	19	39	171	41	CME	74	5	4651	5	ODK	4	108	76	79
CMI	12	46	108	60	CMT	3	138	25	160	ORV	5	100	95	70
CTZ	46	13	3504	7	DAQ	2	171	20	162	PCK	10	49	90	73
DEC	5	101	65	121	DHO	7	62	133	49	PIP	7	63	35	131
DKA	2	172	18	177	DHL	2	173	112	58	PGJ	0	78	114	55
DSG	92	14	7048	21	DTH	3	139	168	42	PTU	5	140	57	100
DUQ	31	20	2503	8	DBY	2	174	18	178	RDV	3	141	27	150
EKP	7	40	43	89	ESH	5	142	57	101	SCM	3	143	57	102
SCP	4	100	221	74	SEA	69	8	6499	3	SGY	21	20	189	38
SHO	3	140	57	103	SHH	4	110	36	130	SHX	5	102	95	71
SIT	40	14	2004	9	SKJ	7	65	65	87	SKK	5	103	45	122
SKX	1	196	0	193	SLQ	6	79	54	112	SMK	6	80	56	107
SNP	2	175	150	93	SOL	5	104	45	123	SRV	3	145	27	151
SVA	6	81	85	76	SVS	7	66	63	88	SVW	2	176	38	129
SWO	10	50	50	115	SXP	3	146	27	152	SYA	2	177	136	45
TAL	6	82	60	113	TCT	2	178	18	179	TKJ	8	54	80	78
TLH	3	147	27	153	TLT	2	179	18	180	TNC	3	148	27	154
TNX	4	111	76	80	TUG	19	29	123	51	UGA	1	197	5	200
UGS	3	149	15	186	UNK	11	48	723	23	UTO	2	180	18	181
VAK	3	150	57	104	VDZ	60	11	1100	18	VEE	7	67	63	89
WRA	3	151	27	155	WBB	8	55	74	82	WHW	10	51	90	74
WCR	5	105	85	124	WKK	3	152	15	185	WLK	5	106	95	72
WMO	6	83	54	114	WNA	2	181	18	182	WRG	35	18	665	24
WSH	15	30	135	46	WSN	6	84	30	134	WTK	1	198	19	183
WTL	2	182	18	183	WWT	1	199	9	194	WXA	28	21	322	33
YAK	14	37	1008	15	YOC	1	200	9	195	YXY	13	44	1031	19

Table H-3

SYSTEMS CONTROL INC. (VT.). 1801 PAGE MILL ROAD. PALO ALTO. CA.. PAGE 1

ESTIMATED FLIGHT AND SEAT COMPLETION FOR SCHEDULED CARRIERS
BASED ON AUG 15. 1975 SCHEDULES - SUMMER WEATHER (MAY-SEPT)

AIRPORT	ID	NAVAIDS	FLIGHT DATA								AVAILABLE SEAT DATA							
			SCHED	RANK	COMP	RANK	PCT COMP	RANK	INCREMENTAL	RANK	SCHED	RANK	COMP	RANK	PCT COMP	RANK	INCREMENTAL	RANK
ANCHORAGE	ANC	NONE	1	40	0.	40	17.	38			9	42	2.	42	17.	38		
		VOR			0.	43	30.	42	0.	29			3.	43	30.	42	1.	29
		VOR/DME			1.	40	85.	31	1.	25			8.	42	85.	31	6.	29
		VOR			0.	43	30.	42	0.	31			3.	43	30.	42	1.	32
		VOR/DME			1.	41	85.	32	1.	25			8.	42	85.	32	6.	31
ANIAK	ANT	VOR	18	7	18.	4	99.	3			563	5	556.	1	99.	4		
		VOR/DME			18.	4	100.	1	0.	33			563.	3	100.	1	7.	28
		VOR			18.	4	100.	1	0.	30			563.	1	100.	1	7.	27
		VOR/DME			18.	4	100.	1	0.	34			563.	3	100.	1	7.	30
BARTER ISL	BTT	VOR	2	33	2.	33	90.	17			80	27	72.	25	90.	17		
		VOR/DME			2.	36	90.	20	0.	39			72.	28	90.	26	0.	39
		VOR			2.	34	90.	20	0.	36			72.	25	90.	21	0.	36
		VOR/DME			2.	35	95.	19	0.	38			76.	28	95.	19	4.	36
FAIRBANKS	FUB	VOR	3	26	3.	32	86.	22			57	30	49.	33	86.	22		
		VOR/DME			3.	32	89.	27	0.	34			51.	33	89.	27	2.	36
		VOR			3.	32	86.	24	0.	37			49.	33	86.	24	0.	37
		VOR/DME			3.	32	89.	28	0.	37			51.	34	89.	28	2.	38
FAIRBANKS	GSH	VOR	1	41	1.	40	65.	35			56	34	36.	34	65.	35		
		VOR/DME			1.	41	75.	34	0.	35			42.	34	75.	34	6.	30
		VOR			1.	39	86.	23	0.	28			48.	34	86.	23	12.	21
		VOR/DME			1.	40	93.	26	0.	30			52.	33	93.	25	16.	20
KHANDALAO	HCR	NONE	5	18	2.	26	42.	27			45	36	19.	35	42.	27		
		VOR			4.	21	72.	29	2.	11			33.	35	72.	29	14.	16
		VOR/DME			4.	24	75.	35	2.	14			34.	38	75.	35	15.	19
		VOR			4.	22	72.	30	2.	11			33.	36	72.	30	14.	16
		VOR/DME			4.	24	75.	36	2.	15			34.	38	75.	36	15.	21
KHEVAK	VAK	NONE	3	27	2.	25	72.	11			57	31	41.	29	72.	11		
		VOR			3.	30	95.	10	1.	22			54.	31	95.	10	13.	17
		VOR/DME			3.	31	95.	18	1.	24			54.	32	95.	18	13.	21
		VOR			3.	30	95.	11	1.	22			54.	31	95.	12	13.	18
		VOR/DME			3.	31	96.	16	1.	24			55.	32	96.	16	14.	22

Table H-3
(Continued)

SYSTEMS CONTROL INC. (VT.)+ 1801 PAGE MILL ROAD+ PALO ALTO+ CA.+ PAGE 2

ESTIMATED FLIGHT AND SEAT COMPLETION FOR SCHEDULED CARRIERS
BASED ON AUG 15+ 1975 SCHEDULES + SUMMER WEATHER (MAY-SEPT)

AIRPORT	ID	NAVAIDS	FLIGHT DATA SCHED	RANK	COMP	RANK	PCT COMP	RANK	INCREMENTAL	RANK	AVAILABLE SEAT DATA SCHED	RANK	COMP	RANK	PCT COMP	RANK	INCREMENTAL	RANK
BARTND BAY	BBR	NONE	1	42	0.	42	13.	41			9	43	1.	43	13.	41		
		NDB			1.	39	68.	33	1.	23			6.	41	68.	33	5.	26
		NDB_DME			1.	42	68.	39	1.	26			6.	43	68.	39	5.	32
		VOR			1.	40	68.	34	1.	23			6.	41	68.	34	5.	28
		VOR_DME			1.	42	73.	38	1.	26			7.	43	73.	39	5.	32
BUTCH HRBR	BUT	NONE	7	13	1.	33	17.	39			345	6	59.	18	17.	39		
		NDB			3.	23	48.	38	2.	9			165.	8	48.	38	105.	3
		NDB_DME			5.	17	72.	37	4.	7			249.	6	72.	37	190.	2
		VOR			3.	24	48.	38	2.	10			165.	8	48.	38	105.	3
		VOR_DME			5.	17	73.	39	4.	8			251.	6	73.	38	191.	3
BANGOR	BHX	NONE	14	9	12.	6	88.	5			188	10	169.	6	87.	5		
		NDB			14.	7	98.	6	1.	12			185.	6	98.	6	21.	14
		NDB_DME			14.	7	98.	9	1.	15			185.	8	98.	10	21.	17
		VOR			14.	7	98.	7	1.	12			185.	6	98.	7	21.	14
		VOR_DME			14.	7	98.	9	1.	16			185.	8	98.	10	21.	17
CAMBELL	CAM	NONE	6	16	3.	20	50.	23			85	25	43.	28	51.	23		
		NDB			5.	16	87.	21	2.	8			76.	23	90.	18	33.	8
		NDB_DME			6.	16	98.	12	3.	11			84.	25	98.	9	41.	9
		VOR			5.	16	88.	22	2.	9			77.	23	90.	19	34.	8
		VOR_DME			6.	16	98.	12	3.	11			84.	25	98.	9	41.	9
CAINES	HNS	NONE	21	4	8.	8	37.	31			189	8	69.	16	37.	31		
		NDB			9.	9	43.	39	1.	13			82.	21	43.	39	13.	18
		NDB_DME			11.	10	52.	41	3.	9			99.	17	52.	41	29.	12
		VOR			9.	9	43.	39	1.	13			82.	21	43.	39	13.	19
		VOR_DME			11.	10	52.	41	3.	9			99.	17	52.	41	29.	13
COLY CROSS	HCR	NONE	5	19	5.	15	90.	3			95	22	86.	11	90.	3		
		NDB			5.	17	100.	1	0.	24			95.	18	100.	1	9.	21
		NDB_DME			5.	18	100.	2	0.	27			95.	20	100.	2	9.	24
		VOR			5.	17	100.	2	0.	24			95.	18	100.	2	9.	23
		VOR_DME			5.	18	100.	2	0.	28			95.	20	100.	2	9.	28
COOPER BAY	HPB	NONE	5	20	4.	18	70.	12			137	13	97.	10	71.	12		
		NDB			5.	20	91.	16	1.	18			125.	10	91.	16	28.	9
		NDB_DME			5.	21	91.	24	1.	20			125.	10	91.	24	28.	13
		VOR			5.	20	91.	18	1.	18			125.	10	91.	18	28.	9
		VOR_DME			5.	21	93.	25	1.	20			128.	10	94.	24	32.	12

Table H-3
(Continued)

ESTIMATED FLIGHT AND SEAT COMPLETION FOR SCHEDULED CARRIERS
BASED ON AUG 15, 1975 SCHEDULES - SUMMER WEATHER (MAY-SEPT)

AIRPORT	ID	NAVAIDS	FLIGHT DATA								AVAILABLE SEAT DATA							
			SCHED	RANK	COMP	RANK	PCT COMP	RANK	INCREMENTAL	RANK	SCHED	RANK	COMP	RANK	PCT COMP	RANK	INCREMENTAL	RANK
TLTAMNA	TLT	NDB	3	38	3.	27	98.	5			120	16	118.	11	98.	5		
		NDB-DME			3.	27	98.	8	0.	40			118.	11	98.	8	0.	40
		VOR			3.	27	98.	6	0.	38			118.	11	98.	6	0.	38
		VOR-DME			3.	27	98.	8	0.	41			118.	11	98.	8	0.	41
KING COVE	KVC	NONE	2	34	0.	39	11.	42			18	40	2.	41	11.	42		
		NDB			1.	42	27.	43	0.	27			5.	42	27.	43	3.	28
		NDB-DME			1.	38	75.	36	1.	17			13.	41	75.	36	11.	23
		VOR			1.	42	27.	43	0.	27			5.	42	27.	43	3.	31
		VOR-DME			2.	39	75.	37	1.	18			14.	41	75.	37	12.	26
P.NEHENHAM	EHM	NDB	2	35	2.	37	80.	26			38	37	31.	38	80.	26		
		NDB-DME			2.	35	91.	23	0.	31			35.	37	91.	23	4.	33
		VOR			2.	37	80.	29	0.	39			31.	38	80.	29	0.	39
		VOR-DME			2.	36	94.	22	0.	32			36.	36	94.	23	5.	34
KORUK	OBU	NONE	3	29	2.	27	64.	15			57	32	36.	31	64.	14		
		NDB			3.	31	93.	12	1.	20			53.	32	93.	13	17.	15
		NDB-DME			3.	29	97.	14	1.	21			55.	30	97.	14	19.	18
		VOR			3.	31	93.	16	1.	20			53.	32	93.	15	17.	15
		VOR-DME			3.	29	97.	13	1.	22			56.	30	97.	13	19.	18
MEKORYUK	MYU	NONE	3	30	2.	24	72.	10			99	21	71.	15	72.	10		
		NDB			3.	26	99.	4	1.	21			98.	16	99.	3	27.	10
		NDB-DME			3.	26	99.	5	1.	23			98.	18	99.	5	27.	14
		VOR			3.	26	99.	5	1.	21			98.	16	99.	5	27.	10
		VOR-DME			3.	26	99.	6	1.	23			98.	18	99.	5	27.	14
NIKOLSKI	IKO	NDB	1	43	1.	41	56.	36			56	35	32.	37	56.	36		
		NDB-DME			1.	43	62.	40	0.	37			35.	36	62.	40	3.	35
		VOR			1.	41	63.	36	0.	33			35.	35	63.	36	3.	30
		VOR-DME			1.	43	64.	40	0.	39			36.	37	64.	40	4.	35
NUZINKIE	KOT	NONE	12	11	6.	13	46.	24			108	19	50.	24	46.	24		
		NDB			8.	10	70.	31	3.	5			75.	24	70.	31	25.	11
		NDB-DME			11.	9	95.	17	6.	2			103.	16	95.	17	53.	6
		VOR			8.	10	70.	32	3.	5			75.	24	70.	32	25.	11
		VOR-DME			11.	9	95.	20	6.	2			103.	16	95.	20	53.	6

Table H-3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA., PAGE 4

ESTIMATED FLIGHT AND SEAT COMPLETION FOR SCHEDULED CARRIERS
BASED ON AUG 15, 1975 SCHEDULES - SUMMER WEATHER (MAY-SEPT)

