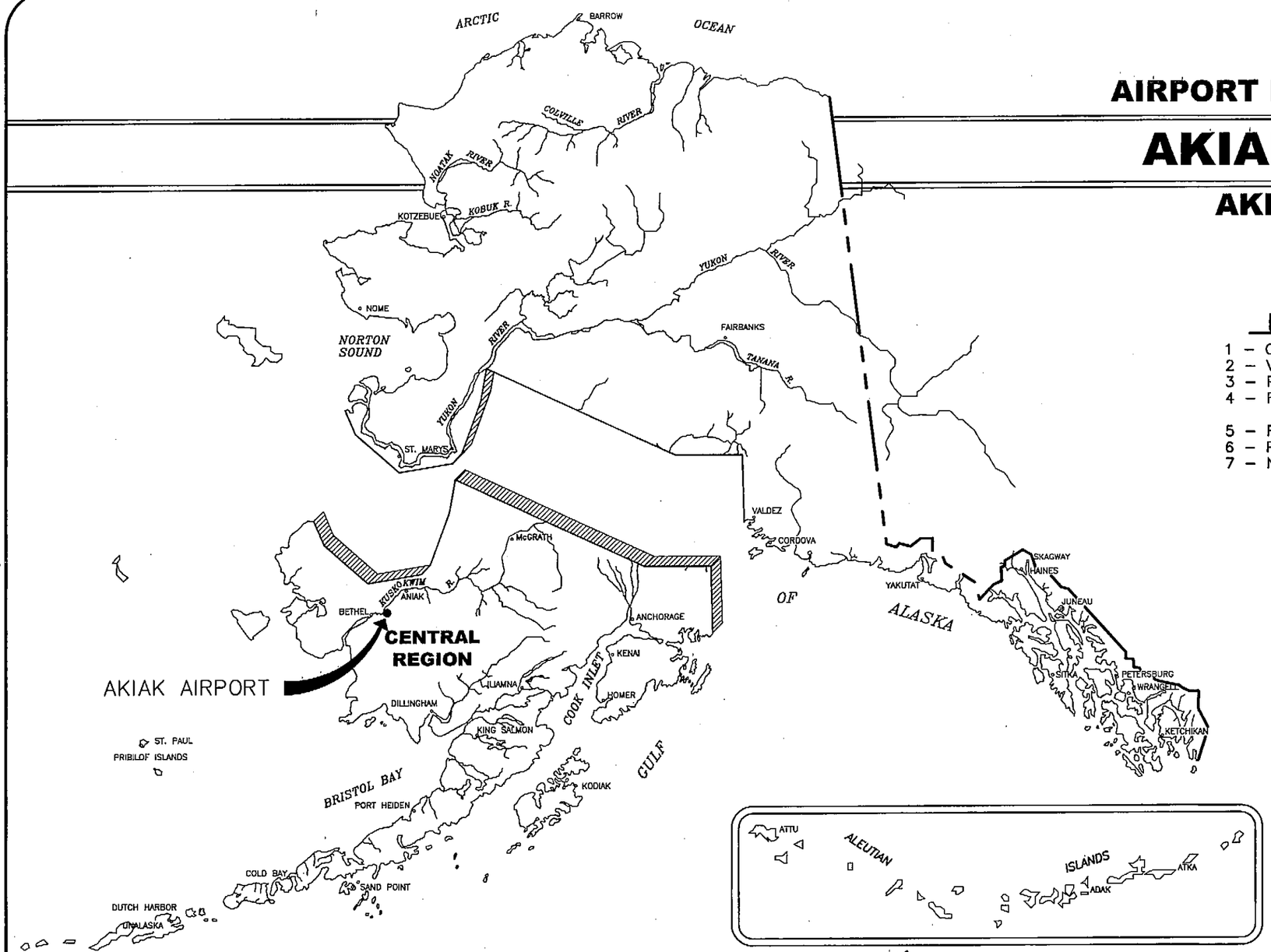
AIRPORT LAYOUT PLAN FOR

AKIAK AIRPORT

AKIAK, ALASKA

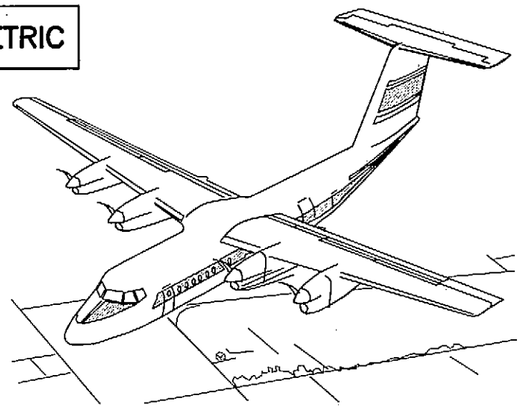
2002



DRAWING INDEX

1 – COVER SHEET AND INDEX
2 – VICINITY MAP AND DATA TABLES
3 – PLAN AND PROFILE
4 – RUNWAY APPROACH SURFACES PLAN AND PROFILE
5 – F.A.R. PART 77 SURFACES
6 – PROPERTY PLAN
7 – NARRATIVE REPORT

METRIC



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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
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CENTRAL REGION

