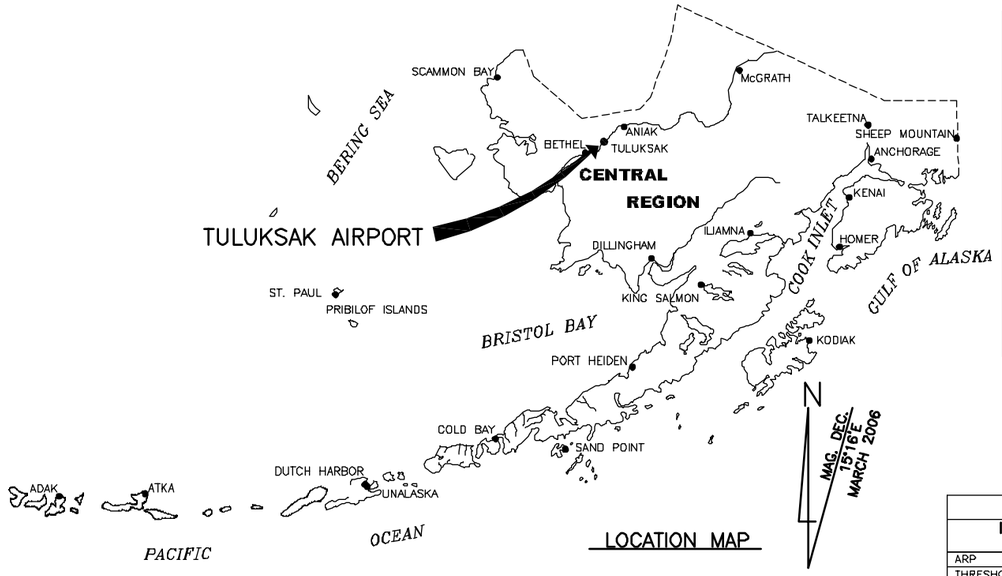
APPENDIX J

AIRPORT LAYOUT PLAN and NARRATIVE



LOCATION MAP

LEGEND

ITEM	EXISTING	ULTIMATE
AIRPORT REFERENCE POINT (A.R.P.)		
ANTENNA		
BLUFF		
BUILDINGS		
BUILDING RESTRICTION LINE	BRL	BRL
FENCE	—X—X—X—	—X—X—X—
PAPI		
PROPERTY LINE		
REIL		
ROADWAYS		
ROTATING BEACON		
SHORELINE		
SURVEY MONUMENT		
THRESHOLD MARKERS/LIGHTS		
TOPOGRAPHIC CONTOURS	100	100
TREE (LARGE SINGLE)		
TREELINE		
VASI		
WIND CONE		
WIND CONE AND SEGMENTED CIRCLE		

RUNWAY 02/20 DATA TABLE

ITEM	EXISTING	NEAR–TERM	ULTIMATE
RUNWAY TYPE UTILITY OR OTHER THAN UTILITY	UTILITY	DECOMMISSIONED	DECOMMISSIONED
FAR PART 77 APPROACH CATEGORY (V, NPI, P)	V / V		
APPROACH SURFACES	20:1/20:1		
VISIBILITY MINIMUM	1 SM		
RUNWAY SURFACE	GRAVEL		
PAVEMENT STRENGTH SW,DW,DTW,DDTW x1000lbs	N/A		
AIRCRAFT APPROACH CATEGORY	B		
AIRPLANE DESIGN GROUP	I		
TRUE BEARING	N44°44'42"E		
EFFECTIVE GRADE	0.0 %		
TOUCHDOWN ELEVATION NAVD88, NGVD29	27.0'/26.7'		
RUNWAY DIMENSIONS	30' X 2460'		
RUNWAY SAFETY AREA (RSA) DIMENSIONS	100' X 2770'		
LENGTH BEYOND R/W END	70'/240'		
RUNWAY PROTECTION ZONE (RPZ) DIMENSIONS	250' X 1000' X 450'		
RUNWAY OBJECT FREE AREA (OFA) DIMENSIONS	400' X 2940'		
LENGTH BEYOND R/W END OR STOPWAY	240'/240'		
RUNWAY OBSTACLE FREE ZONE (OFZ) DIMENSIONS	250' X 2900'		
RUNWAY LIGHTING	NONE		
RUNWAY MARKING TYPE	NONE		
RUNWAY VISUAL APPROACH AIDS	NONE		