AIRPORT	ID	NAVAIDS	FLIGHT DATA SCHED	RANK	COMP	RANK	PCT COMP	RANK	INCREMENTAL	RANK	AVAILABLE SEAT DATA SCHED	RANK	COMP	RANK	PCT COMP	RANK	INCREMENTAL	RANK
PETERSBURG	PSG	NDB	42	2	28.	1	68.	34			798	2	539.	2	68.	34		
		NDB_DME			32.	1	76.	33	3.	8			604.	1	76.	33	65.	9
		VOR			28.	1	68.	35	0.	40			539.	2	68.	35	0.	40
		VOR_DME			33.	1	79.	34	5.	7			628.	1	79.	34	88.	5
PLATTSBURGH	PBG	NONE	3	71	2.	28	58.	19			57	33	33.	32	58.	19		
		NDB			3.	29	96.	9	1.	16			55.	30	96.	9	22.	13
		NDB_DME			3.	30	96.	15	1.	19			55.	31	96.	15	22.	16
		VOR			3.	29	96.	10	1.	16			55.	30	96.	10	22.	13
		VOR_DME			3.	30	96.	15	1.	21			55.	31	96.	15	22.	16
POINT HOPE	PHO	NONE	7	70	6.	11	85.	7			133	14	113.	9	85.	7		
		NDB			6.	14	88.	20	0.	28			117.	12	88.	21	3.	27
		NDB_DME			6.	14	88.	29	0.	32			117.	12	88.	29	4.	34
		VOR			6.	14	88.	21	0.	29			117.	12	88.	22	4.	29
		VOR_DME			6.	14	88.	30	0.	33			117.	12	88.	30	4.	37
P.HETDEN	PTH	NDB	3	32	3.	28	97.	7			168	11	164.	9	97.	7		
		NDB_DME			3.	28	98.	10	0.	38			165.	9	98.	11	1.	37
		VOR			3.	28	98.	8	0.	35			165.	9	98.	8	1.	33
		VOR_DME			3.	28	98.	10	0.	40			165.	9	98.	11	1.	40
PORT LYONS	PRT	NONE	12	12	5.	14	43.	26			108	20	46.	25	43.	26		
		NDB			6.	13	52.	37	1.	17			56.	29	52.	37	10.	20
		NDB_DME			10.	11	83.	32	5.	6			90.	22	83.	32	44.	8
		VOR			6.	13	52.	37	1.	17			56.	29	52.	37	10.	22
		VOR_DME			10.	11	83.	33	5.	6			90.	22	83.	33	44.	8
P.MOLLER	PML	NDB	2	76	2.	35	86.	23			112	18	96.	17	86.	23		
		NDB_DME			2.	37	86.	30	0.	41			96.	19	86.	30	0.	41
		VOR			2.	35	86.	25	0.	41			96.	17	86.	25	0.	41
		VOR_DME			2.	37	86.	31	0.	42			96.	19	86.	31	0.	42
QUINHAGAK	KAN	NONE	5	21	4.	16	88.	4			95	23	84.	12	88.	4		
		NDB			5.	18	97.	8	0.	25			93.	19	97.	8	9.	22
		NDB_DME			5.	19	97.	13	0.	28			93.	21	97.	13	9.	25
		VOR			5.	18	97.	9	0.	25			93.	19	97.	9	9.	24
		VOR_DME			5.	19	97.	14	0.	29			93.	21	97.	14	9.	29

Table H-3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 5

ESTIMATED FLIGHT AND SEAT COMPLETION FOR SCHEDULED CARRIERS
BASED ON AUG 15, 1975 SCHEDULES - SUMMER WEATHER (MAY-SEPT)

AIRPORT	ID	NAVAIDS	FLIGHT DATA								AVAILABLE SEAT DATA							
			SCHED	RANK	COMP	RANK	PCT COMP	RANK	INCREMENTAL	RANK	SCHED	RANK	COMP	RANK	PCT COMP	RANK	INCREMENTAL	RANK
ST.MARYS	KSM	NONE	17	8	10.	7	61.	16			574	4	342.	2	60.	17		
		VOR			16.	6	92.	14	5.	1			524.	3	91.	15	183.	1
		VOR_DME			16.	6	94.	19	6.	3			534.	4	93.	22	192.	1
		VOR			16.	6	94.	12	6.	1			534.	3	93.	17	192.	1
		VOR_DME			16.	6	94.	24	6.	3			534.	4	93.	26	192.	2
ST.PAUL IS	KNP	VOR	2	37	1.	38	68.	32			150	12	103.	14	68.	32		
		VOR_DME			1.	39	68.	38	0.	42			103.	15	68.	38	0.	42
		VOR			1.	38	68.	33	0.	42			103.	14	68.	33	0.	42
		VOR_DME			2.	38	77.	35	0.	35			115.	14	77.	35	13.	24
SAND POINT	SDP	NONE	4	23	1.	38	18.	37			224	7	40.	30	18.	37		
		VOR			3.	24	78.	27	2.	7			176.	7	78.	27	136.	2
		VOR_DME			4.	23	98.	6	3.	10			221.	7	98.	6	180.	3
		VOR			3.	25	81.	28	3.	7			183.	7	81.	28	142.	2
		VOR_DME			4.	23	99.	5	3.	10			222.	7	99.	6	181.	4
SAVOONGA	SVA	NONE	6	17	3.	19	51.	22			85	26	44.	27	51.	22		
		VOR			6.	15	92.	15	2.	6			79.	22	93.	12	36.	6
		VOR_DME			6.	15	98.	7	3.	12			84.	24	98.	7	40.	10
		VOR			6.	15	93.	15	3.	8			81.	22	95.	11	37.	5
		VOR_DME			6.	15	98.	7	3.	12			84.	24	98.	7	40.	10
SELAWIK	WLK	NONE	5	22	4.	17	84.	8			95	24	80.	13	84.	8		
		VOR			5.	19	93.	11	0.	26			89.	20	93.	11	9.	23
		VOR_DME			5.	20	93.	20	0.	29			89.	23	93.	19	9.	26
		VOR			5.	19	93.	13	0.	26			89.	20	93.	13	9.	25
		VOR_DME			5.	20	94.	21	1.	27			90.	23	94.	22	10.	27
SHAGAVV	SGV	NONE	21	5	6.	10	29.	35			189	9	56.	19	29.	35		
		VOR			7.	11	34.	41	1.	19			65.	27	34.	41	9.	24
		VOR_DME			7.	12	34.	43	1.	22			65.	28	34.	43	9.	27
		VOR			7.	11	34.	41	1.	19			65.	27	34.	41	9.	26
		VOR_DME			8.	12	39.	43	2.	14			73.	27	39.	43	17.	19
SHARRE VOWN	SVW	VOR	2	38	2.	36	84.	25			38	38	32.	36	84.	25		
		VOR_DME			2.	33	98.	11	0.	30			37.	35	98.	12	5.	31
		VOR			2.	36	85.	27	0.	34			32.	37	85.	27	0.	35
		VOR_DME			2.	33	98.	11	0.	31			37.	35	98.	12	5.	33

Table H-3
(Continued)

SYSTEMS CONTROL INC. (VT.), 1801 PAGE MILL ROAD, PALO ALTO, CA.. PAGE 6

ESTIMATED FLIGHT AND SEAT COMPLETION FOR SCHEDULED CARRIERS
BASED ON AUG 15, 1975 SCHEDULES - SUMMER WEATHER (MAY-SEPT)

AIRPORT	ID	NAVAIDS	FLIGHT DATA								AVAILABLE SEAT DATA							
			SCHED	RANK	COMP	RANK	PCT COMP	RANK	INCREMENTAL	RANK	SCHED	RANK	COMP	RANK	PCT COMP	RANK	INCREMENTAL	RANK
STEVENS VI	SVS	NONE	7	15	6.	12	80.	9			63	29	51.	23	80.	9		
		VOR			7.	12	100.	2	1.	14			63.	28	100.	2	12.	19
		VOR-DME			7.	13	100.	3	1.	16			63.	29	100.	3	12.	22
		VOR			7.	12	100.	3	1.	14			63.	28	100.	3	12.	20
		VOR-DME			7.	13	100.	3	1.	17			63.	29	100.	3	12.	25
SOGIAK	SOG	NONE	19	6	13.	4	66.	13			123	15	78.	14	64.	15		
		VOR			18.	5	93.	13	5.	3			114.	13	93.	14	36.	5
		VOR-DME			18.	5	93.	22	5.	5			114.	13	93.	21	36.	11
		VOR			18.	5	93.	17	5.	3			114.	13	93.	16	36.	6
		VOR-DME			18.	5	94.	23	5.	4			116.	13	95.	21	38.	11
SOKSOOK	DOK	NONE	4	24	2.	23	59.	18			76	28	45.	26	59.	18		
		VOR			4.	22	89.	18	1.	15			68.	24	89.	19	23.	12
		VOR-DME			4.	25	90.	25	1.	18			69.	27	90.	25	24.	15
		VOR			4.	23	90.	19	1.	15			69.	26	90.	20	24.	12
		VOR-DME			4.	25	90.	27	1.	19			69.	28	90.	27	24.	15
VALDEZ	VDZ	NONE	60	1	16.	2	27.	36			1100	1	306.	4	28.	36		
		VOR			22.	3	36.	40	5.	2			399.	5	36.	40	93.	4
		VOR-DME			26.	3	43.	42	10.	1			479.	5	44.	42	174.	4
		VOR			22.	3	36.	40	5.	2			399.	5	36.	40	93.	4
		VOR-DME			27.	3	46.	42	11.	1			502.	5	46.	42	196.	1
WAINWRIGHT	AIN	VOR	2	39	2.	34	89.	19			18	41	16.	39	89.	20		
		VOR-DME			2.	34	93.	21	0.	36			17.	40	93.	20	1.	38
		VOR			2.	33	93.	14	0.	32			17.	40	93.	14	1.	34
		VOR-DME			2.	34	96.	17	0.	36			17.	40	96.	17	1.	39
WIEN ARCTC	ARC	NONE	13	10	7.	9	55.	20			117	17	65.	17	55.	20		
		VOR			11.	8	86.	24	4.	4			100.	15	86.	24	35.	7
		VOR-DME			12.	8	96.	18	5.	4			112.	14	96.	18	47.	7
		VOR			11.	8	86.	26	4.	4			100.	15	86.	26	35.	7
		VOR-DME			12.	8	96.	18	5.	5			112.	15	96.	18	47.	7
YAKATAGA	CYT	NONE	4	25	1.	29	35.	34			20	39	7.	39	35.	34		
		VOR			3.	25	76.	28	2.	10			15.	40	76.	28	8.	25
		VOR-DME			4.	22	100.	4	3.	13			20.	39	100.	4	13.	20
		VOR			4.	21	100.	4	3.	6			20.	39	100.	4	13.	17
		VOR-DME			4.	22	100.	4	3.	13			20.	39	100.	4	13.	23

APPENDIX I

COMMUNITY DEPENDENCY ON AIR TRANSPORTATION RANKING MODEL

This Appendix presents the "Community Dependency on Air Transportation Ranking Model", developed by the State of Alaska, Department of Public Works, Division of Aviation.

The application of this model, produced the "community dependency upon aviation" factors, listed in Table I-1, which were subsequently utilized in this study.

The model procedures were modified as appropriate in order to derive comparable community dependency on aviation factors for communities with populations greater than 750, such as Petersburg.

TABLE I-1

COMMUNITY DEPENDENCY ON AVIATION FACTORS

AIRPORT	COMMUNITY DEPENDENCY UPON AVIATION FACTOR
Aniak	68.66
Chevak	60.89
Dutch Harbor	62.65
Emmonak	74.32
Gambell	65.97
Holy Cross	58.06
Hooper Bay	71.81
Kipnuk	70.23
Kobuk	52.23
Mekoryuk	67.82
Petersburg	63.57(*)
Platinum	63.65
Point Hope	72.39
Port Heiden	64.23
Quinhagak	66.31
St. Marys	78.98
St. Paul Island	76.90
Sand Point	77.48
Savoonga	67.47
Togiak	78.98
Toksook	63.73
Wrangell	63.57(*)

(*) Estimated by the Contractor based upon State of Alaska, Division of Aviation methodology.

PROCEDURE UTILIZED IN DEVELOPING THE COMMUNITY DECISION MAKING MODEL:

I. Identified the problem and selected pertinent variables to be included in the model. These include: (1) Population; (2) Alternative Year-round Methods of Transportation; (3) Distance to the nearest Trunk Airport; (4) Industry in Community; (5) School attendance; (6) Class of Post Office; (7) Percentage change in population over past decade; (8) Status of Community; (9) Air Carrier Service to community; (10) Number of stores in community; (11) Number of scheduled and non-scheduled air carrier departures; (12) Number of enplaning and originating passengers; (13) Tonnage of originating air cargo; (14) Per Capita Income level; and (15) Number of aircraft stationed in community.

II. Interviewed the probable decision-makers to screen the variables.

III. Developed a questionnaire including the relevent variables. These include: (1) Population; (2) Alternative Year-round Methods of Transportation; (3) Distance to the nearest Trunk Airport; (4) Industry in community; (5) School attendance; (6) Class of Post Office; (7) States of Community; (8) Air Carrier Service; and (9) A tie variable, percentage change in population over the past decade.

A. Weighed each variable and class of variables by selecting a weight from a low of zero (0) to a high of twenty (20).

B. Each variable and class of variables was weighed on its own merits, as well as in relationship to each of the other variables.

IV. The questionnaires in turn were distributed to top and middle level decision-makers within the Division of Aviation for proper evaluation.

V. After the evaluation had been completed, the variables were individually analyzed - computing the arithmetic mean, median, mode, range, and standard deviation.

A. Arithmetic Mean $(\bar{X}) = \frac{Xi}{N}$

B. Median = 50th percentile

C. Mode = Most frequent occurrence

D. Range = low/high value

E. Standard Deviation ( ) = $\frac{(Xi - \bar{X})^2}{N-1}$

The arithmetic mean was utilized since it was the most representative value.

VI. Definition of "Trunk Airport", as used in rating priorities, be restricted to airports presently receiving scheduled Air Carrier Service by heavy twin engine aircraft.

AN IN DEPTH VIEW OF THE VARIABLES

I. COMMUNITY: The sample of communities was obtained from the 1970 official U. S. Census. The communities utilized had to have a population of twenty-five persons or greater but less than 750 persons, covering both incorporated and unincorporated places.

II. POPULATION: Statistics were obtained from the U.S. Official Census conducted April 1, 1970.

III. ALTERNATIVE YEAR-ROUND METHODS OF TRANSPORTATION: These included railroad, road and water. This information was obtained from Federal Field Committee Publications, as well as A.D.A. research.

IV. DISTANCE TO TRUNK AIRPORT: The number of miles from the community to the nearest Trunk Airport. This information was obtained primarily from A.D.A. research.

V. INDUSTRY IN COMMUNITY: The following industry separations were made: cannery, logging, mining, oil, and other.

This information was primarily obtained from Federal Field Committee and Alaska State Housing Authority Publications.

VI. SCHOOL ATTENDANCE: The number of children attending the community school. This information was obtained from two sources; namely, Federal Field Committee, and Alaska State Housing Authority Publications.