CONCUR Glenn L. Miller for DATE 4/1/02
GORDON C. KEITH, P.E. DIRECTOR OF CONSTRUCTION AND OPERATIONS

APPROVED R. M. Wilson FOR DATE 3-29-02
STEVEN R. HORN, P.E. REGIONAL PRECONSTRUCTION ENGINEER

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 1/17/03

By: [signature] DATE: 1/17/03
FOR AIRPORTS DIVISION
ALASKAN REGION, AAL-___

FAA AIRSPACE REVIEW NUMBER
00-AAL-

AKIAK AIRPORT
AKIAK, ALASKA
AIRPORT LAYOUT PLAN

SHEET 1 OF 7

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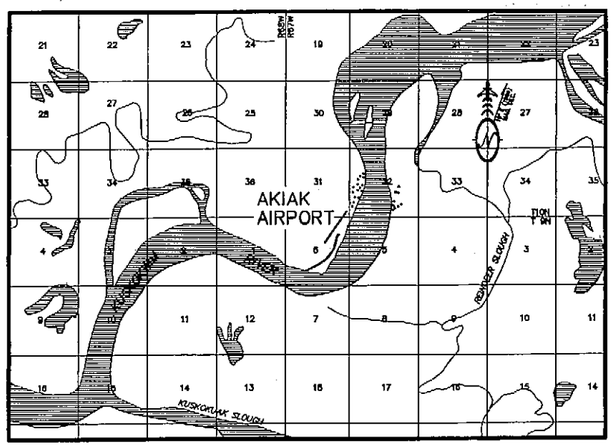

VICINITY MAP

T 10 N, R 67 W, SEC. 31
T 9 N, R 67 W, SEC. 6
SEWARD MERIDIAN
U.S.G.S. BETHEL (D-6), ALASKA

CONVERSION FACTORS FROM SI UNITS

TO CONVERT FROM	TO	MULTIPLY BY
STATION (1000 METERS)	FEET (ft)	3280.84
KILOMETER (km)	MILE (mi)	0.6214
METER (m)	MILE (mi)	0.00062137
METER (m)	FOOT (ft)	3.28083333
MILLIMETER (mm)	FOOT (ft)	0.00328084
MILLIMETER (mm)	INCH (in)	0.03937008
SQUARE METER (m^2)	SQUARE FOOT (ft^2)	10.76391042
SQUARE METER (m^2)	SQUARE YARD (yd^2)	1.19599
HECTARE (ha)	ACRE (Ac)	2.4711
CUBIC METER (m^3)	CUBIC FOOT (ft^3)	35.3146667
CUBIC METER (m^3)	CUBIC YARD (yd^3)	1.3079506
CUBIC METER (m^3)	GALLON (US LIQUID)	264.17204
CUBIC METER (m^3)	M. GAL.	0.26417204
KILOGRAM (kg)	POUND-MASS (LBM)	2.2046225
MEGAGRAM (Mg)	TON (SHORT)	1.10231
NEWTON (n)	POUND-FORCE (LBF)	0.2248089
LUX (lx)	FOOTCANDLE	0.092903
DEGREE CELSIUS (°C)	DEGREE FAHRENHEIT (°F)	°F=(1.8 x °C)+32

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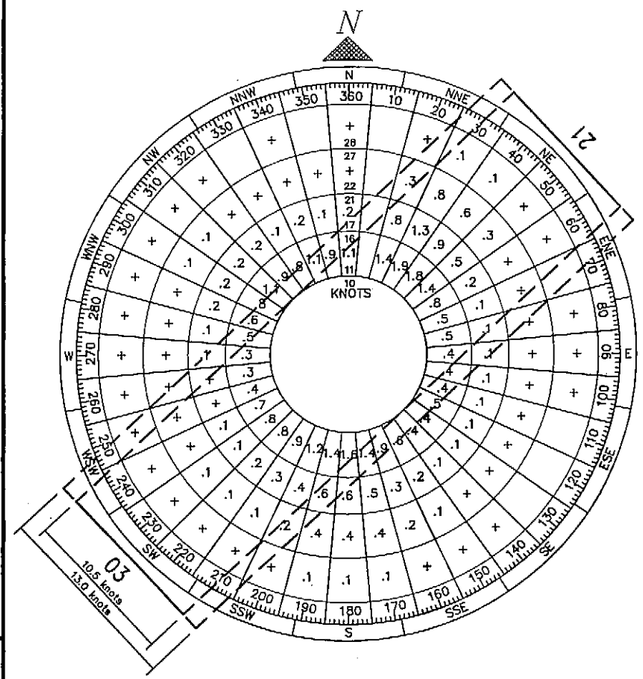


WIND DATA

WIND COVERAGE: 81.55% @ 10.5 KNOTS
88.98% @ 13.0 KNOTS

SOURCE: ALASKA STATE CLIMATIC CENTER
E.N.R.I. UNIVERSITY OF ALASKA, ANCHORAGE
DATA IS FOR BETHEL, ALASKA WHICH IS
32 km (19.9 mi) SOUTHWEST OF AKIAK

PERIOD: JANUARY 1992 – JUNE 1996

NONSTANDARD CONDITIONS

ITEM	EXISTING	STANDARD	FUTURE
WIND COVERAGE	88.98% @ 13 KNOTS *	95.0%	88.98% @ 13 KNOTS *
RUNWAY WIDTH	23m (75.5 ft)*	18m (59.1 ft)	23m (75.5 ft)*

* RUNWAY WIDTH INCREASED TO NEXT HIGHER AIRPORT REFERENCE CODE (B-II) TO PROVIDE FOR ADDITIONAL WIND COVERAGE.

NOTE: METRIC DIMENSIONS ARE IN ACCORDANCE WITH FAA AC 150/5300-13. ENGLISH UNIT CONVERSIONS ARE APPROXIMATE AND ARE FOR INFORMATION ONLY.