RUNWAY 15/33 DATA TABLE

ITEM	EXISTING	NEAR–TERM	ULTIMATE
RUNWAY TYPE UTILITY OR OTHER THAN UTILITY	NOT APPLICABLE	SAME AS ULTIMATE	UTILITY
FAR PART 77 APPROACH CATEGORY (V, NPI, P)			NPI / NPI
APPROACH SURFACES			34:1/ 34:1
VISIBILITY MINIMUM			1 SM
RUNWAY SURFACE			GRAVEL
PAVEMENT STRENGTH SW,DW,DTW,DDTW x1000lbs			N/A
AIRCRAFT APPROACH CATEGORY			B
AIRPLANE DESIGN GROUP			I
TRUE BEARING (NAD83)			S19°48'43"E
EFFECTIVE GRADE			0 %
TOUCHDOWN ELEVATION NAVD88			32.3' / 32.3'
RUNWAY DIMENSIONS			60' X 3300'
RUNWAY SAFETY AREA (RSA) DIMENSIONS			120'x3780'
LENGTH BEYOND R/W END			240' / 240'
RUNWAY PROTECTION ZONE (RPZ) DIMENSIONS			500' X 1000' X 700'
RUNWAY OBJECT FREE AREA (OFA) DIMENSIONS			400'x3780'
LENGTH BEYOND R/W END OR STOPWAY			240'/240'
RUNWAY OBSTACLE FREE ZONE (OFZ) DIMENSIONS			250'x3700'
RUNWAY LIGHTING			MIRL
RUNWAY MARKING TYPE			NONE
RUNWAY VISUAL APPROACH AIDS			PAPI, REIL, BEACON

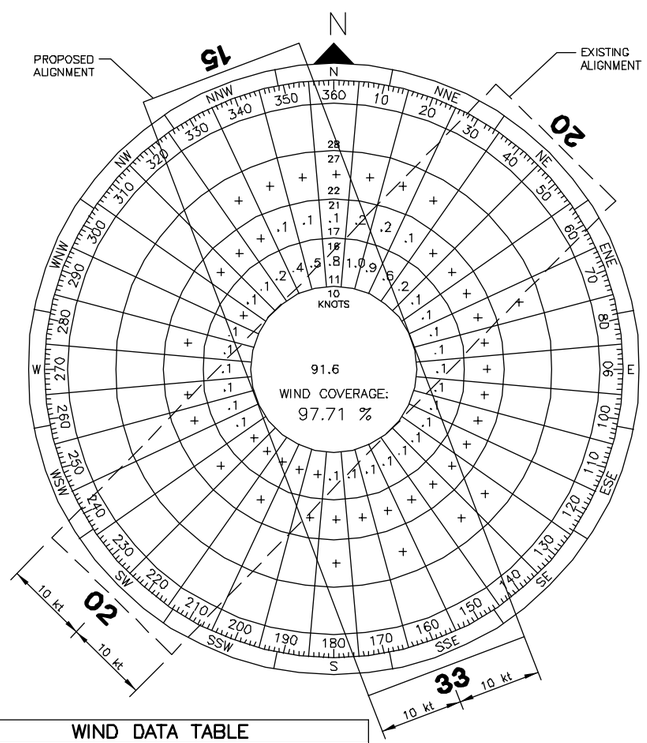
GEOGRAPHIC COORDINATES TABLE

ITEM	EXISTING* LATITUDE	EXISTING* LONGITUDE	ULTIMATE LATITUDE	ULTIMATE LONGITUDE
ARP	61°05'48.60"N	160°58'10.10"W	61°05'15.82"N	160°55'24.08"W
THRESHOLD RW 02	61°05'40.01"N	160°58'27.69"W	–	–
THRESHOLD RW 20	61°05'57.23"N	160°57'52.46"W	–	–
THRESHOLD RW 15	–	–	61°05'31.11"N	160°55'35.46"W
THRESHOLD RW 33	–	–	61°05'00.53"N	160°55'12.71"W