VII. CLASS OF POST OFFICE: The following class of Post Office break down was utilized.

Class of Post Office	Gross Receipts
2	$ 7,667 - $14,132
3	$ 2,678 - $ 7,667
4 or R.B.	$ 0 - $ 2,678

The Class of Post Office is in direct relationship to the annual gross receipts of the Post Office.

VIII. STATUS OF COMMUNITY: A community is either incorporated (city) or unincorporated. This information was obtained from the Official April 1, 1970 U.S. Census.

IX. COMMUNITY PRESENTLY SERVED BY SCHEDULED AIR CARRIER: This is a yes or no response question. The information regarding this question was obtained from Federal Field Committee and Federal Aviation Administration Publications.

X. (TIE-VARIABLE) PERCENTAGE CHANGE IN POPULATION OVER THE PAST DECADE: This is the aggregate percentage change in population between April 1, 1960 and April 1, 1970. This information was gathered from the Official 1970 U.S. Census. In case of identical utile scores, this variable can be utilized to determine the priority.

THE MEAN ($\bar{X}$) VARIABLE STRUCTURE

(Stated in Terms of Utils)

VARIABLES	WEIGHTS in UNITS
I. POPULATION:	
0 - 100	2.50
101 - 200	7.50
201 - 300	10.75
301 - 500	15.41
501 & Above	20.00
II. ALTERNATIVE YEAR-ROUND METHODS OF TRANSPORTATION:	
None	16.50
Railroad	6.75
Road	4.33
Water	8.58
III. DISTANCE TO NEAREST TRUNK AIRPORT:	
0 - 10 mi.	1.25
11 - 20 mi.	4.50
21 - 50 mi.	8.66
51 - 100 mi.	13.00
101 & Above	15.08
IV. INDUSTRY IN COMMUNITY:	
None (subsistence only)	3.41
Cannery	10.58
Logging	8.58
Mining	10.00
Oil	20.00
Other*	8.00

NOTES:

(1) Other*- for proper identification of this variable see Section: "An in Depth View of the Variables".

(2) This is a cummulative variable. If a community has two industries; namely, logging and mining, it will receive utils for each industry.

VARIABLES	WEIGHT in Units
V. SCHOOL ATTENDANCE:	
0 - 10	0.58
11 - 20	2.50
21 - 50	4.91
51 - 100	5.75
101 & Above	7.25
VI. CLASS OF POST OFFICE:	
Class	
2	10.41
3	6.58
4	4.16
None	1.18
VII. STATUS OF COMMUNITY:	
Incorporated (city)	3.16
Unincorporated	1.58
VIII. COMMUNITY PRESENTLY SERVED BY AIR CARRIER:	
Yes	6.50
No	5.08
IX. PERCENTAGE CHANGE IN POPULATION OVER PAST DECADE:	
This variable will only be utilized as a tie-variable.	

X. EXAMPLE: COMMUNITY OF ALAKANUK

	Variables	Data	Weight
1.	Population	265	10.75
2.	Alter. year-round transp.	None	16.50
3.	Dist. to Trunk Airport	65	13.00
4.	Industry	Cannery	10.58
5.	School Attendance	105	7.25
6.	Class of P.O.	3	6.58
7.	Status of Community	Incorporated	3.16
8.	Air Carrier Service	Yes	6.50
		Total Weight (in Utils)	74.32

LIMITATIONS OF THE MODEL

I. The limitations of this model are in direct relationship to the sampled decision-makers abilities to make balanced airport development policy decisions.

II. This Economic Decision-Making Model should be utilized only as a tool and is by no means a substitute for common sense.

III. The information and statistics for each community were obtained from sources believed to be reliable.

(1) Federal Field Committee Publications
(2) Alaska State Housing Authority Publications
(3) U.S. Department of Commerce, 1970 Official Census
(4) Greater Anchorage Area School Board
(5) F.A.A. Airport Activity Statistics - 1970 F.Y.
(6) United States Post Office - Official list of Alaskan communities having Post Offices.

APPENDIX J
DESCRIPTIONS OF CANDIDATE NAVIGATION AID LOCATIONS

The candidate navigation aid locations analyzed in this study are listed in alphabetical order in this appendix. The requesting organization is indicated together with their view of the primary application and most suitable type of NAVAID. Since work was initiated prior to receipt of NAVAID location recommendations, several sites, primarily in the Aleutian Chain, were analyzed that did not ultimately have a "requesting organization." These locations are noted by a "none" on the "requestor line."

Narratives describing the terrain, siting difficulties, etc., are also provided. Finally, tabular charts indicating the enroute and/or approach aid improvement potential, in terms of enroute gap reduction or increased landing probabilities, respectively, are provided when appropriate. The landing probabilities do reflect weather and TERPS-related terrain considerations, but do not account for NAVAID siting difficulties which may preclude the use of a given type of NAVAID at a particular location.

ADAK

NAVAID Requestor	-	FAA Alaska Region
NAVAID Application	-	Enroute
NAVAID Type	-	VORTAC
Affected Route	-	New

Adak, as well as Amchitka, Nikolski, Port Heiden and Cape Sarichef are all located along the Aleutian Peninsula and Islands. Generally, siting is difficult since the terrain typically is quite rugged. Also, the sites must provide cover-

AD-A038 637 SYSTEMS CONTROL INC PALO ALTO CALIF F/G 17/7
ALASKAN AIR NAVIGATION REQUIREMENTS. VOLUME II. PART 2. APPENDI--ETC(U)
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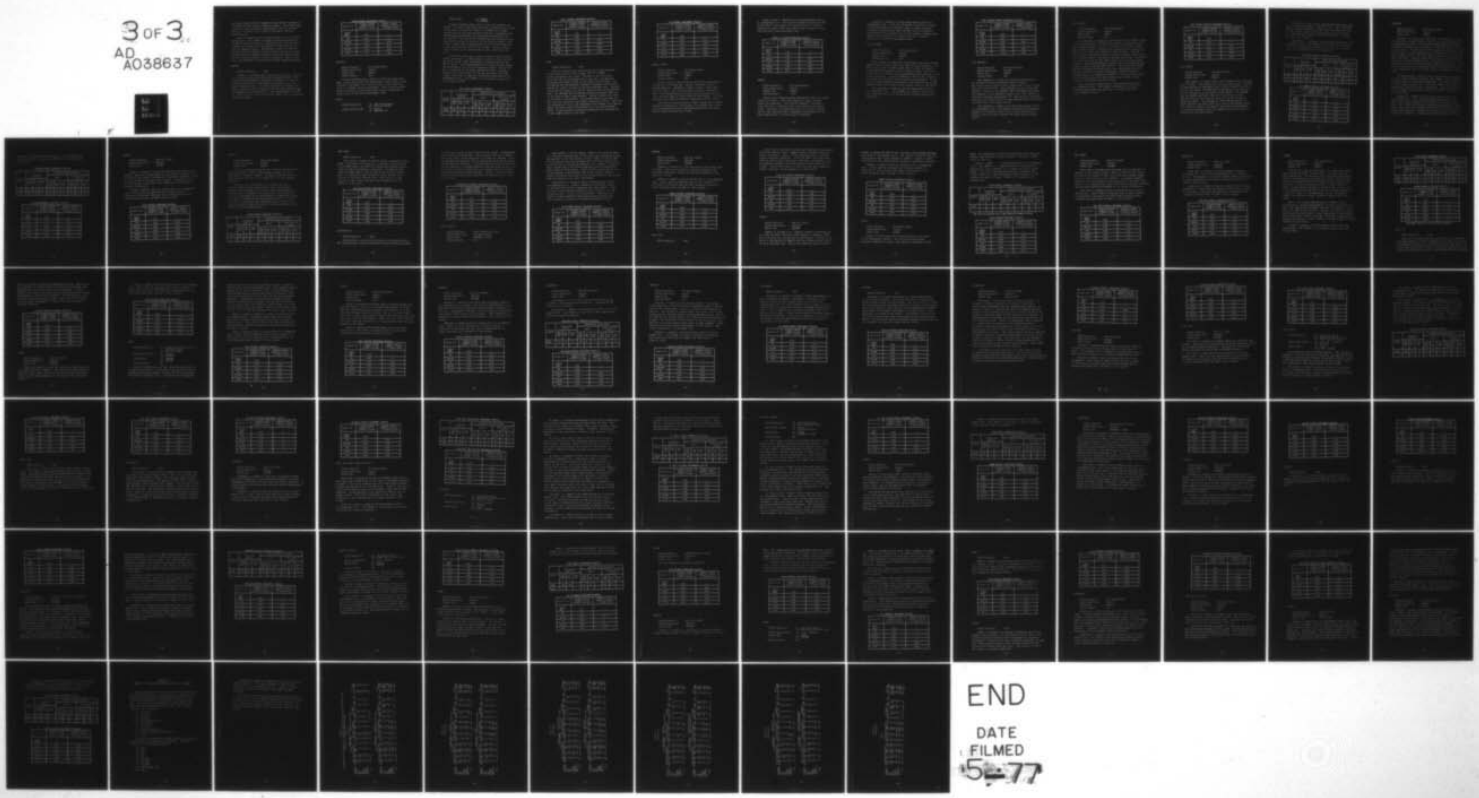

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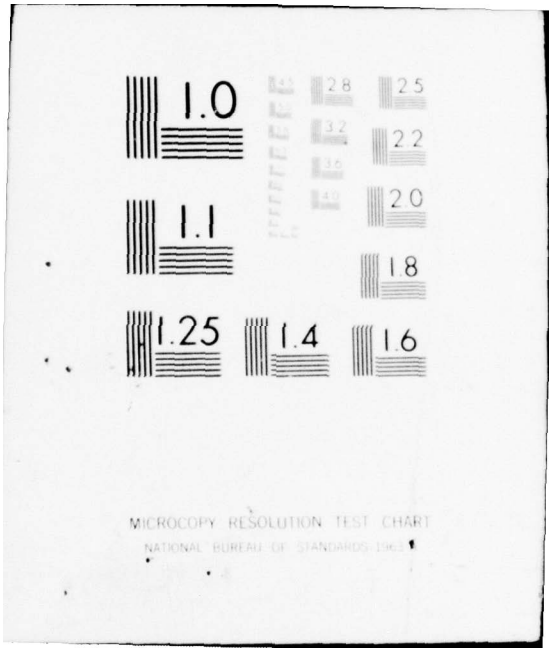
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963

age along a narrow band as opposed to more spatial coverage as is common for most airway navigation support. The route length involved is quite extensive (approximately 800 nmi one way). Almost all of these sites currently have NDB as the sole navigation aid.

Adak is ranked by the FAA Alaska Region 24th of 28 recommended sites. This VORTAC is needed to improve terminal ATC procedures and to provide for extending an existing and establishment of new VOR routes to connect the North Pacific over water to domestic routes. Additionally, safety of aircraft operation will be enhanced by more accurate fixing of aircraft position that will improve airspace utilization and will make possible quicker response in case of emergency. These routes serve international air carrier and military flight operations.

AKUTAN

NAVAID Requestor - None

Akutan is a seaplane base located in the Aleutian Islands, in a sheltered cove on the east side of Akutan Island. The nearest existing NAVAID is an NDB at Driftwood Bay. The controlling obstruction in the protected airspace is 4,275 ft peak on Akutan Island. A 1,000 ft obstruction clearance altitude is applied to this tallest obstruction and resulting value is rounded up to the next 100 ft. The resulting MOCA is 5,300 ft. The visibility associated with this MOCA value is determined from VFR minimums.

AKUTAN APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.14	---
NDB	0.25	0.11
NDB/DME	0.77	0.64
VOR	0.25	0.11
VOR/DME	0.77	0.64
TACAN	0.77	0.64

AMCHITKA

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC
Affected Route - New

Terrain characteristics similar to those discussed under Adak. Since the military has vacated the island, there is only a minimal requirement for a Victor airway to serve this location or a terminal service requirement. Only limited coverage would be provided on the North Pacific routes as Amchitka is 60 nmi south of the direct Adak/Shemya route.

ANIAK

NAVAID Requestors - (1) FAA Alaska Region
(2) Wien Air Alaska

NAVAID APPLICATIONS - (1) Enroute
(2) Approach Aid

NAVAID Type - (1) VORTAC
(2) VOR/DME

Aniak is located along a river in an area northeast of Bethel. The area to the south of Aniak is generally flat, while to the north of Aniak the terrain is somewhat more rugged. Aniak has an existing NDB approach procedure, consequently the NDB/DME approach minimums were based upon adding DME to the existing NDB. The VOR and the VOR/DME approach procedures were based upon locating the facility to the south-southeast of the runway. Some slight siting problems could occur at Aniak due to the terrain to the north of the airport. However, these could probably be overcome through careful selection of the site.

A NAVAID at Aniak would supply navigation support between Bethel and McGrath. An NDB currently exists at this location. The victor route, V480, from Bethel to McGrath overlies the NDB at Aniak. In the determination of the existing gap length, the Aniak NDB is not used for navigation support. Use of the NDB, in addition to the Bethel and McGrath VOR's, provides navigation coverage except for the gap indicated in the NDB column. This site is ranked by FAA Alaska Region 18th of 28 recommended sites. This VORTAC is to be used as a gap filler and to lower the MEA.

ANIAK ENROUTE IMPROVEMENT POTENTIAL

EFFECTED ROUTES	EXISTING GAP (NMI) AT			PROJECTED GAP AFTER ADDING					
				NDB AT			TACAN, VOR W/WO DME AT		
	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL
V480	120	50	0	67	40	0	45	0	0

ANIAK APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.97	---
NDB	0.97	---
NDB/DME	1.00	0.03
VOR	1.00	0.03
VOR/DME	1.00	0.03
TACAN	1.00	0.03

ATTU

NAVAID Requestors - None

ATTU is located at the very western tip of the Aleutians, on the eastern side of Attu Island. There is rugged terrain throughout the island. The MOCA at Attu was based on an NDB bearing from Shemya NDB to the east. The MOCA was based upon the 3,000 ft peak at the center of the island. For the NDB and the VOR approach, Category A through C aircraft are limited by 1,000 ft terrain in the final approach area. Category D aircraft are limited by 1,950 ft terrain in the missed approach area. The NDB/DME and the VOR/DME approach procedures make use of the point-in-space type approach. Descent is made over water to the south of the airport. The minimum descent altitudes in this case are limited by the airport elevation of 40 ft. The facility locations for all of the approaches were assumed to be approximately two miles south of the airport on a site called Berger Point. Siting could be a potential problem at this location due to the rugged terrain to the west.