BASIC DATA TABLE
RUNWAY DATA

ITEM		RUNWAY 3/21 EXISTING	RUNWAY 3/21 FUTURE
EFFECTIVE GRADE		0.0%	
% WIND COVERAGE		88.98%	
INSTRUMENT RUNWAY		NONE	
RUNWAY SURFACE		GRAVEL	
PAVEMENT STRENGTH (LBS.)		N/A	
APPROACH SURFACES		20:1	
VISIBILITY MINIMUM		VISUAL	
RUNWAY LIGHTING		M.I.R.L.	
RUNWAY MARKING		NONE	
NAVIGATION AIDS		NONE	
RUNWAY SAFETY AREA DIMENSION		36m x 1119m (118.1 ft x 3671.3 ft)	
RUNWAY DIMENSION		23m x 975m * (75.5 ft x 3198.8 ft)	
RUNWAY OBJECT FREE AREA DIMENSION		120m x 1119m (393.7 ft x 3671.3 ft)	
RUNWAY OBSTACLE FREE ZONE DIMENSION		75m x 1095m (246.1 ft x 3592.5 ft)	
RUNWAY END COORDINATES (N.A.D. 83)			
RUNWAY 21	LAT.	60°54'21.173" N	
	LONG.	161°13'26.459" W	
RUNWAY 03	LAT.	60°53'59.883" N	
	LONG.	161°14'13.745" W	

BASIC DATA TABLE
AIRPORT DATA

ITEM		EXISTING	FUTURE
AIRPORT ELEVATION (M.S.L.)		12.12m(39.76 ft)	12.12m(39.76 ft)
AIRPORT REFERENCE POINT (A.R.P.)	LAT.	60°54'10.429" N	60°54'10.429" N
	LONG.	161°13'50.105" W	161°13'50.105" W
TAXIWAY LIGHTING		M.I.T.L.	M.I.T.L.
RAMP LIGHTING		NONE	NONE
MEAN MAXIMUM TEMPERATURE, HOTTEST MONTH (JULY)		17° C (62.6° F)	17° C (62.6° F)
MEAN MINIMUM TEMPERATURE, COLDEST MONTH (JANUARY)		-18° C (-0.4° F)	-18° C (-0.4° F)
MAGNETIC DECLINATION, YEAR		19° E (1998)	19° E (1998)
AIRPORT CATAGORY		B-1	B-1
AIRPORT AND TERMINAL NAVIGATION AIDS		NONE	NONE

LEGEND

ITEM	EXISTING	FUTURE
PROPERTY LINE		
AIRPORT REFERENCE POINT (A.R.P.)		
WIND CONE AND SEGMENTED CIRCLE		
CONTOURS	10	
ROADWAYS		
BUILDINGS		
ROTATING BEACON		
SHORELINE		
RUNWAY THRESHOLD LIGHT		
EDGE OF TREES		
RUNWAY PROTECTION ZONE (RPZ)	RPZ	RPZ
RUNWAY SAFETY AREA (RSA)	RSA	RSA
OBJECT FREE AREA (OFA)	OFA	OFA
BUILDING RESTRICTION LINE (BRL)	BRL	BRL
OBSTACLE FREE ZONE (OFZ)	OFZ	OFZ

FILE:
DATE:

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL 1/27/03
SUBJECT TO ALP APPROVAL LETTER DATED
By: DATE: 1/27/03
FAA AIRPORTS DIVISION
ALASKAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER: 02-AAL-162NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

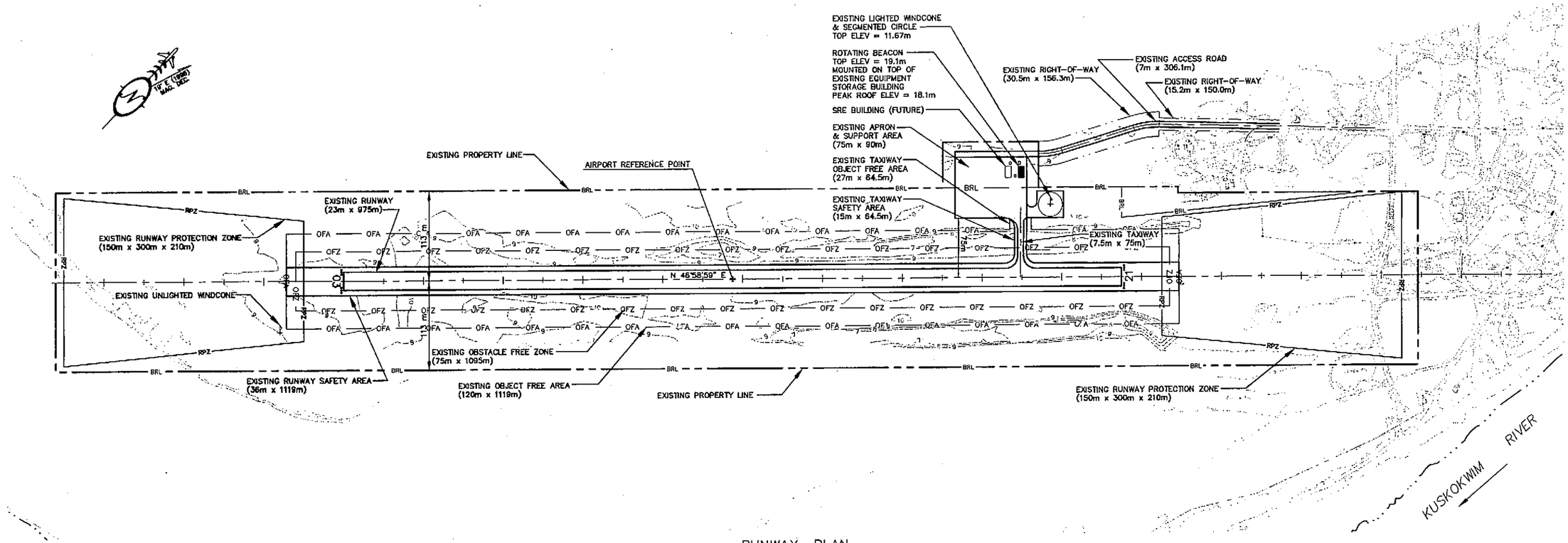
APPROVED: STEPHEN M. RYAN, P.E. — DESIGN SECTION CHIEF
APPROVED: JOHN G WAHL, P.E. — PROJECT MANAGER