*VALUES OBTAINED FROM FAA FORM 5010

AIRPORT DATA TABLE

ITEM	EXISTING	ULTIMATE
ICAO IDENTIFIER	NONE	NONE
NATIONAL AIRPORT IDENTIFIER	TLT	TLT
FAA SITE NUMBER	50771.*A	50771.*A
AIRPORT ELEVATION NAVD88	28.9'	32.3'
AIRPORT REFERENCE CODE	B I	B I
MEAN MAX. TEMPERATURE, HOTTEST MONTH	63 F° JULY	63 F° JULY
AIRPORT AND TERMINAL NAVIGATION AIDS	NONE	GPS, PAPI, REILS
	–	ROTATING BEACON
TAXIWAY LIGHTING/MARKING	NONE / NONE	MITL / NONE
OBSTRUCTION SURVEY SOURCE & TYPE	AERIAL MAPPING, USGS QUAD	ANP
MAGNETIC DECLINATION, YEAR, RATE OF CHANGE	15°16'E, MARCH 2006	0°12' (W)/YEAR
	14°29'E, JAN 2010 EPOCH 0°12'W/YEAR	

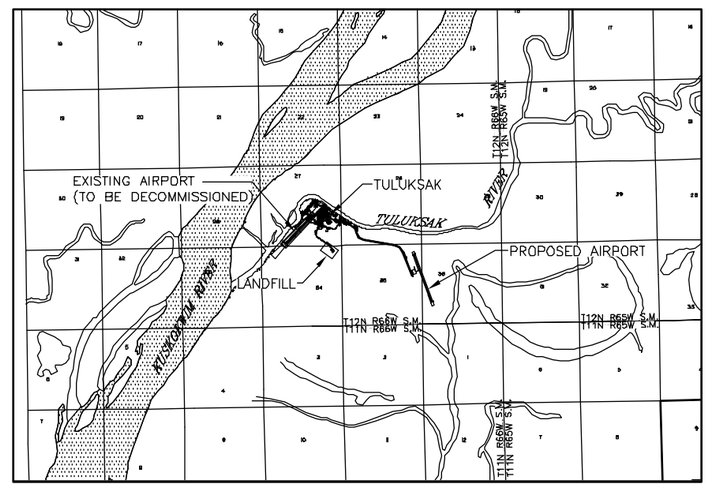


WIND DATA TABLE

RUNWAY	10.5 kt	13 kt	16 kt	20 kt
02/20	96.84%	–	–	–
15/33	97.71%	–	–	–

SOURCE: ENVIRONMENTAL AND NATURAL RESOURCES INSTITUTE (ENRI)

PERIOD: SEPTEMBER 1995 – FEBRUARY 1997



VICINITY MAP

1" = 5000'
T12N, R66W SECTIONS 25–27, 34–36
SEWARD MERIDIAN
USGS RUSSIAN MISSION (A–6), ALASKA

MODIFICATION TO STANDARDS/ NON STANDARD CONDITIONS

DESCRIPTION	STANDARD	EXISTING	ULTIMATE
RUNWAY SAFETY AREA WIDTH	120'	100'	120'
RUNWAY SAFETY AREA BEYOND THRESHOLD	240'	90'/240'	240'
TRAVERSE WAY IN RSA (END OF RUNWAY 20)	NONE	YES	NONE
BRUSH WITHIN OFA AND OFZ LIMITS	NONE	YES	NONE
TRAILS WITHIN OFA AND OFZ LIMITS	NONE	YES	NONE
DWELLINGS IN RPZ	NONE	8 DWELLINGS	NONE

DRAFT – NOT APPROVED BY FAA

BY	DATE	REVISION

DRAWING INDEX

SHT #	TITLE
1	WIND ROSE, DATA TABLES, LOCATION MAP & VICINITY MAP
2	EXISTING PLAN
3	ULTIMATE PLAN
4	INNER PORTION OF APPROACH SURFACE
5	F.A.R. PART 77 SURFACES
6	PROPERTY MAP

APPROVED: DATE:
PRECONSTRUCTION ENGINEER

RECOMMENDED: DATE:
DESIGN SECTION CHIEF

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED ___/___/___
FAA AIRSPACE REVIEW NUMBER: 2006–AAL–244–NRA