ATTU APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.08	---
NDB	0.29	0.21
NDB/DME	0.62	0.54
VOR	0.30	0.22
VOR/DME	0.62	0.54
TACAN	0.62	0.54

BARTER ISLAND

NAVAID Requestor - *FAA Alaska Region*
NAVAID Application - Enroute
NAVAID Type - VORTAC
Affected Route - New

Barter Island is located on the North Slope approximately 100 nmi east of Prudhoe Bay. Barter Island has an existing NDB approach. The MOCA at Barter Island is based upon a 1,200 ft tower. The terrain at Barter Island is virtually flat. The minimum descent altitudes were based upon obstructions that are shown in the vicinity of the airport. No siting problems other than the tundra is expected at Barter Island.

This facility would primarily supply navigation for North Slope oil exploration. The terrain is reasonably flat except for the mountainous Brooks Range approximately 40 nmi south. Barter Island currently has an NDB.

Barter Island is ranked by the FAA Alaska Region 5th of 28 recommended sites. This proposed VORTAC would provide VOR navigational track guidance for international air carriers operating on polar routes and support route structure to and from the North Slope development area.

BARTER IS. APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.92	---
NDB	0.92	---
NDB/DME	0.96	0.04
VOR	0.96	0.04
VOR/DME	0.96	0.04
TACAN	0.96	0.04

BORNITE

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC
Affected Route - J-502

Bornite lies between Kotzebue and Bettles Field in a rather large river valley. VOR siting should not pose a problem except for remoteness. This facility appears to provide a focal point for a proposed Victor route system to the North Slope. Currently, no navigation aids exist at this location. The air taxi operators have recommended a navigation aid for Kobuk (OBK) which is in the vicinity of Bornite.

Bornite is ranked by the FAA Alaska Region 15th of 28 recommended sites. J-502 from Fairbanks to Kotzebue is established with an MEA of 27,000 and a gap in signal coverage. The VORTAC proposed would lower the MEA, provide continuous navigational track guidance on J-502 and support a proposed VOR federal airway structure to connect the above terminals. VORTAC to be located in the general area.

CAPE LISBURNE

NAVAID Requestor	-	FAA Alaska Region
NAVAID Application	-	Enroute
NAVAID Type	-	VORTAC
Affected Route	-	New

Cape Lisburne is located on the northwest section of Alaska. Rugged terrain in this area comes right up to the seashore. The MOCA is based upon a 1,586 ft peak which is near the airport. An NDB approach currently exists at Cape Lisburne. Due to the terrain near the airport circling approaches were used for all approach procedures. The only advantage to DME at this airport is for potential reduction in the visibility requirements. Siting at Cape Lisburne could be potentially very difficult due to the rugged terrain on all sides of the airport except to the north.

Cape Lisburne is ranked by the FAA Alaska Region 23rd of 28 recommended sites. This VORTAC will support a route structure along the Arctic rim serving native villages and military operations.

CAPE LISBURNE APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.85	---
NDB	0.85	---
NDB/DME	0.90	0.05
VOR	0.85	0
VOR/DME	0.90	0.05
TACAN	0.90	0.05

CAPE NEWENHAM

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC
Affected Route - New

Cape Newenham is located on a peninsula boardering on the Bering Sea in the southwestern part of Alaska. The terrain on this cape is quite rugged with a 2,305 ft peak being the tallest point. Cape Newenham has an existing NDB approach. The use of an NDB/DME, VOR or VOR/DME could reduce the minimums at Cape Newenham slightly due to the reduced obstruction clearance requirements for these approach procedures. The siting of a VOR facility at Cape Newenham could be extremely difficult due to the rugged terrain.

Cape Newenham is ranked by the FAA Alaska Region 7th of 28 recommended sites. This VORTAC would provide navigational guidance for extensive North Pacific routes which service military and civil users between the Orient and the United States.

CAPE SARICHEF

NAVAID Requestor	-	FAA Alaska Region
NAVAID Application	-	Enroute
NAVAID Type	-	VORTAC
Affected Route	-	New

Cape Sarichef is located on the western side of Unimak Island in the Aleutian chain. Although the island has some very significant terrain features, such as a 6,000 and a 9,000 foot volcano, Cape Sarichef itself is located on a relatively flat coastal area. There is an existing NDB approach at Cape Sarichef. The NDB is not located at the airport and its relative location, with respect to the runway, makes a straight-in approach impossible. Consequently, a relocation of the NDB could improve the circling minimums slightly. The NDB/DME approach minimums were based upon the addition of a DME at existing NDB facility. The VOR and the VOR/DME approach minimums were based upon a more advantageous facility location such that straight-in approaches could be achieved. Although there is a considerable amount of terrain on the island, it is not anticipated that there would be any serious siting problems at the airport location itself.

Cape Sarichef is ranked by the FAA Alaska Region 28th of 28 recommended sites. This VORTAC is needed to provide for extending and establishing VOR routes to connect the North Pacific domestic routes.

CAPE SARICHEF APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.59	---
NDB	0.59	---
NDB/DME	0.71	0.12
VOR	0.71	0.12
VOR/DME	0.79	0.20
TACAN	0.79	0.20

CAPE SPENCER

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC

Cape spencer is a small cape in the southeast area of Alaska east of Juneau. Cape Spencer has a marine radio beacon. The MOCA at Cape Spencer was determined from a 1,870 ft elevation northwest of the island. The NDB and the VOR approach are limited by a 600 ft terrain in an area north of the beacon. The NDB/DME and the VOR/DME approaches make use of the point-in-space approach from the west over the water with a 180° missed approach procedure. The minimums for these DME approaches are based upon the sea level elevation of the missed approach point. The siting of a VOR at Cape Spencer could have some potential siting error problems due to the rugged terrain in the area to the north of the radio beacon.

The terrain is the typical southeastern mountainous and, hence, VOR siting becomes a difficult task. This site would support traffic in and out of the inlets to Juneau and also for the coastal airway V440 from Yakutat to Biorka Island. No navigation aids currently exist at this site. Icy Point (IP) is in the vicinity.

Cape Spencer is ranked by the FAA Alaska Region 8th of 28 recommended sites. This VORTAC will be used as a gap filler and to lower the MEA significantly. It will also increase safety by providing more precise navigation.

CAPE SPENCER ENROUTE IMPROVEMENT POTENTIAL

EFFECTED ROUTES	EXISTING GAP (NMI) AT			PROJECTED GAP AFTER ADDING					
				NDB AT			TACAN, VOR W/WO DME AT		
	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL
V440	60	0	0	0	0	0	0	0	0
V317	28	0	0	0	0	0	0	0	0

CAPE SPENCER APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.66	---
NDB	0.93	0.27
NDB/DME	0.99	0.33
VOR	0.93	0.27
VOR/DME	0.99	0.33
TACAN	0.99	0.33

CHANDALAR

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC

Chandalar is located on a lake north of Fairbanks in a mountainous area of central Alaska. There is an existing NDB facility at Chandalar, but there is no published NDB approach procedure. The MOCA at Chandalar was based upon a 7,040 foot peak to the north of the airport. The NDB and the VOR approach are limited by 4,082 foot terrain in a final approach area. Through the use of the DME and step-down fixes in the final approach area some reduction in MDA is possible. However, high terrain such as a 4,935 foot peak exists in the missed approach area. Consequently, this is a very difficult site for locating instrument approach procedures. A siting of a VOR facility at Chandalar would be extremely difficult, if not impossible, due to the high terrain surrounding the entire area.

The NDB currently located at this site provides the navigation for traffic between Fairbanks and Deadhorse with resultant navigation gaps of considerable magnitude. The traffic ranking for this region includes all of the third ranking (FAI-North) and possibly some of the first (ANC-North). This facility would provide suqport for the major portion of traffic to and from the North Slope.

Chandalar is ranked by the FAA Alaska Region 6th of 28 recommended sites. This proposed VORTAC would provide VOR navigational track guidance from Fairbanks to the North Slope area. This VORTAC would provide oeprational advantages to both pilots and controllers through increased route flexibility that would reduce delays to aircraft and increase safety by improving accuracy of navigation. Additionally, Federal Airway 436 from

Anchorage to Chandalar would terminate at a VOR facility instead of an NDB as it does now. VORTAC to be located in the general area.

CHANDALAR ENROUTE IMPROVEMENT POTENTIAL

EFFECTED ROUTES	EXISTING GAP (NMI) AT			PROJECTED GAP AFTER ADDING					
				NDB AT			TACAN, VOR W/WO DME AT		
	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL
V436	210	132	64	113	31	0	116	0	0
V347	180	120	70	80	19	0	82	0	0

CHANDALAR APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.51	---
NDB	0.76	0.25
NDB/DME	0.78	0.27
VOR	0.76	0.25
VOR/DME	0.78	0.27
TACAN	0.78	0.27

CHEVAK

NAVAID Requestor - Wien Air Alaska
NAVAID Application - Approach
NAVAID Type - VOR/DME

Chevak is located in a very flat area near the west coast of Alaska. There are no significant terrain problems anywhere in the vicinity of the airport, consequently, instrument approaches should not be difficult to design at this airport. In addition, due to the flat terrain in the area, there should be no difficulty in siting a VOR facility.

Chevak is ranked by Wien Air Alaska 15th of 15 recommended sites. Wien's need for approach aids at these airports is sufficient to the point that they have installed and are currently operating their own NDB's at this airport.

CHEVAK APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.81	---
NDB	0.95	0.06
NDB/DME	0.95	0.06
VOR	0.95	0.06
VOR/DME	0.97	0.08
TACAN	0.97	0.08

CORDOVA

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC

Cordova is located along the coast between Johnstone Point and Cape Yakataga. Many of the Yakataga comments are also applicable to Cordova. However, it appears that the relative importance of this site is less than that of a Cape Yakataga facility.

Cordova is not justifiable as a terminal aid since Localizer/DME has been installed and Glide Slope planned. However, there currently is a project under consideration for installation of a VORTAC in the vicinity of the Cordova Airport as a replacement of the one currently on Middleton Island (in effect a relocation of the Middleton facility). A test of the site at Cordova has been completed and the results are being evaluated. Ranked 10th of the 28 sites originally recommended by the FAA Alaska Region.

CORDOVA ENROUTE IMPROVEMENT POTENTIAL

EFFECTED ROUTES	EXISTING GAP (NMI) AT			PROJECTED GAP AFTER ADDING					
				NDB AT			TACAN, VOR W/WO DME AT		
	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL
V317	105	23	0	4	0	0	0	0	0

DAHL CREEK

NAVAID Requestor - None

Dahl Creek is located in central Alaska, northwest of Fairbanks. The airport is located in a relatively low area close to the Kobuk River, but there are significant features such as 3,000 to 4,000 ft mountains to the north. The MOCA at Dahl Creek was based upon a 3,440 ft peak to the north of the airport. All approaches were limited by 500 ft terrain in the vicinity of the final approach area. The siting of a VOR facility at Dahl Creek could pose some problems due to the mountains to the north.

DAHL CREEK APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.72	---
NDB	0.95	0.23
NDB/DME	0.95	0.23
VOR	0.95	0.23
VOR/DME	0.96	0.24
TACAN	0.96	0.24

DRIFTWOOD BAY

NAVAID Requestor - None

Driftwood Bay is located on an island in the Aleutian chain. The island contains several significant terrain features including

a 6,680 foot volcano in the interior of the island. Driftwood Bay has an existing NDB approach. This approach calls for a descent over water until visual conditions or the MDA are reached. Circling minimums are necessary for all approaches which use the existing NDB facility location. A circling approach would be necessary for the VOR also. A VOR/DME approach using the point-in-space concept with a facility located near the approach end of the runway could obtain reduced landing minimums. However, the very rugged terrain in this area could conceivably preclude the use of a VOR at this site.

DRIFTWOOD BAY APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.17	---
NDB	0.67	0.50
NDB/DME	0.67	0.50
VOR	0.67	0.50
VOR/DME	0.70	0.53
TACAN	0.70	0.53

DUTCH HARBOR

NAVAID Requestor - Reeve Aleutian Airlines
NAVAID Application - Approach/Enroute
NAVAID Types - VOR/DME or TACAN
Affected Routes - New

Dutch Harbor is on the largest island in the Aleutian Chain. It is located on Unalaska Bay on the north side of Unalaska Island. Any approach to the Dutch Harbor airport without the use of DME will necessarily have high minimums due to the very high terrain in the vicinity of the missed approach area. However, a point-in-space concept with a 180° missed approach could be potentially quite useful at Dutch Harbor. There could be some potential VOR siting problems at Dutch Harbor due to the terrain, however, several relatively flat areas in the vicinity north of the airport might be potential sites for a VOR NAVAID.

Dutch Harbor is ranked by Reeve Aleutian Airways 4th of 4 recommended sites. Largest community in Aleutians, center of the King Crab industry, imploying 1000 plus workers. There are nine crab processing companies at this location. No aids at present time. Strictly a VFR operation. Installation of VORTAC or TACAN equipment would allow for more reliable and safer operation in an area of extremely difficult terrain.

DUTCH HARBOR APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.21	---
NDB	0.49	0.28
NDB/DME	0.70	0.49
VOR	0.49	0.28
VOR/DME	0.70	0.49
TACAN	0.70	0.49

EMMONAK

NAVAID Requestor - Wien Air Alaska
NAVAID Application - Approach
NAVAID Type - VOR/DME

Emmonak is located in a very flat area in the western part of Alaska. There are virtually no terrain features in the area that would effect either the instrument approach at the location of a VOR.

Emmonak is ranked by Wien Air Alaska 4th of 15 recommended sites. Wien's need for approach aids at these airports is sufficient to the point that they have installed and are currently operating their own NDB's at this airport.

EMMONAK APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.83	---
NDB	0.95	0.12
NDB/DME	0.95	0.12
VOR	0.95	0.12
VOR/DME	0.97	0.14
TACAN	0.97	0.14

FALSE PASS

NAVAID Requestor - None

False Pass is an airport located near Cold Bay at the eastern end of the Aleutian chain. Rugged terrain surrounds the entire area at False Pass. This is a very difficult area in which to locate instrument approaches. All of the MDA's that were determined for this airport were above 2,000 feet, consequently, a visual approach procedure could conceivably be more useful at this airport. The terrain features in the area will also produce extremely difficult siting problems for a VOR facility.