DATE 4/1/02
DESIGN
DRAWN
CHECKED

AKIAK AIRPORT

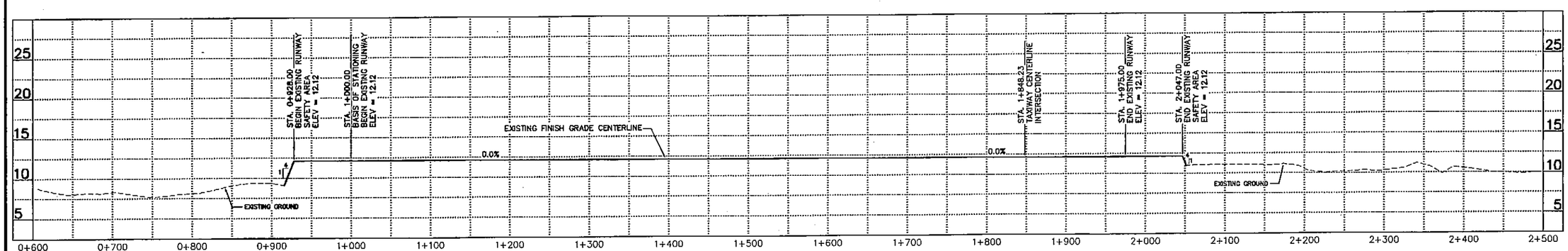
AIRPORT LAYOUT PLAN
VICINITY MAP & DATA TABLES

SHEET 2 OF 7



RUNWAY PLAN
SCALE – 1:2500

1 Meter = 3937/1200 U.S. Survey Feet
50 0 25 50 100 150 200 250
SCALE IN METERS



RUNWAY PROFILE
HORZ. SCALE – 1:2500
VERT. SCALE – 1:250

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FILE:
DATE:

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 1/17/03
By: [signature] DATE: 1/17/03
FAA AIRPORTS DIVISION ALASKAN REGION, AAL-___

FAA AIRSPACE REVIEW NUMBER: 00-AAL-600-

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

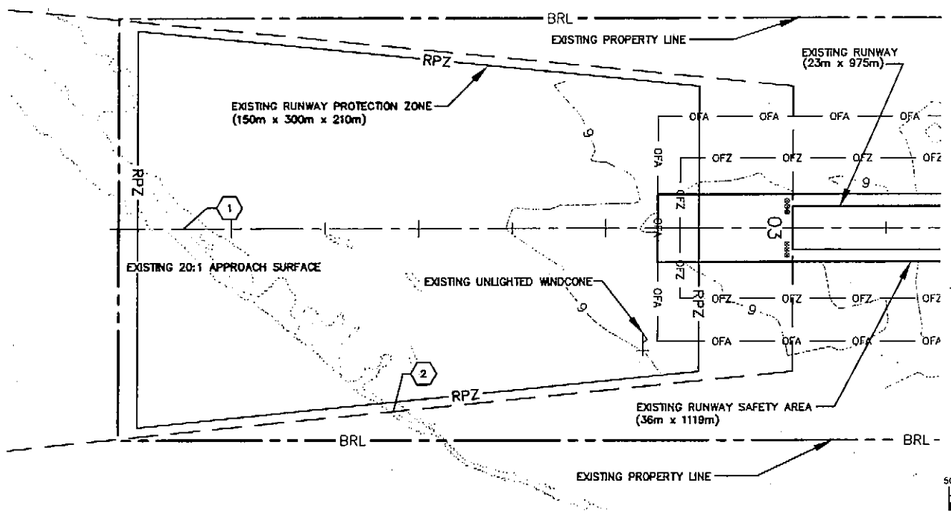
APPROVED: [signature] STEPHEN M. RYAN, P.E. DESIGN SECTION CHIEF
APPROVED: [signature] JOHN G. WAHL, P.E. PROJECT MANAGER

DATE 4/01/02
DESIGN
DRAWN
CHECKED

AKIAK AIRPORT
AKIAK, ALASKA

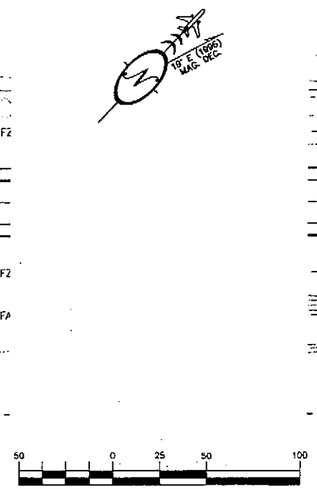
AIRPORT LAYOUT PLAN
PLAN & PROFILE

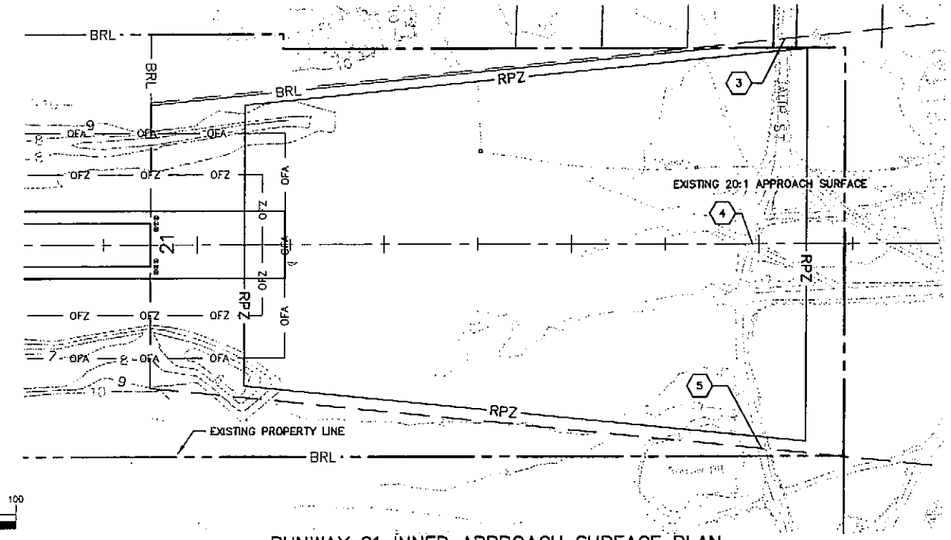
SHEET 3 OF 7



RUNWAY 03 INNER APPROACH SURFACE PLAN

SCALE – 1:1500



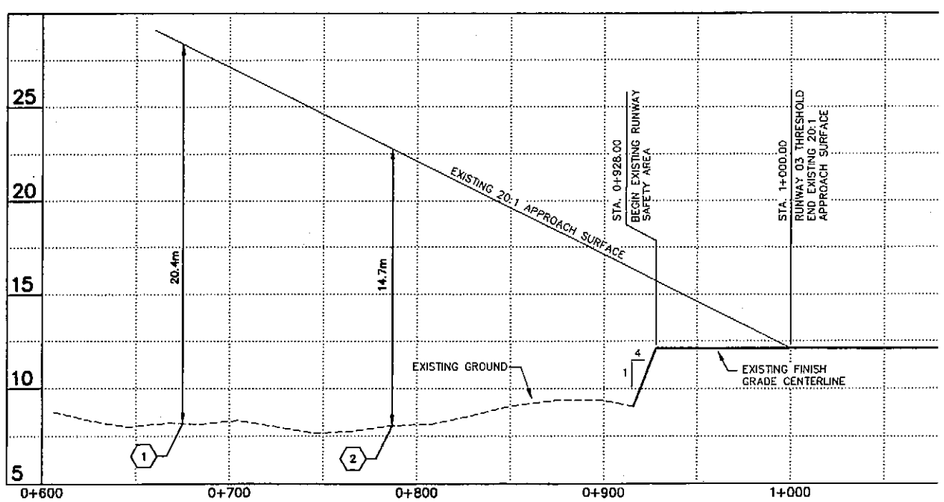


RUNWAY 21 INNER APPROACH SURFACE PLAN

SCALE – 1:1500

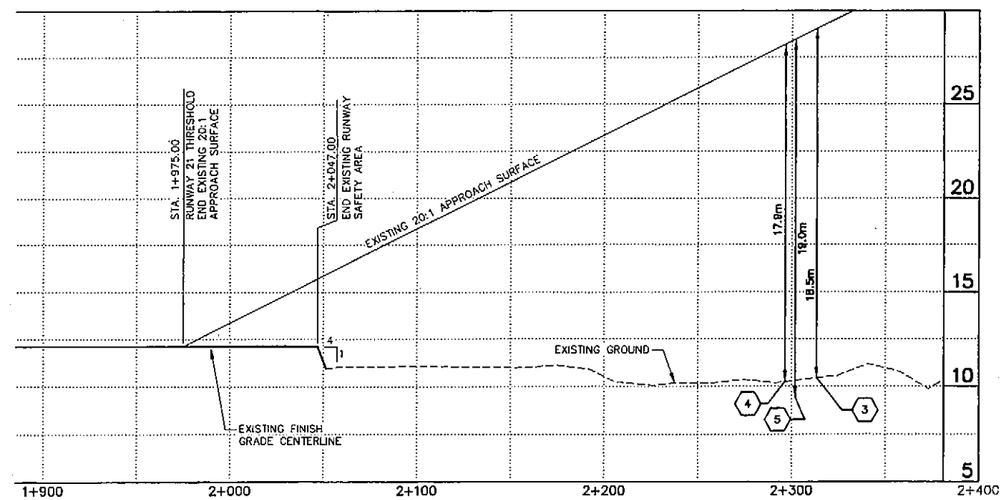
INNER APPROACH SURFACE OBSTRUCTION TABLE						
NO.	DESCRIPTION	OBJECT ELEVATION	APPROACH SURFACE ELEVATION	VERTICAL CLEARANCE	PENETRATION	DISPOSITION
1	TRAIL	8.2 m	28.3 m	20.1 m	0.0 m	N/A
2	TRAIL	8.1 m	22.8 m	14.7 m	0.0 m	N/A
3	ROAD	11.0 m	29.5 m	18.5 m	0.0 m	N/A
4	ROAD	10.1 m	28.0 m	17.9 m	0.0 m	N/A
5	ROAD	8.0 m	27.0 m	19.0 m	0.0 m	N/A