FALSE PASS APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.18	---
NDB	0.38	0.20
NDB/DME	0.38	0.20
VOR	0.38	0.20
VOR/DME	0.39	0.21
TACAN	0.39	0.21

GAMBELL

NAVAID Requestor - Wien Air Alaska
NAVAID Application - Approach
NAVAID Type - VOR/DME

Gambell is located on St. Lawrence Island in the Bering Sea very near the USSR. The area around Gambell is generally flat, with a 600 foot hill located east of the airport. The use of an NDB or a VOR approach at Gambell would be limited by this hill in the final approach area. The use of a DME with either of these

NAVAIDS in moving the MAP out over the water could produce minimums that would be considerably lower. The location of the 600 foot hill could produce some siting problems at Gambell. However, careful selection of a site would probably produce a satisfactory location.

Gambell is ranked by Wien Air Alaska 5th of 15 recommended sites. Wien's need for approach aids at these airports is sufficient to the point that they have installed and are currently operating their own NDB's at this airport.

GAMBELL APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.58	---
NDB	0.87	0.29
NDB/DME	0.95	0.37
VOR	0.87	0.29
VOR/DME	0.97	0.39
TACAN	0.97	0.39

HAINES

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC

Haines is at the north end of the southeastern pan handle in very mountainous terrain. This facility would provide navigation support for airways from Juneau to Fairbanks via the

Yukon. The mountainous terrain would make VOR siting difficult. TACAN at this point may be more suitable. Currently, an NDB exists at this site.

Haines is ranked by FAA Alaska Region 4th of 23 recommended sites. This VORTAC could connect VOR airways from the termination of V-444 at Burwash, Y.T., Canada, to Sisters Island VORTAC. This route extension would provide continuous VOR routes from the U.S. and southeastern Alaska terminals to the northern perimeter of Alaska. VORTAC to be located in the general area.

HAINES ENROUTE IMPROVEMENT POTENTIAL

EFFECTED ROUTES	EXISTING GAP (NMI) AT			PROJECTED GAP AFTER ADDING					
				NDB AT			TACAN, VOR W/WO DME AT		
	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL
A-15*									

*Gaps were not analyzed since airway penetrates Canadian airspace

HAINES APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.35	---
NDB	0.42	0.07
NDB/DME	0.50	0.15
VOR	0.42	0.07
VOR/DME	0.50	0.15
TACAN	0.50	0.15

HOLY CROSS

NAVAID Requestor - Wien Air Alaska
NAVAID Application - Approach
NAVAID Type - VOR/DME

Holy Cross is located along the Yukon River at the west of McGrath in west central Alaska. There is some 250 foot terrain the west of the airport at Holy Cross with some slightly higher terrain 10 to 15 miles to the southwest. In general, however, there are very few prominent terrain features in the area, consequently, it is expected that there would be few problems in developing instrument approach procedures or in siting a VOR facility.

Holy Cross is ranked by Wien Air Alaska 7th of 15 recommended sites. Wien's need for approach aids at these airports is sufficient to the point that they have installed and are currently operating their own NDB's at this airport.

HOLY CROSS APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.88	---
NDB	0.99	0.11
NDB/DME	0.99	0.11
VOR	0.99	0.11
VOR/DME	0.99	0.11
TACAN	0.99	0.11

HOOPER BAY

NAVAID Requestor - Wien Air Alaska
NAVAID Application - Approach
NAVAID Type - VOR/DME

Hooper Bay is located on a wide peninsula boardering the Bering Sea. The terrain around Hooper Bay is completely flat. Consequently, no terrain problems would be encountered in either developing the instrument approach procedure or in siting a VOR facility.

Hooper Bay is ranked by Wien Air Alaska 3rd of 15 recommended sites. Wien's need for approach aids at these airports is sufficient to the point that they have installed and are currently operating their own NDB's at this airport.

HOOPER BAY APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.83	---
NDB	0.94	0.11
NDB/DME	0.94	0.11
VOR	0.94	0.11
VOR/DME	0.95	0.12
TACAN	0.95	0.12

ILIAMNA

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC

Iliamna lies along the North Shore of Iliamna Lake approximately 60 nmi northeast of King Salmon. The local terrain is quite mountainous. The facility at this location would support traffic from Anchorage to the Aleutian Islands. Sizable gaps do exist and would be greatly alleviated by additional navigation aids. For this particular example, siting a TACAN or VOR at Iliamna appears inferior to siting an NDB. This is due to the assumption that the NDB is not line-of-sight limited as is the VOR. Hence, in the mountainous terrain surrounding Iliamna, the NDB has a greater reception range at lower altitudes.

There is an existing NDB approach at Iliamna in which the facility is located approximately five miles east of the airport. The NDB approach minimums would not be improved by the addition of a DME at this facility. However, if a VOR or a VORTAC were located at the airport a slight improvement in the minimum descent altitutdes could be obtained. There are no apparent problems associated with siting a VORTAC at Iliamna insofar as terrain features are concerned.

Iliamna is ranked by FAA Alaska Region 11th of 28 recommended sites. This VORTAC is to be used as a gap filler and to lower MEA's.

ILIAMNA ENROUTE IMPROVEMENT POTENTIAL

EFFECTED ROUTES	EXISTING GAP (NMI) AT			PROJECTED GAP AFTER ADDING					
				NDB AT			TACAN, VOR W/WO DME AT		
	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL
V427	120	36	0	39	9	0	64	0	0
V456	80	16	0	6	0	0	10	0	0

ILIAMNA APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.96	---
NDB	0.96	---
NDB/DME	0.96	0*
VOR	0.96	0
VOR/DME	0.96	0
TACAN	0.96	0

*Improvement obtained for other aircraft categories

KING COVE

NAVAID Requestor - None

King Cove is located near the eastern end of the Aleutian chain approximately 15 miles southeast of Cold Bay. The airport is located in a narrow pass with high terrain on both sides. Due to the high terrain the location of a facility anywhere near the airport will necessarily result in high minimum descent altitudes.

The use of a point-in-space type approach utilizing a DME for the final approach fix could result in relatively low minimums over Belkofski Bay to the east of the airport; however, a visual approach would have to be made from the MAP which would be located approximately 6 miles from the airport. The high terrain in the vicinity of the airport will produce severe site error problems at this airport; consequently, siting a VOR facility would be extremely difficult.

KING COVE APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.12	---
NDB	0.30	0.18
NDB/DME	0.77	0.65
VOR	0.30	0.18
VOR/DME	0.78	0.66
TACAN	0.78	0.66

KIPNUK

NAVAID Requestor - Wien Air Alaska
NAVAID Application - Approach
NAVAID Type - VOR/DME

Kipnuk is located on a very flat area in western Alaska several miles southwest of Bethel. The terrain all around Kipnuk is extremely flat. There would be no terrain problems which would effect any instrument approach or the siting of any navigation facility.

Kipnuk is ranked by Wien Air Alaska 14th of 15 recommended sites. Wien's need for approach aids at these airports is sufficient to the point that they have installed and are currently operating their own NDB's at this airport.

KIPNUK APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.80	---
NDB	0.95	0.15
NDB/DME	0.95	0.15
VOR	0.95	0.15
VOR/DME	0.97	0.17
TACAN	0.97	0.17

KOBUK

NAVAID Requestors - (1) Alaska Air Carriers Association (Air Taxi)
(2) Wien Air Alaska

NAVAID Applications - (1) Enroute
(2) Approach

NAVAID Types - (1) VOR/DME
(2) VOR/DME

Affected Route - New

Kobuk is located very near Dahl Creek and Bornite in the central part of Alaska. The terrain to the north of Kobuk is somewhat mountainous; however, in the vicinity of the airport the terrain is generally flat. The NDB and the VOR approach

would be limited to circling approaches only due to some terrain rising in the missed approach area. This problem could be reduced to the use of a DME with either of these NAVAIDS in which the MAP would be located back from the airport a sufficient distance with which to be used with the missed approach procedure. Consequently, lower approach minimums could be achieved through the use of a DME. The terrain to the north of the airport could cause some site error problems for a VOR facility located near the airport. However, with careful selection of a site, a VOR could probably be cited at this location.

Kobuk is ranked by Alaska Air Carriers Association 3rd of 6 recommended sites. No NAVAID, even a NDB, exists in the Kobuk area. Distance between nearest two VOR's is almost 275 nautical miles. There are at least 12 air taxi firms based in and around this area plus a great deal of mineral exploration activity in season.

Kobuk is ranked by Wien Air Alaska 13th of 15 recommended sites. Wien's need for approach aids at these airports is sufficient to the point that they have installed and are currently operating their own NDB's at this airport.

KOBUK APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.65	---
NDB	0.94	0.29
NDB/DME	0.97	0.32
VOR	0.94	0.29
VOR/DME	0.97	0.32
TACAN	0.97	0.32

LONELY

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC
Affected Route - New

Lonely is located on the North Slope in between Prudhoe Bay and Point Barrow. There is an existing NDB approach at Lonely. The only significant terrain problems in this area is a 55 foot hill some distance from the airfield. The use of a VOR or DME facility at Lonely would produce slightly lower minimums than those that exist with the NDB approach. Due to the flat terrain in the area there would be essentially no siting problems other than that imposed by the tundra.

Lonely is ranked by FAA Alaska Region 21st of 28 recommended sites. This VORTAC will support the route structure serving the North Slope and military activities.

LONELY APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.88	---
NDB	0.88	---
NDB/DME	0.90	0.02
VOR	0.90	0.02
VOR/DME	0.92	0.04
TACAN	0.92	0.04

MEKORYUK

NAVAID Requestor - Wien Air Alaska
NAVAID Application - Approach
NAVAID Type - VOR/DME

Mekoryuk is located on the north side of Nunivak Island in the southwest part of Alaska. The terrain around Mekoryuk is essentially flat with no significant terrain features anywhere in the area. Consequently, the MDA's are based upon the elevation of the terrain in the vicinity of the airport. There should be no problems in siting a VOR facility anywhere in the vicinity of the airport.

Mekoryuk is ranked by Wien Air Alaska 9th of 14 recommended sites. Wien's need for approach aids at these airports is sufficient to the point that they have installed and are currently operating their own NDB's at this airport.

MEKORYOK APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.75	---
NDB	0.94	0.19
NDB/DME	0.94	0.19
VOR	0.94	0.19
VOR/DME	0.96	0.21
TACAN	0.96	0.21

MINCHUMINA

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC

Minchumina lies in the river valley between McGrath and Fairbanks. Siting would not be difficult. Currently an NDB exists at this location.

Minchumina is ranked by FAA Alaska Region 20th of 28 recommended sites. This VORTAC is to be used to lower the MEA and provide more precise guidance.

MINCHUMINA ENROUTE IMPROVEMENT POTENTIAL

EFFECTED ROUTES	EXISTING GAP (NMI) AT			PROJECTED GAP AFTER ADDING					
				NDB AT			TACAN, VOR W/WO DME AT		
	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL
V480	97	35	0	30	0	0	0	0	0

MINCHUMINA APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.94	---
NDB	0.94	---
NDB/DME	0.99	0.05
VOR	0.99	0.05
VOR/DME	0.99	0.05
TACAN	0.99	0.05

NIKOLSKI

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC
Affected Route - New

Nikolski is located in the Aleutian Islands. The terrain around Nikolski is relatively flat as compared to most of the terrain in this island chain. There is an existing NDB approach at Nikolski. The facility is located about three miles north of the airport and its location permits circling approaches only. The use of a DME at this facility would still require circling approaches to be made. The relocation of the facility or the location of a VOR/DME facility at the airport could result in lower minimums. There should be relatively few siting problems at this airport. Additional information is listed under Adak.

Nikolski is ranked by FAA Alaska Region 26th of 28 recommended sites. This VORTAC is needed to provide for extending and establishing VOR routes to connect the North Pacific domestic routes.

NIKOLSKI APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.46	---
NDB	0.46	---
NDB/DME	0.49	0.03
VOR	0.49	0.03
VOR/DME	0.49	0.03
TACAN	0.49	0.03

OLD HARBOR

NAVAID Requestor - None

Old Harbor is located in southwest Alaska approximately 14 miles southwest of Kodiak. Old Harbor, is located in a bay between several terrain features that rise to 2,000 feet. Consequently, this is a very difficult area in which to locate either a VOR or an NDB and to develop instrument approach procedures. This is shown by the relatively high MDA's that were given to this airport. A more useful approach procedure might be developed by locating a radio facility along the coastal areas to provide a means for descending near the facility and flying visually to the field.

OLD HARBOR APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.40	---
NDB	0.50	0.10
NDB/DME	0.57	0.17
VOR	0.50	0.10
VOR/DME	0.57	0.17
TACAN	0.57	0.17

OUZINKIE

NAVAID Requestor - None

Ouzinkie is a seaplane base which is located approximately 10 miles north of Kodiak. This is an area that has high terrain on the several islands in the vicinity. The use of a VOR or an NDB facility would produce high MDA values due to these terrain features. The use of a point-in-space approach with an NDB/DME or a VOR/DME would reduce the minimums considerably, but would require visual approaches to be made to the airport. The mountains in the vicinity of the airport could cause some potential VOR siting problems. However, these problems could be minimized through careful selection of a location that would be remote from the airport.

OUZINKIE APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.46	---
NDB	0.67	0.21
NDB/DME	0.95	0.49
VOR	0.67	0.21
VOR/DME	0.95	0.49
TACAN	0.95	0.49

PETERSBURG

NAVAID Requestor - Alaska Airlines
NAVAID Application - Approach
NAVAID Type - TACAN or MLS

Petersburg is located adjacent to Fredricks Sound. Any attempt to locate a facility on the field at Petersburg would result in minimums that are extremely high, that is, in excess of 2,500 ft. The only way that an instrument approach facility could be located in this area is the use of one of the islands in Fredricks Sound for the location of the navaids. The high mountains surrounding the Petersburg area preclude the use of a VOR at this site. There is a possibility that a localizer or a TACAN could be located on Little McDonald Island in Fredericks Sound and that approaches could be made to this point. The distance from this island to the Petersburg airfield is approximately five miles. The missed approach would be supported by another localizer or another TACAN radio to the north of the island in Fredericks Sound. The feasibility of this approach is being investigated by Alaska Airlines and minimum descent altitudes of the order of 500 to 800 ft seem feasible. These values were essentially confirmed in this analysis.

Petersburg is one of the two sites that Alaska Airlines recommended for improved approach aid. Alaska Airlines would be able to phase out their Twin Otter fleet, thus allowing them the option of closing their Juneau maintenance base. Alaska Airlines estimated that this action would save $200,000.

PETERSBURG APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.70	---
NDB	0.70	---
NDB/DME	0.78	0.08
VOR	0.70	0
VOR/DME	0.81	0.11
TACAN	0.81	0.11

PLATINUM

NAVAID Requestor - Wien Air Alaska
NAVAID Application - Approach
NAVAID Type - VOR/DME

Platinum is located along the coast in southwest Alaska in an area of essentially flat terrain which is very near sea level. There appear to be no problems in developing any instrument approach procedure or in siting any navigation facility.

Platinum is ranked by Wien Air Alaska 12th of 15 sites recommended. Wien's need for approach aids at these airports is sufficient to the point that they have installed and are currently operating their own NDB's at this airport.

PLATINUM APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.63	---
NDB	0.94	0.31
NDB/DME	0.94	0.31
VOR	0.94	0.31
VOR/DME	0.95	0.32
TACAN	0.95	0.32

POINT HOPE

NAVAID Requestor - Wien Air Alaska
NAVAID Application - Approach
NAVAID Type - VOR/DME

Point Hope is located in northeast Alaska in essentially flat terrain. There are no terrain problems to affect either VOR siting or instrument approach procedures. Consequently, the minimum descent altitudes were based upon the airport elevation.

Point Hope is ranked by Wien Air Alaska 8th of 14 recommended sites. Wien's need for approach aids at these airports is sufficient to the point that they have installed and are currently operating their own NDB's at this airport.

POINT HOPE APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.87	---
NDB	0.89	0.02
NDB/DME	0.90	0.03
VOR	0.90	0.03
VOR/DME	0.90	0.03
TACAN	0.90	0.03

PORT HEIDEN

NAVAID Requestors - (1) FAA Alaska Region
(2) Alaska Air Carriers Assoc.
(3) Reeve Aleutian Airways

NAVAID Applications - (1), (2) & (3) - Enroute
(3) Approach

NAVAID Types - (1) VORTAC
(2) & (3) - VOR/DME

Port Heiden has an existing NDB approach. This approach is limited by a 235 ft tower next to the NDB. The addition of DME to VOR at Port Heiden would reduce the minimums slightly, but all of the approaches would be limited by the 235 ft tower. There are essentially no VOR siting problems at Port Heiden.

Port Heiden is ranked by Alaska Air Carriers Association 6th of 6 recommended sites. This facility would provide an aid on a route to the Aleutian Islands, a route becoming increasingly active because of energy related activities.

Port Heiden is ranked by FAA Alaska Region 27th of 28 recommended sites. The VORTAC will provide for extension and establishment of additional airways and routes to King Salmon, Kodiak and Cold Bay.

Port Heiden is ranked 1st of 4 recommended sites by Reeve Aleutian Airways. This facility serves the Peninsula area plus all the stations on the south side. The area is flat. LOC/DME - VORTAC or TACAN type equipment would allow minimums of at least 300/ 3/4. Better enroute aids VORTAC/TACAN are needed, especially in lower altitude range surface to 12,000'. Much development in this area is forecast in the coming years. Mineral oil exploration is increasing anually. Served by YS-11, C-46, DC-6 (L-188 starting this winter).

PORT HEIDEN ENROUTE IMPROVEMENT POTENTIAL

EFFECTED ROUTES	EXISTING GAP (NMI) AT			PROJECTED GAP AFTER ADDING					
				NDB AT			TACAN, VOR W/WO DME AT		
	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL
V456	145	78	15	70	28	0	30	0	0

PORT HEIDEN APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT	0.90	---
NDB	0.90	---
NDB/DME	0.91	0.01
VOR	0.91	0.01
VOR/DME	0.91	0.01
TACAN	0.91	0.01

PORT LIONS

NAVAID Requestor - None

Port Lions is located across the bay from Ouzinkie Seaplane Base. All comments concerning Ouzinkie generally apply to Port Lions. The high terrain in the area make the use of VOR and NDB facilities extremely difficult for this type of procedure. The addition of a DME would permit the point-in-space type approach over the bay and permit lower minimums, but it would require a visual approach to the airport. The high terrain surrounding Port Lions would make the siting of a VOR facility very difficult.

PORT LIONS APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.43	---
NDB	0.50	0.07
NDB/DME	0.82	0.39
VOR	0.50	0.07
VOR/DME	0.82	0.39
TACAN	0.82	0.39

PORT MOLLER

NAVAID Requestor - None

Port Moller is located in the southwest area of Alaska near the eastern end of the Aleutian Chain. There is an existing NDB approach at Port Moller; however, it's location permits the use of circling minimums only. The addition of DME to this facility could further reduce minimums only slightly. The VOR and the VOR/DME approach cases assumed that the facilities were located on or near the airfield. This permitted a further reduction in the MDA value. There is a possibility that some siting problems could be encountered in locating the VOR at this site. However, alternate sites could probably be found which could still produce straight-in approaches.

PORT MOLLER APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.75	---
NDB	0.75	---
NDB/DME	0.75	0
VOR	0.75	0
VOR/DME	0.75	0
TACAN	0.75	0

QUINHAGAK

NAVAID Requestor - Wien Air Alaska
NAVAID Application - Approach
NAVAID Type - VOR/DME

Quinhagak is located in a flat area in southwest Alaska. There are virtually no terrain problems anywhere in the area; consequently, the MDA's are based upon the airport elevation. No siting problems for VOR facility location should be encountered at Quinhagak.

Quinhagak is ranked by Wien Air Alaska 11th of 15 recommended sites. Wien's need for approach aids at these airports is sufficient to the point that they have installed and are currently operating their own NDB's at this airport.

QUINHAGEK APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.83	---
NDB	0.95	0.08
NDB/DME	0.95	0.08
VOR	0.95	0.08
VOR/DME	0.96	0.09
TACAN	0.96	0.09

RAINY PASS LODGE (PUNTILLA LAKE)

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC

Rainy Pass is located in an area of extremely high terrain. Very high values of MDA exist for all types of instrument approach procedures. The use of a DME at this site could reduce minimums slightly through the use of step down fixes. However, high terrain in the missed approach area will not permit a great deal of MDA reduction. Siting problems in this area for a VOR are also extremely severe. The terrain limitation for VOR creates the difference in the resulting gap size between addition of VOR or NDB.

Rainy Pass Lodge is ranked by FAA Alaska Region 12th of 28 recommended sites. This VORTAC is to be used as a gap filler to provide more precise navigation.

RAINY PASS LODGE ENROUTE IMPROVEMENT POTENTIAL

EFFECTED ROUTES	EXISTING GAP (NMI) AT			PROJECTED GAP AFTER ADDING					
				NDB AT			TACAN, VOR W/WO DME AT		
	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL
V510	58	8	0	0	0	0	20	0	0
V440	93	24	0	0	0	0	20	0	0

RAINY PASS LODGE APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.41	---
NDB	0.52	0.11
NDB/DME	0.61	0.20
VOR	0.52	0.11
VOR/DME	0.62	0.21
TACAN	0.52	0.21

ST. MARY'S

NAVAID Requestors - (1) FAA Alaska Region
(2) Alaska Air Carriers Assoc.
(3) Wien Air Alaska

NAVAID Applications - (1) & (2) - Enroute
(3) Approach

NAVAID Types - (1) VORTAC
(2) & (3) - VOR/DME

St. Mary's is located approximately 90 nmi north of Bethel and will provide coverage along V506 between Bethel and Nome. The terrain in this region is reasonably flat; hence, allowing a facility here to provide maximum coverage. Currently, an NDB exists here which is made operational through a radio operated by Wien Air Alaska.

St. Mary's has a 600 ft ridge to the east of the airport which will affect all of the instrument approach procedures to that airport. Since this airport is located in a relatively flat area of western Alaska, the siting of a VOR facility at St. Mary's should not produce problems associated with siting errors.

St. Mary's is ranked by Alaska Air Carriers Association 1st of 6 recommended sites. Both the St. Mary's and the Sparrevohn sites would provide for IFR capabilities that currently do not exist in an area served by 27 based air taxi services plus at least five other state carriers flying regularly to points in the area from both Fairbanks and Anchorage. These air taxi operators made about 35,008 flights, carrying 94,935 passengers, 4.6 million pounds of freight and 1.2 million pounds of mail in 1974 according to reports filed with the Alaska Transportation Commission (see Table A-1, Appendix A). A St. Mary's facility would also close a "gap" and, at the same time, provide IFR capabilities in a very large and busy section of the state at the delta of the Yukon River.

St. Mary's is ranked by FAA Alaska Region 1st of 28 recommended sites. This VORTAC would serve the terminal area of St. Mary's, eliminate the need for many special off-airway direct routes, eliminate the gap in signal coverage, and lower the MEA of V-506 by providing continuous navigatinal track guidance. Pilots would have the advantage of detailed charting information.

St. Mary's is ranked by Wien Air Alaska 1st of 15 recommended sites. Wien's need for approach aids at these airports

is sufficient to the point that they have installed and are currently operating their own NDB's at this airport. Since this is a privately owned NDB, its impact on the enroute and approach capabilities is not taken into account on the following improvement potential charts.

ST. MARY'S ENROUTE IMPROVEMENT POTENTIAL

EFFECTED ROUTES	EXISTING GAP (NMI) AT			PROJECTED GAP AFTER ADDING					
				NDB AT			TACAN, VOR W/WO DME AT		
	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL
V506	95	10	0	34	0	0	10	0	0

ST. MARY'S APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.63	---
NDB	0.87	0.14
NDB/DME	0.89	0.16
VOR	0.89	0.16
VOR/DME	0.89	0.16
TACAN	0.89	0.16

ST. PAUL ISLAND

NAVAID Requestors	-	(1) FAA Alaska Region (2) Reeve Aleutian Airways
NAVAID Applications	-	(1) Enroute (2) Enroute/Approach
NAVAID Type	-	(1) VORTAC (2) VOR/DME or TACAN
Affected Route	-	New

St. Paul Island is located in the Bering Sea west of the Bethel area of Alaska, approximately 280 nmi offshore. There is an existing NDB approach with a final approach fix at St. Paul Island. The minimum descent altitudes at this location could not be reduced significantly with the use of anything other than a precision approach aid. There should be no difficulty in siting a VOR at this location. An aborted flight could conceivably result in a flight length of 600 to 800 nmi.

St. Paul Island is ranked by the FAA Alaska Region 3rd of 28 recommended sites. This VORTAC will provide operational advantages to both pilots and controllers by providing more accurate aircraft position fixing over extensive North Pacific routes, eliminating many special off-airway routes, providing charted information to all pilots and enhancing response capability to emergency situations. These routes serve military and civil routes between the Orient and the conterminous U.S. and between the Orient, Alaska and Europe.

St. Paul Island is ranked by Reeve Aleutian Airways 3rd of 4 recommended sites. Home of the only fur seal activity in the United States. Tourist traffic during summer months increasing by leaps and bounds each year. Missed trips due to fog season cause great economic hardship. VOR programmed by FAA for years, but continually denied. TACAN, VORTAC would serve as enroute aid to International traffic and allow for lower minimums, safer operation and more reliable service.

ST. PAUL ISLAND APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.63	---
NDB	0.63	---
NDB/DME	0.63	0
VOR	0.63	0
VOR/DME	0.70	0.07
TACAN	0.70	0.07

SAGWON

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC

Sagwon is on the North Slope, north of the Brooks Range between Chandalar and Deadhorse. This facility would primarily be a North Slope traffic navigation gap filler in conjunction with Chandalar. No navigation aids exist here. The region is fairly remote from any populated areas, but is reasonably close to the proposed oil pipeline.

The NDB and VOR approaches were limited by a 1,030 ft hill in the final approach area. The addition of a DME to these facilities could reduce the MDA to a value that would be based on the field elevation of 650 ft. There should be no siting problems at Sagwon. However, the terrain limitation associated with the VOR is manifested in the gap size difference between NDB and VOR.

Sagwon is ranked by FAA Alaska Region 13th of 28 recommended sites. This VORTAC is to be used to support North Slope airway structure and as a terminal aid.

SAGWON ENROUTE IMPROVEMENT POTENTIAL

EFFECTED ROUTES	EXISTING GAP (NMI) AT			PROJECTED GAP AFTER ADDING					
				NDB AT			TACAN, VOR W/WO DME AT		
	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL
V436	73	0	0	15	0	0	20	0	0

SAGWON APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.59	---
NDB	0.72	0.13
NDB/DME	0.82	0.23
VOR	0.72	0.13
VOR/DME	0.82	0.23
TACAN	0.82	0.23

SAND POINT

NAVAID Requestor - Reeve Aleutian Airways
NAVAID Application - Approach
NAVAID Type - VOR/DME or TACAN

Sand Point is located in southwest Alaska on an island about 70 miles east of Cold Bay. There is some terrain in the Sand Point area, but a judicious choice of final approach and missed approach areas can avoid areas of high terrain and still permit a straight-in approach. The use of a point-in-space approach with a DME at Sand Point could conceivably reduce minimums to those based on airport elevation. These would require visual approaches to be made from the missed approach point. The terrain in the vicinity of Sand Point could pose some problems in siting a VOR facility. It is possible that not all radials would be useful if the facility was located near the airfield.

Sand Point is ranked by Reeve Aleutian Airways 2nd of 4 recommended sites. One of the higher density stations, Reeve installed two NDB's this summer to establish an approach which helps but is not the best. Approach should be from the Northwest. Newer and more modern aids would allow this and give minimum of 400/ 3/4 and a much greater safety factor. Sand Point is one of the large fishing communities. Establishment of a community of 2500 people is contemplated within three years at Balboa Bay 30 miles away due to large copper discovery.

SAND POINT APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.17	---
NDB	0.69	0.52
NDB/DME	0.92	0.75
VOR	0.72	0.55
VOR/DME	0.93	0.76
TACAN	0.93	0.76

SAVOONGA

NAVAID Requestor - Wien Air Alaska
NAVAID Application - Approach
NAVAID Type - VOR/DME

Savoonga is located on an island in the Bering Sea west of Bethel. The use of an NDB or a VOR approach would require minimums on the order of 600 to 700 ft due to terrain in the final approach area. The use of a point-in-space approach with a DME could reduce minimums to those based on the airport elevation. Due to the fast rising terrain south of the airport, siting of a VOR could be a potential problem.

Savoonga is ranked by Wien Air Alaska 6th of 15 recommended sites. Wien's need for approach aids at these airports is sufficient to the point that they have installed and are currently operating their own NDB's at this airport.

SAVOONGA APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.58	---
NDB	0.89	0.31
NDB/DME	0.94	0.36
VOR	0.91	0.33
VOR/DME	0.96	0.38
TACAN	0.96	0.38

SELAWIK

NAVAID Requestor - None

Selawik lies in a very flat area on the west coast of Alaska. There are no terrain problems to affect either the instrument approach procedures or the VOR siting at this location.