NO OFZ OBJECT PENETRATIONS
NO THRESHOLD SITING SURFACE PENETRATIONS



RUNWAY 03 INNER APPROACH SURFACE PROFILE

HORZ. SCALE – 1:1500
VERT. SCALE – 1:150



RUNWAY 21 INNER APPROACH SURFACE PROFILE

HORZ. SCALE – 1:1500
VERT. SCALE – 1:150

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AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 1/17/03
By: [signature] DATE: 1/17/03
FAA AIRPORTS DIVISION
ALASKAN REGION, AAL-___

FAA AIRSPACE REVIEW NUMBER: 00-AAL-600

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

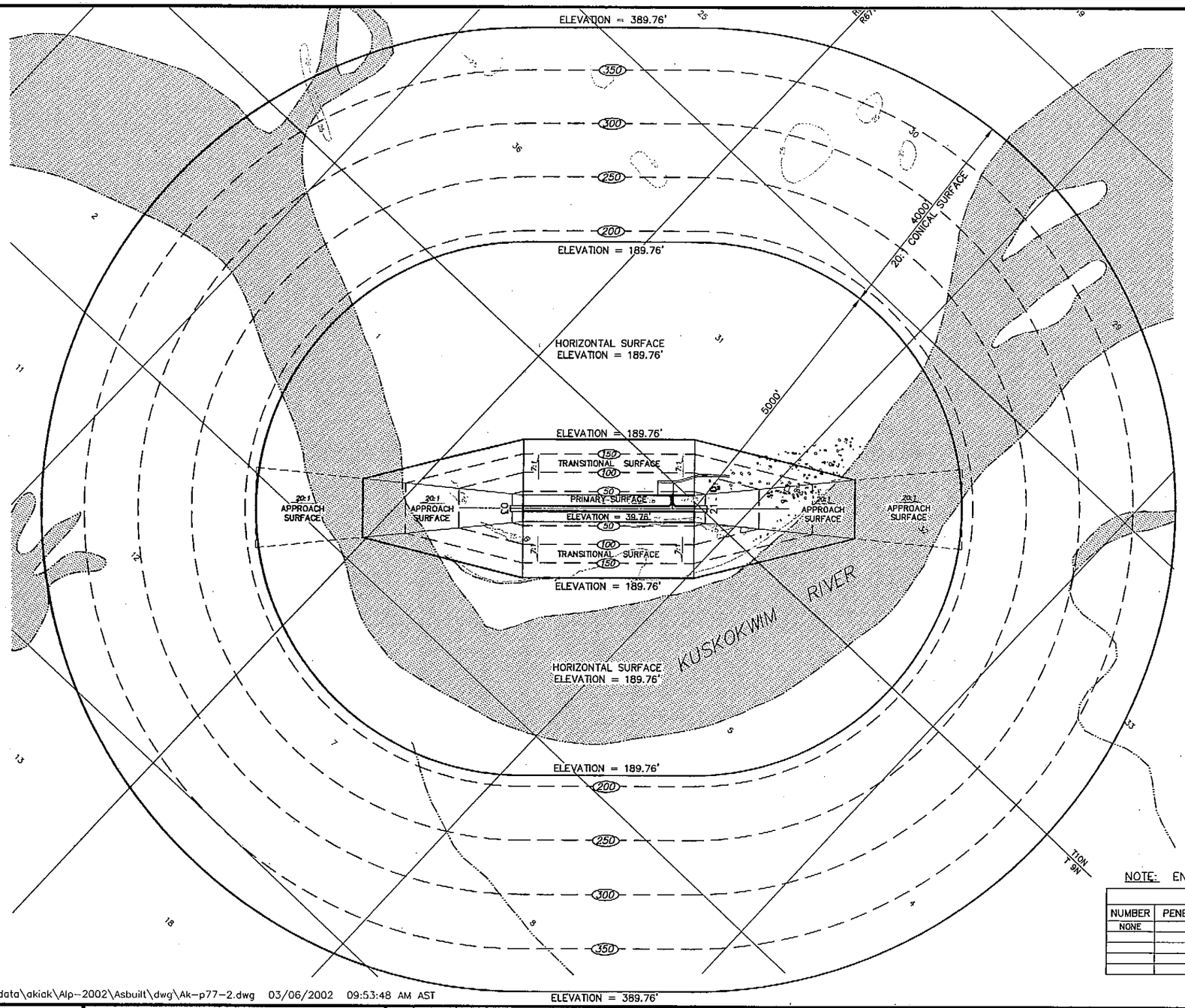
APPROVED: [signature] STEPHEN M. RYAN, P.E. — DESIGN SECTION CHIEF
APPROVED: [signature] JOHN G. WAHL, P.E. — PROJECT MANAGER

DATE 4/01/02
DESIGN
DRAWN [signature]
CHECKED [signature]

AKIAK AIRPORT
AKIAK, ALASKA

AIRPORT LAYOUT PLAN
RUNWAY 03/21 APPROACH SURFACES
PLAN AND PROFILE

SHEET 4 OF 7



SCALE: 1" = 1000'

1000' 500' 0 500' 1000' 2000'

SCALE IN FEET

19° E (1996) MAG. DEC.

LEGEND

WATER SURFACE

EDGE OF WATER

NOTES

1. AIRPORT AND RUNWAY ELEVATIONS ARE 39.76'.
2. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET.

NOTE: ENGLISH DIMENSIONS ARE IN ACCORDANCE WITH FAA AC 150/5300-13.

OBSTRUCTION DATA TABLE

NUMBER	PENETRATION DISTANCE	DESCRIPTION
NONE		

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DATE:

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BY: DATE: 1/27/03

FAA AIRPORTS DIVISION ALASKAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER: 00-AAL-

BY	DATE	REVISIONS

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

CENTRAL REGION

APPROVED: STEPHEN M. RYAN, P.E. — DESIGN SECTION CHIEF

APPROVED: JOHN G WAHL, P.E. — PROJECT MANAGER

DATE 4/01/02

DESIGN

DRAWN

CHECKED

AKIAK AIRPORT

AIRPORT LAYOUT PLAN

F.A.R. PART 77 SURFACES

SHEET 5 OF 7

SURVEY NOTES

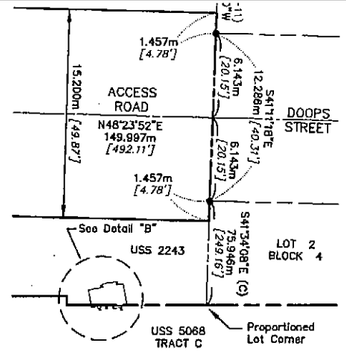
1. The minimum closure of all traverses meets or exceeds 1:10,000.
2. The basis of bearings for this survey is the mean NAD 83 geodetic bearing between runway centerline monuments at Station 1+000 and Station 1+975, according to GPS survey control, July 1996 originating from NGS B order GPS station "CABIN" located near Bethel; said mean bearing is N46°58'59"E.
3. The bearings shown are local plane bearings as oriented to the basis of bearings, and distances shown are reduced to horizontal ground distances.
4. The origin of coordinates is the centerline monument at Station 1+000, a 5/8"x30" rebar with 2" aluminum cap stamped as shown hereon, having the following coordinates:

   ASPC 83 ZONE 7: NAD 83:
   N 766,588.8603 LAT 60°53'59.68294" N
   E 541,400.8318 LONG 161°14'13.74542" W
   H 9.077

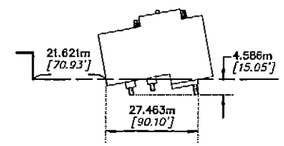
   The project grid factor used hereon is 0.9999229 and the mapping angle is 00°40'21".
5. The meter to foot conversion factor is 3.937/1200.
6. Information hereon is based on an actual field survey conducted during May 1997.
7. Bearings shown for the remainder of Tract D, USS 5068 are record bearings rotated counterclockwise 0°01'01" to agree with bearings used for this survey. These bearings are shown as being computed (C). Record distances were held throughout Tract D remainder unless noted otherwise.
8. All monuments shown hereon were found or set in May 1997.
9. Distances are horizontal ground meter units with U.S. Survey Feet in italicized brackets [ ].

LEGEND

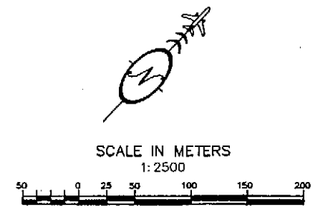
- Proposed Runway Centerline
- Proposed Access Road Centerline
- Proposed Airport Boundary
- Property Line
- Protracted Section Line
- Proposed Edge of Gravel
- Proposed Runway Protection Zone
- Found Brass Cap Monument
- Set 2" Aluminum Cap on 5/8" x 30" Rebar
- Found 1-1/2" Aluminum Cap on 5/8" x 30" Rebar
- × WCMC – searched for, not found
- (C) Computed
- (R) Record per USS 5068
- [ ] Distance in U.S. Survey Feet