SELAWIK APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.81	---
NDB	0.94	0.07
NDB/DME	0.94	0.07
VOR	0.94	0.07
VOR/DME	0.94	0.07
TACAN	0.94	0.07

SKAGWAY

NAVAID Requestor - None

Skagway is located in extremely mountainous terrain in the southeast area of Alaska. There is virtually no way that instrument approach procedures could be developed to reduce the minimums below 6,000 ft to 7,000 ft. This terrain also precludes the siting of any VOR in the immediate vicinity.

SKAGWAY APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.30	---
NDB	0.35	0.05
NDB/DME	0.35	0.05
VOR	0.35	0.05
VOR/DME	0.39	0.09
TACAN	0.39	0.09

SPARREVOHN

NAVAID Requestor - Alaska Air Carriers Association
NAVAID Application - Enroute
NAVAID Type - VOR/DME

This proposed facility lies midway between Anchorage and Bethel. This facility would provide VOR/DME coverage along the existing colored route G-9. Currently, an DOD NDB is operational at this location. The local terrain is reasonably flat; however, the location is very remote from any populated area. The ranking for this route is second for both total flights and revenue. Taylor Mountain, which is in the vicinity, has been recommended by the air taxi operators. Note that an NDB at this site still leaves navigation gaps at all altitudes considered.

There is an existing NDB approach at Sparrevohn which requires 3,000 ft minimums and 5 mile visibility. The use of a VOR rather than an NDB at Sparrevohn will not improve these mini-

mums substantially. The use of a DME could possibly reduce minimums by about 800 to 900 ft if the missed approach point is located to the south of the airport. This would permit missed approaches to make a 180° turn before encountering the high terrain to the north of the airport. The siting of a VOR at this airfield would be quite difficult due to the terrain to the north of the airport.

Sparrevohn is ranked by Alaska Air Carriers Association 2nd of 6 recommended sites. Both the St. Mary's and the Taylor Mt. (Sparrevohn) sites would provide for IFR capabilities that currently do not exist in an area served by 27 based air taxi services plus at least five other state carriers flying regularly to points in the area from both Fairbanks and Anchorage.

A Taylor Mt. or Sparrevohn facility would give new coverage on the Anchorage-Bethel route, at the under 10,000 ft level, where a "gap" in NAVAIDS exists which is almost 175 miles long.

Sparrevohn is ranked by FAA Alaska Region 2nd of 28 recommended sites. This VORTAC would provide a needed VOR federal airway route structure between Anchorage and Bethel and King Salmon-Galena. A route structure is not possible due to excessive distances between VOR facilities. VORTAC to be located in the general area.

SPARREVOHN ENROUTE IMPROVEMENT POTENTIAL

EFFECTED ROUTES	EXISTING GAP (NMI) AT			PROJECTED GAP AFTER ADDING					
				NDB AT			TACAN, VOR W/WO DME AT		
	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL
G-9	197	138	77	109	51	5	90	0	0

SPARREVOHN APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.82	---
NDB	0.82	---
NDB/DME	0.96	0.14
VOR	0.82	0
VOR/DME	0.96	0.14
TACAN	0.96	0.14

STEVENS VILLAGE

NAVAID Requestors	-	(1) FAA Alaska Region (2) Alaska Air Carriers Assoc.
NAVAID Applications	-	(1) & (2) - Enroute
NAVAID Types	-	(1) VORTAC (2) VOR/DME
Affected Route	-	New

Stevens Village is located in a flat area in central Alaska between Fairbanks and Bettles. All of the approaches are based on the airport field elevation of 310 ft. There should be no siting problems at this location.

Stevens Village is ranked by Alaska Air Carriers Association 5th of 6 recommended sites. This facility would provide needed aid along a route heavily traveled in connection with energy development in Alaska as well as other regular commerce.

This facility is ranked by FAA Alaska Region 22nd of 28 recommended sites. This VORTAC is to be used as a gap filler and to provide guidance for routes serving the North Slope. However, an adequate route structure with reasonable MEA's can be established based upon the facilities currently installed at Fairbanks, Bettles, Ft. Yukon and Deadhorse, along with the VOR/DME proposed for Umiat.

STEVENS VILLAGE APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.85	---
NDB	1.00	0.15
NDB/DME	1.00	0.15
VOR	1.00	0.15
VOR/DME	1.00	0.15
TACAN	1.00	0.15

SUMMIT

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC

Summit is located in the extremely mountainous terrain between Anchorage and Fairbanks and would act as a gap filler along the dense traffic routes in this region. Siting would be difficult in this area.

Summit has an existing NDB approach. The use of a VOR would be very dubious due to siting problems. In addition, a VOR would not significantly reduce minimums. The use of a DME could potentially reduce the MDA by using a step down fix. However, these minimums would be well above the airport elevation. The terrain limiting effect on the VOR system is again manifested by the gap sizes.

Summit is ranked by FAA Alaska Region 19th of 28 recommended sites. This VORTAC will be used as a gap filler to provide more precise guidance between Anchorage and Fairbanks.

SUMMIT ENROUTE IMPROVEMENT POTENTIAL

EFFECTED ROUTES	EXISTING GAP (NMI) AT			PROJECTED GAP AFTER ADDING					
				NDB AT			TACAN, VOR W/WO DME AT		
	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL
V438	105	38		24	0		60	0	
V436	0			0			0		

SUMMIT APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.70	---
NDB	0.70	---
NDB/DME	0.82	0.12
VOR	0.70	0
VOR/DME	0.82	0.12
TACAN	0.82	0.12

TOGIAK

NAVAID Requestor - Kodiak-Western Airlines
NAVAID Application - Approach
NAVAID Type - VOR

See Cape Newenham for enroute information.

TOGIAK APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.63	---
NDB	0.92	0.29
NDB/DME	0.92	0.29
VOR	0.92	0.29
VOR/DME	0.93	0.30
TACAN	0.93	0.30

TOKSOOK

NAVAID Requestor - Wien Air Alaska
NAVAID Application - Approach
NAVAID Type - VOR/DME

Toksook is located in a relatively flat area of western Alaska; however, there is a 600 ft ridge to the west of the air-

port. This ridge affects missed approaches and, thus, produces an increased MDA requirement. This ridge could also produce a slight problem in siting the VOR. However, there should be no major problems with finding a satisfactory VOR location.

Toksook is ranked by Wien Air Alaska 10th of 15 recommended sites. Wien's need for approach aids at these airports is sufficient to the point that they have installed and are currently operating their own NDB's at this airport.

TOKSOOK APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.63	---
NDB	0.92	0.29
NDB/DME	0.92	0.29
VOR	0.92	0.29
VOR/DME	0.93	0.30
TACAN	0.93	0.30

UMIAT

NAVAID Requestors - (1) FAA Alaska Region
(2) Alaska Air Carriers Assoc.

NAVAID Applications - (1) & (2) - Enroute

NAVAID Type - (1) VORTAC
(1) VOR/DME

Route Affected - New

Umiat is located near the north slope, southwest of Prudhoe Bay. The terrain around Umiat is relatively flat with a slight rise going to the north or the south away from the river bed. All of the approaches at Umiat were based on the field elevation of 352 ft. There should be relatively few problems in siting a VOR at this location.

This facility appears to be a second focal point for the Victor airway structure of Bornite. Currently, an NDB exists at this location.

Umiat is ranked by the Alaska Air Carriers Association 4th of 6 recommended sites. A facility at Umiat would provide an aid north of the Brooks Range, half way between Barrow and Bettles, which is south of the Brooks Range. Although not filling the signal gap, it would at least reduce it and make available an aid in an area of unutual activity because of oil and mineral related activities.

Umiat is ranked by the FAA Alaska Region 16th of 28 recommended sites. This VORTAC would provide an operational advantage to pilots and controllers through improved route structures that reduce aircraft delay and enhance safety by improving accuracy of air navigation.

UMIAT APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.68	---
NDB	0.68	---
NDB/DME	0.68	0
VOR	0.68	0
VOR/DME	0.76	0.08
TACAN	0.76	0.08

UMNAK

NAVAID Requestor - None

Umnak is located in the Aleutian chain on a flat coastal area of a volcanic island. The area surrounding the airport is relatively flat and should permit instrument approaches to be made with relatively little difficulty. If the VOR is sited carefully, there should be few siting problems.

UMNAK APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.13	---
NDB	0.47	0.33
NDB/DME	0.47	0.33
VOR	0.47	0.33
VOR/DME	0.48	0.34
TACAN	0.48	0.34

VALDEZ

NAVAID Requestor - None

Valdez is located in an extremely mountainous area in the southern part of Alaska. The high terrain on all sides of the airport essentially prevents any low approaches to be made on instruments. At the present time, instrument approaches are made over Johnstone Point about 30 miles from the airport and the aircraft fly visually from that point. The siting of a VOR at the airport is virutally impossible.

VALDEZ APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.27	---
NDB	0.35	0.08
NDB/DME	0.43	0.16
VOR	0.35	0.08
VOR/DME	0.45	0.18
TACAN	0.45	0.18

WAINWRIGHT

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC
Affected Route - New

Wainwright is a Dew station west of Pt. Barrow on the North Slope. Terrain presents no problem at all. This facility would support a proposed Victor route along the Alaskan coastline. There is an existing NDB approach at this airport. At the present time, the approaches are limited by a 305 ft tower near the airport. The use of a DME at this location will result in slightly lower minimums. In general, there are no terrain problems to affect VOR siting or the instrument approach procedures.

Wainwright is ranked by FAA Alaska Region 17th of 28 recommended sites. This VORTAC would provide navigational guidance in the expected exploration area west of Umiat and support a route structure along the Arctic rim.

WAINWRIGHT APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NDB)	0.82	---
NDB	0.82	---
NDB/DME	0.86	0.04
VOR	0.86	0.04
VOR/DME	0.89	0.07
TACAN	0.89	0.07

WIEN ARCTIC VILLAGE

NAVAID Requestor - FAA Alaska Region
NAVAID Application - Enroute
NAVAID Type - VORTAC
Affected Route - New

Wien Arctic Village is located in the Brooks Mountain Range between Ft. Yukon and Barter Island. This facility would support air traffic to the North Slope. Currently, no navigation facilities are in existence at this site.

The NDB and the VOR approaches are limited by the procedure turn areas which include a 3,873 ft peak. The DME approaches are based on the field elevation of 2,200 ft. The siting of a VOR in this location would be very difficult due to the high terrain in the surrounding area.

Wien Arctic Village is ranked by FAA Alaska Region 14th of 28 recommended sites. This VORTAC will support a route structure to the North Slope and also to Europe.

WIEN ARCTIC VILLAGE APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.62	---
NDB	0.86	0.24
NDB/DME	0.93	0.31
VOR	0.86	0.24
VOR/DME	0.93	0.31
TACAN	0.93	0.31

WRANGEL

NAVAID Requestor - Alaska Airlines
NAVAID Application - Approach
NAVAID Type - TACAN or MLS

Wrangel is located in a very mountainous area in the southeastern part of Alaska. This is one of the two airfields in which Alaska Airlines would like to see improved minimums for the 727 operations. There has just recently been a localizer DME type approach put in at Wrangel. This approach permits a reduction in minimums to 1,100-3 for Category A and B aircraft, 1,720-3 for Category C aircraft and 2,400-3 for Category D aircraft. Alaska

Airline feels that a realignment of the localizer could produce lower minimums for their Category C and D operations. The missed approach procedure of Wrangel requires an approximately 160° turn to intercept the Level Island VOR radial. This type of missed approach procedure would be required for any type of approach at Wrangel due to the high terrain in this area. It may be possible to achieve lower minimums through the use of a TACAN facility which would permit a greater selection of radials to be used in the initial approach. The mountainous terrain on all sides of the airport precludes the use of a VOR at this location.

Wrangel is one of two sites that Alaska Airlines recommended for improved approach aids. Alaska Airlines would be able to phase out all Twin Otter flying, thus allowing them to close their Juneau base. This could save an estimated $200,000.

YAKATAGA

NAVAID Requestor	-	FAA Alaska Region
NAVAID Application	-	Enroute
NAVAID Type	-	VORTAC

Yakataga is located in the southern part of Alaska on the coast. There is an existing NDB at this airport. Its location, however, will produce MDA's in the vicinity of 1,800 ft. A relocation of this facility to the west of the airport could reduce the minimums considerably. The VOR was assumed to be located in this area when the MDA's for this procedure were developed. The use of a DME at this location will also provide for a point-in-space type approach over the water which permits descents to altitudes which are based on the airport elevation. The terrain to the north of Yakataga could produce some problems with VOR siting.

Yakataga is ranked by FAA Alaska Region 9th (Cape Yakataga) of 28 recommended sites. This VORTAC will be used as a gap filler and to lower the MEA significantly. It will also increase safety by providing more precise navigation.

YAKATAGA ENROUTE IMRPOVEMENT POTENTIAL

EFFECTED ROUTES	EXISTING GAP (NMI) AT			PROJECTED GAP AFTER ADDING					
				NDB AT			TACAN, VOR W/WO DME AT		
	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL	3000' ABOVE SITE	8000' MSL	13000' MSL
V317	105	23		40	0		14	0	

YAKATAGA APPROACH IMPROVEMENT POTENTIAL

NAVAID TYPE	ESTIMATED LANDING PROBABILITY FOR CATEGORY A AIRCRAFT	IMPROVED LANDING PROBABILITY RELATIVE TO CURRENT NAVAID
CURRENT (NONE)	0.35	---
NDB	0.74	0.39
NDB/DME	0.98	0.63
VOR	0.98	0.63
VOR/DME	0.99	0.64
TACAN	0.99	0.64

APPENDIX K
SUMMARY OF ALASKA-BASED AIRCRAFT AVIONICS EQUIPMENT

Processing the 1974 FAA Aircraft Master Registration Tape to ascertain the Alaska aircraft/avionics mix characteristics involved considering all of the Alaska-based aircraft and categorizing according to "primary use" and avionics equipment. The primary use determination is based upon a user completed entry on the registration forms. The available categories are as follows:

(1) executive,
(2) business,
(3) personal,
(4) aerial applications,
(5) instruction,
(6) air taxi,
(7) industrial/special,
(8) aircraft rental business, and
(9) other.