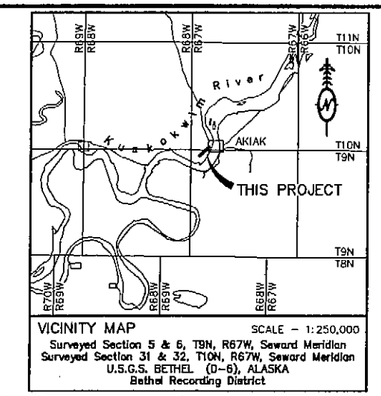


DETAIL "A" NTS



DETAIL "B" NTS

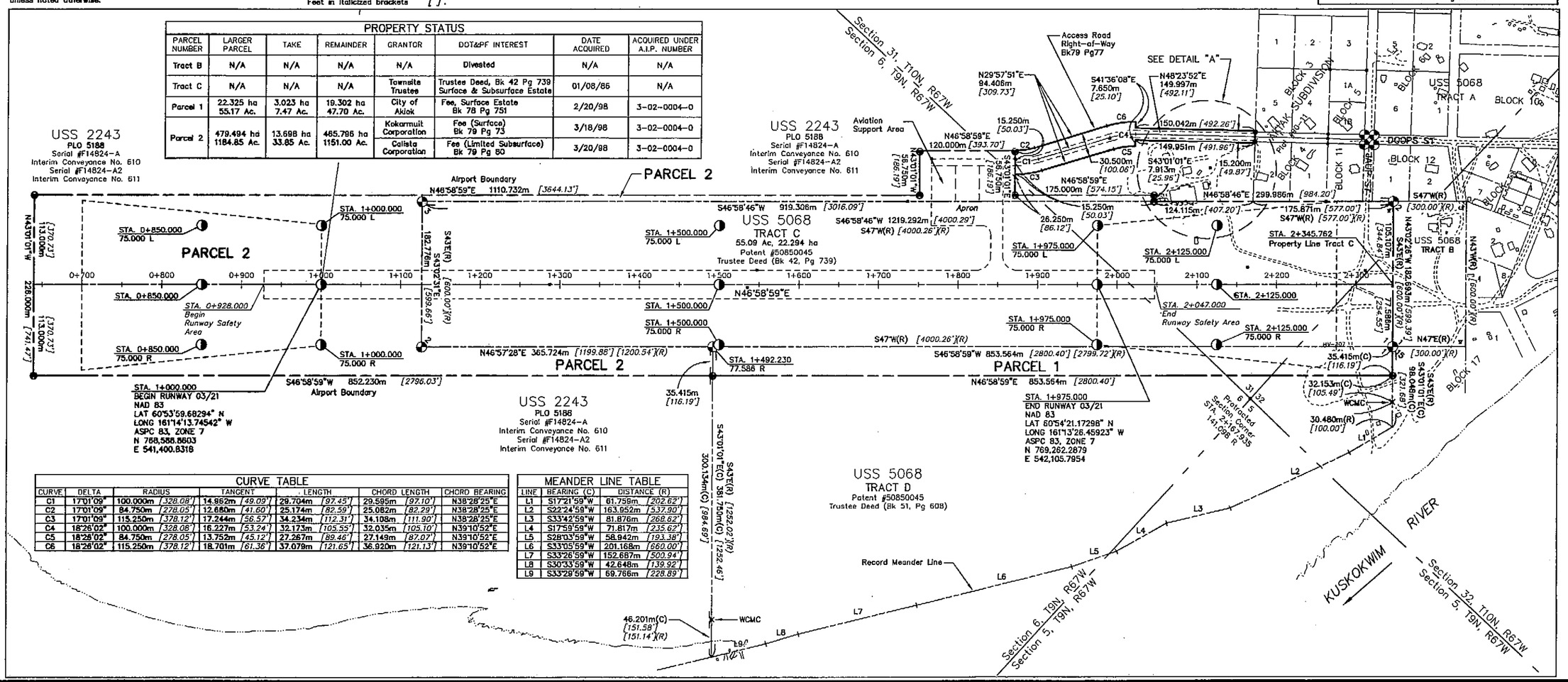




VICINITY MAP SCALE – 1:250,000
Surveyed Section 5 & 6, T9N, R67W, Seward Meridian
Surveyed Section 31 & 32, T10N, R67W, Seward Meridian
U.S.G.S. BETHEL (D-6), ALASKA
Bethel Recording District

PROPERTY STATUS

PARCEL NUMBER	LARGER PARCEL	TAKE	REMAINDER	GRANTOR	DOT&PF INTEREST	DATE ACQUIRED	ACQUIRED UNDER A.I.P. NUMBER
Tract B	N/A	N/A	N/A	N/A	Divested	N/A	N/A
Tract C	N/A	N/A	N/A	Townsite Trustee	Trustee Deed, Bk 42 Pg 739 Surface & Subsurface Estate	01/08/86	N/A
Parcel 1	22.325 ha 55.17 Ac.	3.023 ha 7.47 Ac.	19.302 ha 47.70 Ac.	City of Akiak	Fee, Surface Estate Bk 78 Pg 751	2/20/98	3-02-0004-0
Parcel 2	479.494 ha 1184.85 Ac.	13.698 ha 33.85 Ac.	465.796 ha 1151.00 Ac.	Kokarmuit Corporation	Fee (Surface) Bk 79 Pg 73	3/18/98	3-02-0004-0
				Calista Corporation	Fee (Limited Subsurface) Bk 79 Pg 80	3/20/98	3-02-0004-0



CURVE TABLE

CURVE	DELTA	RADIUS	TANGENT	LENGTH	CHORD LENGTH	CHORD BEARING
C1	17°01'09"	100.000m [328.08']	14.862m [49.09']	29.704m [97.45']	29.595m [97.10']	N38°28'25"E
C2	17°01'09"	84.750m [278.05']	12.680m [41.60']	25.174m [82.59']	25.082m [82.29']	N38°28'25"E
C3	17°01'09"	115.250m [378.12']	17.244m [56.57']	34.234m [112.31']	34.108m [111.90']	N38°28'25"E
C4	18°26'02"	100.000m [328.08']	16.227m [53.24']	32.173m [105.55']	32.035m [105.10']	N39°10'52"E
C5	18°26'02"	84.750m [278.05']	13.752m [45.12']	27.267m [89.46']	27.149m [87.07']	N39°10'52"E
C6	18°26'02"	115.250m [378.12']	18.701m [61.36']	37.079m [121.65']	36.920m [121.13']	N39°10'52"E

MEANDER LINE TABLE

LINE	BEARING (C)	DISTANCE (R)
L1	S17°21'59"W	61.759m [202.62']
L2	S22°24'59"W	163.952m [537.90']
L3	S33°42'59"W	81.876m [268.62']
L4	S17°59'59"W	71.817m [235.62']
L5	S28°03'59"W	58.942m [193.38']
L6	S33°05'59"W	201.168m [660.00']
L7	S33°26'59"W	152.687m [500.94']
L8	S30°33'59"W	42.648m [139.92']
L9	S33°29'59"W	69.766m [228.89']

FILE:
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AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 1/17/03
By: [signature] DATE: 1/17/03
FAA AIRPORTS DIVISION
ALASKAN REGION, AAL-

FAA AIRSPACE REVIEW NUMBER: 00-AAL-600

BY	DATE	REVISIONS
PLH	3/04/02	REMOVE PROPOSED RUNWAY TEXT
KPG	11/1/01	UPDATE PROPERTY STATUS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: [signature] STEPHEN M. RYAN, P.E. DESIGN SECTION CHIEF
APPROVED: [signature] JOHN G. WAHL, P.E. PROJECT MANAGER

DATE 4/01/02
DESIGN
DRAWN [signature]
CHECKED [signature]

AKIAK AIRPORT
AKIAK, ALASKA
AIRPORT LAYOUT PLAN
PROPERTY PLAN

PROPERTY PLAN SHEET 1 OF 1

SHEET 6 OF 7