The avionics information includes whether or not each aircraft has ADF, VOR, DME and RNAV capability. These were grouped into the following categories:

(1) none,
(2) ADF,
(3) VOR,
(4) DME,
(5) ADF-VOR,
(6) ADF-DME,
(7) VOR-DME,
(8) ADF-VOR-DME, and
(9) RNAV.

Aircraft with RNAV were automatically categorized accordingly (Category 9). The other categories, however, were defined so as to be mutually exclusive. Category 2 (ADF), for example, implies the absence of VOR, DME, and RNAV equipment.

The results of the registration processing are presented in Table K.1. It must be pointed out that defects in the tapes allowed only 87% of the total aircraft to be processed. The total aircraft values may, therefore, be low. There is no reason to suspect, however, that the per cent statistics are biased.

Table K.1

Distribution of Navigation Avionics Equipment by Aircraft Primary Use and Type - Alaska Based Aircraft

Unknown

PRIMARY USE: 40.9% OF TOTAL AIRCRAFT .0% OF TOTAL FLIGHT HOURS

NAVIGATION CAPABILITY	FIXED WING SINGLE ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	FIXED WING MULTI ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	ROTORCRAFT NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	TOTAL AIRCRAFT	TOTAL FLIGHT HOURS
NONE	587.	47.1	0.	.0	54.	37.0	0.	.0	72.	90.0	0.	.0	713.	0.
ADF	33.	2.7	0.	.0	4.	2.7	0.	.0	5.	6.3	0.	.0	42.	0.
VOR	363.	29.2	0.	.0	3.	2.1	0.	.0	0.	.0	0.	.0	366.	0.
DME	1.	.1	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	1.	0.
ADF-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR	211.	16.9	0.	.0	30.	20.5	0.	.0	3.	3.7	0.	.0	244.	0.
VOR-DME	1.	.1	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	1.	0.
ADF-VOR-DME	12.	1.0	0.	.0	48.	32.9	0.	.0	0.	.0	0.	.0	60.	0.
RNAV	37.	3.0	0.	.0	7.	4.8	0.	.0	0.	.0	0.	.0	44.	0.
TOTAL	1245.	100.0	0.	.0	146.	100.0	0.	.0	80.	100.0	0.	.0	1471.	0.

Air Taxi

PRIMARY USE: 9.5% OF TOTAL AIRCRAFT 39.1% OF TOTAL FLIGHT HOURS

NAVIGATION CAPABILITY	FIXED WING SINGLE ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	FIXED WING MULTI ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	ROTORCRAFT NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	TOTAL AIRCRAFT	TOTAL FLIGHT HOURS
NONE	41.	18.5	27852.	25.8	4.	6.9	1260.	3.1	15.	24.6	6235.	27.5	60.	35347.
ADF	6.	2.7	1957.	1.8	0.	.0	0.	.0	22.	36.1	8530.	37.6	28.	10487.
VOR	34.	15.3	11455.	10.6	1.	1.7	50.	.1	3.	4.9	828.	3.7	38.	16333.
DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR	119.	53.6	56731.	52.6	23.	39.7	17575.	43.7	21.	34.4	7067.	31.2	163.	81373.
VOR-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR-DME	9.	4.1	3394.	3.1	21.	36.2	16918.	42.1	0.	.0	0.	.0	30.	20312.
RNAV	13.	5.9	6523.	6.0	9.	15.5	4394.	10.9	0.	.0	0.	.0	22.	10917.
TOTAL	222.	100.0	107912.	100.0	58.	100.0	40197.	100.0	61.	100.0	22660.	100.0	341.	170769.

Table K.1

(Continued)

PRIMARY USE: 3 Personal

33.0% OF TOTAL AIRCRAFT 29.7% OF TOTAL FLIGHT HOURS

NAVIGATION CAPABILITY	FIXED WING SINGLE ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	FIXED WING MULTI ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	ROTORCRAFT NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	TOTAL AIRCRAFT	TOTAL FLIGHT HOURS
NONE	341.	29.1	32403.	25.2	0.	.0	0.	.0	2.	50.0	30.	22.7	343.	32433.
ADF	29.	2.5	3758.	2.9	1.	9.1	25.	2.0	0.	.0	0.	.0	30.	3783.
VOR	478.	40.8	49445.	38.5	2.	18.2	89.	7.1	1.	25.0	60.	45.5	481.	49594.
DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR	259.	22.1	36574.	28.5	5.	45.5	1036.	82.1	0.	.0	0.	.0	264.	37610.
VOR-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR-DME	11.	.9	1009.	.8	3.	27.3	112.	8.9	0.	.0	0.	.0	14.	1121.
RNAV	53.	4.5	5224.	4.1	0.	.0	0.	.0	1.	25.0	42.	31.8	54.	5266.
TOTAL	1171.	100.0	128413.	100.0	11.	100.0	1262.	100.0	4.	100.0	132.	100.0	1186.	129807.

PRIMARY USE: 9 Other

.9% OF TOTAL AIRCRAFT 2.8% OF TOTAL FLIGHT HOURS

NAVIGATION CAPABILITY	FIXED WING SINGLE ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	FIXED WING MULTI ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	ROTORCRAFT NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	TOTAL AIRCRAFT	TOTAL FLIGHT HOURS
NONE	2.	9.5	219.	2.5	0.	.0	0.	.0	0.	.0	0.	.0	2.	219.
ADF	10.	47.6	3744.	42.0	0.	.0	0.	.0	0.	.0	0.	.0	10.	3744.
VOR	5.	23.8	999.	11.2	1.	8.3	7.	.2	0.	.0	0.	.0	6.	1006.
DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR	3.	14.3	3672.	41.2	3.	25.0	940.	29.4	0.	.0	0.	.0	6.	4612.
VOR-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR-DME	1.	4.8	286.	3.2	4.	33.3	759.	23.7	0.	.0	0.	.0	5.	1045.
RNAV	0.	.0	0.	.0	4.	33.3	1492.	46.7	0.	.0	0.	.0	4.	1492.
TOTAL	21.	100.0	8920.	100.0	12.	100.0	3198.	100.0	0.	.0	0.	.0	33.	12118.

Table K.1

(Continued)

Instruction

PRIMARY USE: 5

2.5% OF TOTAL AIRCRAFT 8.5% OF TOTAL FLIGHT HOURS

NAVIGATION CAPABILITY	FIXED WING SINGLE ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	FIXED WING MULTI ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	ROTORCRAFT NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	TOTAL AIRCRAFT	TOTAL FLIGHT HOURS
NONE	8.	9.6	1932.	5.3	0.	.0	0.	.0	2.	100.0	9.	100.0	10.	1941.
ADF	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
VOR	50.	60.2	24254.	66.9	1.	25.0	147.	20.2	0.	.0	0.	.0	51.	24401.
DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR	21.	25.3	7936.	21.9	1.	25.0	136.	18.7	0.	.0	0.	.0	22.	8072.
VOR-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR-DME	1.	1.2	610.	1.7	2.	50.0	443.	61.0	0.	.0	0.	.0	3.	1053.
RNAV	3.	3.6	1514.	4.2	0.	.0	0.	.0	0.	.0	0.	.0	3.	1514.
TOTAL	83.	100.0	36246.	100.0	4.	100.0	726.	100.0	2.	100.0	9.	100.0	89.	36981.

Business

PRIMARY USE: 2

10.8% OF TOTAL AIRCRAFT 15.1% OF TOTAL FLIGHT HOURS

NAVIGATION CAPABILITY	FIXED WING SINGLE ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	FIXED WING MULTI ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	ROTORCRAFT NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	TOTAL AIRCRAFT	TOTAL FLIGHT HOURS
NONE	62.	17.3	8197.	14.2	0.	.0	0.	.0	0.	.0	0.	.0	62.	8197.
ADF	19.	5.3	3562.	6.2	0.	.0	0.	.0	1.	33.3	40.	1.9	20.	3622.
VOR	110.	30.7	15583.	27.0	0.	.0	0.	.0	1.	33.3	1251.	60.1	111.	16834.
DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR	138.	38.5	24248.	42.0	10.	35.7	2702.	42.9	1.	33.3	791.	38.0	149.	27741.
VOR-DME	1.	.3	160.	.3	0.	.0	0.	.0	0.	.0	0.	.0	1.	160.
ADF-VOR-DME	6.	1.7	652.	1.1	15.	53.6	3239.	51.4	0.	.0	0.	.0	21.	3891.
RNAV	22.	6.1	5298.	9.2	3.	10.7	362.	5.7	0.	.0	0.	.0	25.	5660.
TOTAL	358.	100.0	57720.	100.0	28.	100.0	6303.	100.0	3.	100.0	2082.	100.0	389.	66105.

Table K.1
(Continued)

PRIMARY USE: 6 Rental
.9% OF TOTAL AIRCRAFT 2.3% OF TOTAL FLIGHT HOURS

NAVIGATION CAPABILITY	FIXED WING SINGLE ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	FIXED WING MULTI ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	ROTORCRAFT NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	TOTAL AIRCRAFT	TOTAL FLIGHT HOURS
NONE	1.	3.1	161.	1.7	0.	.0	0.	.0	0.	.0	0.	.0	1.	161.
ADF	0.	.0	0.	.0	0.	.0	0.	.0	1.	100.0	560.	100.0	1.	560.
VOR	14.	43.8	5584.	59.7	0.	.0	0.	.0	0.	.0	0.	.0	14.	5584.
DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR	16.	50.0	3334.	35.7	1.	100.0	70.	100.0	0.	.0	0.	.0	17.	3404.
VOR-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
RNAV	1.	3.1	270.	2.9	0.	.0	0.	.0	0.	.0	0.	.0	1.	270.
TOTAL	32.	100.0	9349.	100.0	1.	100.0	70.	100.0	1.	100.0	560.	100.0	34.	9979.

PRIMARY USE: 7 Industrial/Special
.6% OF TOTAL AIRCRAFT 1.6% OF TOTAL FLIGHT HOURS

NAVIGATION CAPABILITY	FIXED WING SINGLE ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	FIXED WING MULTI ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	ROTORCRAFT NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	TOTAL AIRCRAFT	TOTAL FLIGHT HOURS
NONE	1.	7.7	300.	8.7	0.	.0	0.	.0	3.	42.9	1366.	52.8	4.	1666.
ADF	1.	7.7	475.	13.8	0.	.0	0.	.0	1.	14.3	232.	9.0	2.	707.
VOR	5.	38.5	1105.	32.0	0.	.0	0.	.0	1.	14.3	403.	17.9	6.	1508.
DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR	5.	38.5	971.	28.1	1.	33.3	329.	33.6	2.	28.6	524.	20.3	8.	1824.
VOR-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR-DME	0.	.0	0.	.0	2.	66.7	650.	66.4	0.	.0	0.	.0	2.	650.
RNAV	1.	7.7	600.	17.4	0.	.0	0.	.0	0.	.0	0.	.0	1.	600.
TOTAL	13.	100.0	3451.	100.0	3.	100.0	979.	100.0	7.	100.0	2585.	100.0	23.	7015.

Table K.1

(Continued)

PRIMARY USE: 1 Executive

.4% OF TOTAL AIRCRAFT .6% OF TOTAL FLIGHT HOURS

NAVIGATION CAPABILITY	FIXED WING SINGLE ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	FIXED WING MULTI ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	ROTORCRAFT NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	TOTAL AIRCRAFT	TOTAL FLIGHT HOURS
NONE	3.	25.0	644.	26.6	0.	.0	0.	.0	0.	.0	0.	.0	3.	644.
ADF	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
VOR	4.	33.3	465.	19.2	0.	.0	0.	.0	0.	.0	0.	.0	4.	465.
DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR	4.	33.3	1173.	48.5	0.	.0	0.	.0	0.	.0	0.	.0	4.	1173.
VOR-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR-DME	1.	8.3	136.	5.6	3.	75.0	375.	99.7	0.	.0	0.	.0	4.	511.
RNAV	0.	.0	0.	.0	1.	25.0	1.	.3	0.	.0	0.	.0	1.	1.
TOTAL	12.	100.0	2418.	100.0	4.	100.0	376.	100.0	0.	.0	0.	.0	16.	2794.

PRIMARY USE: 4 Aerial Application

.4% OF TOTAL AIRCRAFT .3% OF TOTAL FLIGHT HOURS

NAVIGATION CAPABILITY	FIXED WING SINGLE ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	FIXED WING MULTI ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	ROTORCRAFT NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	TOTAL AIRCRAFT	TOTAL FLIGHT HOURS
NONE	4.	66.7	362.	70.0	0.	.0	0.	.0	0.	.0	0.	.0	4.	362.
ADF	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
VOR	1.	16.7	120.	23.2	0.	.0	0.	.0	0.	.0	0.	.0	1.	120.
DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR	1.	16.7	35.	6.8	0.	.0	0.	.0	0.	.0	0.	.0	1.	35.
VOR-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR-DME	0.	.0	0.	.0	7.	100.0	984.	100.0	0.	.0	0.	.0	7.	984.
RNAV	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
TOTAL	6.	100.0	517.	100.0	7.	100.0	984.	100.0	0.	.0	0.	.0	13.	1501.

Table K.1
(Continued)

TOTALS

NAVIGATION CAPABILITY	FIXED WING SINGLE ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	FIXED WING MULTI ENGINE NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	ROTORCRAFT NO. OF AIRCRAFT	% OF TOTAL	FLIGHT HOURS	% OF TOTAL	TOTAL AIRCRAFT	TOTAL FLIGHT HOURS
NONE	1050.	33.2	72070.	20.3	58.	21.2	1260.	2.3	94.	59.5	7640.	27.3	1202.	80970.
ADF	98.	3.1	13516.	3.8	5.	1.8	25.	.0	30.	19.0	9362.	33.4	133.	22903.
VOR	1064.	33.6	109010.	30.7	8.	2.9	293.	.5	6.	3.8	2602.	9.3	1078.	111905.
DME	1.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	1.	0.
ADF-DME	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	.0	0.	0.
ADF-VOR	777.	24.6	134674.	37.9	74.	27.0	22788.	42.1	27.	17.1	8382.	29.9	878.	165844.
VOR-DME	2.	.1	160.	.0	0.	.0	0.	.0	0.	.0	0.	.0	2.	160.
ADF-VOR-DME	41.	1.3	6087.	1.7	105.	38.3	23480.	43.4	0.	.0	0.	.0	146.	29567.
RNAV	130.	4.1	19429.	5.5	24.	8.8	6249.	11.6	1.	.6	42.	.1	155.	25720.
TOTAL	3163.	100.0	354946.	100.0	274.	100.0	54095.	100.0	158.	100.0	28028.	100.0	3595.	437069.