DATE:
FAA, AIRPORTS DIVISION ALASKAN REGION, AAL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

TULUKSAK AIRPORT
TULUKSAK, ALASKA
AIRPORT LAYOUT PLAN

WIND ROSE, DATA TABLES, LOCATION MAP & VICINITY MAP

DATE: 1/16/07
SHEET: 1 OF 6

Date Plotted: 1/17/2007, 8:36 AM
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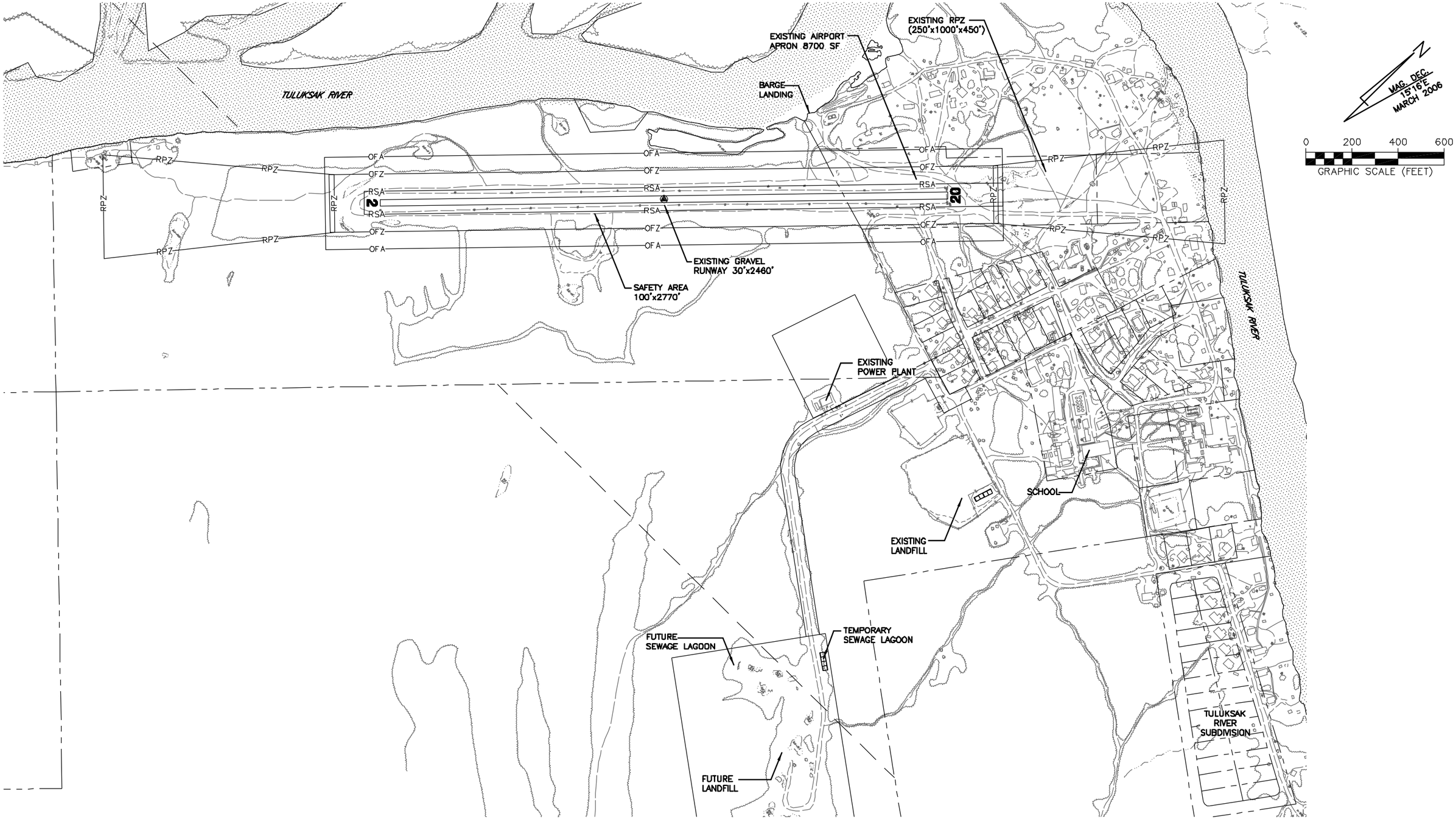
File Name: Z:\project\1247.01\CIVIL\Preliminary Engineering\ACAD_Civil\Acad\51247-alp01.dwg
Designed By:
Drawn By: PWinfree
Checked By:



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BY	DATE	REVISION

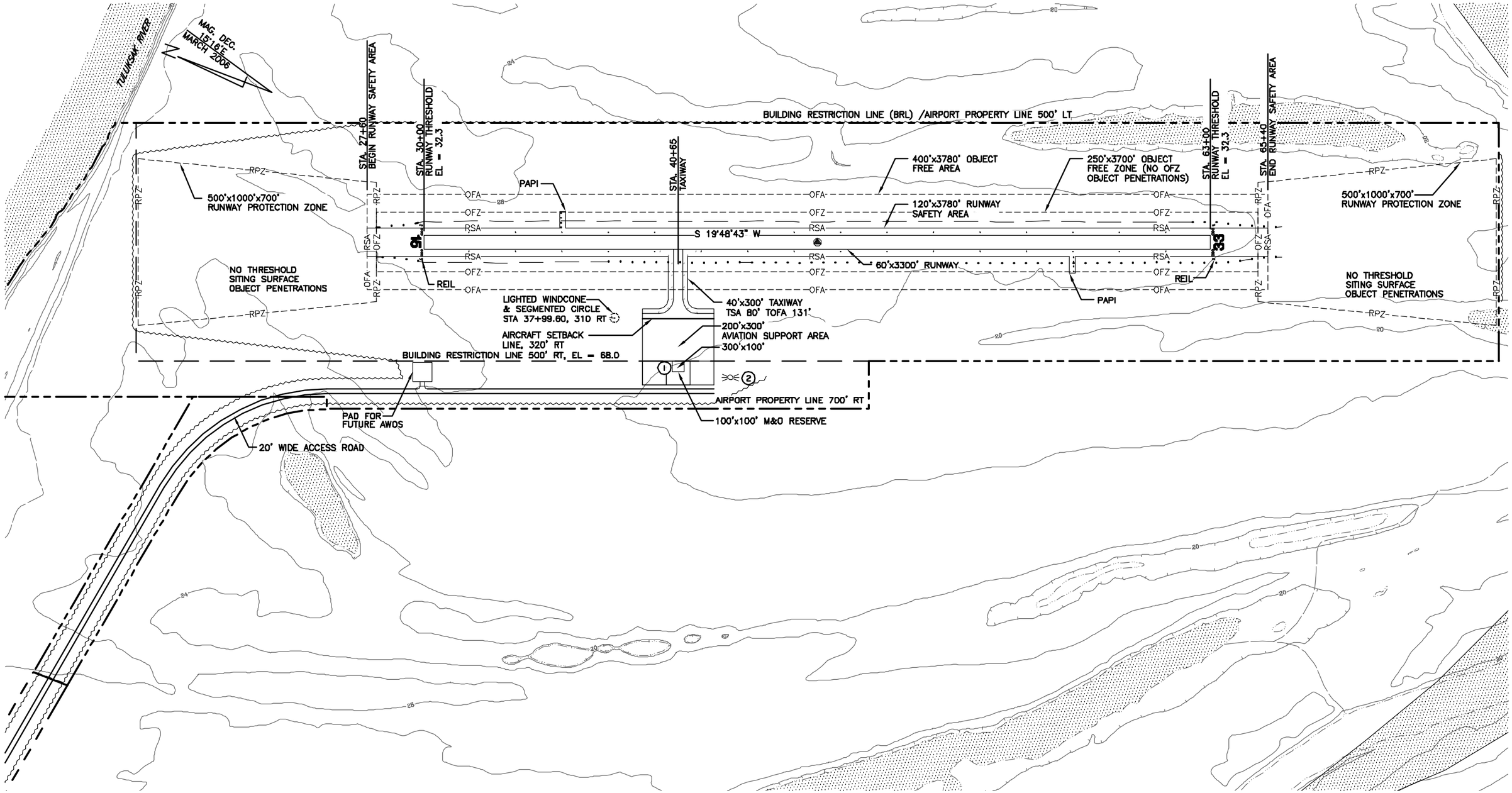
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

TULUKSAK AIRPORT
TULUKSAK, ALASKA
AIRPORT LAYOUT PLAN

EXISTING PLAN

DATE: 1/16/07

SHEET: 2 OF 6



BUILDING DATA TABLE				
ID	DESCRIPTION	STATION/ OFFSET	TOP ELEV (NAVD 88)	OBSTRUCT MARKING
1	SRE BUILDING	40+65/500 RT	TBD	NONE
2	ROTATING BEACON	–	TBD	NONE

0 200 400 600
GRAPHIC SCALE

BY	DATE	REVISION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

TULUKSAK AIRPORT
TULUKSAK, ALASKA
AIRPORT LAYOUT PLAN

ULTIMATE PLAN

DATE: 1/16/07
SHEET: 3 OF 6

Date Plotted: 1/17/2007, 8:36 AM
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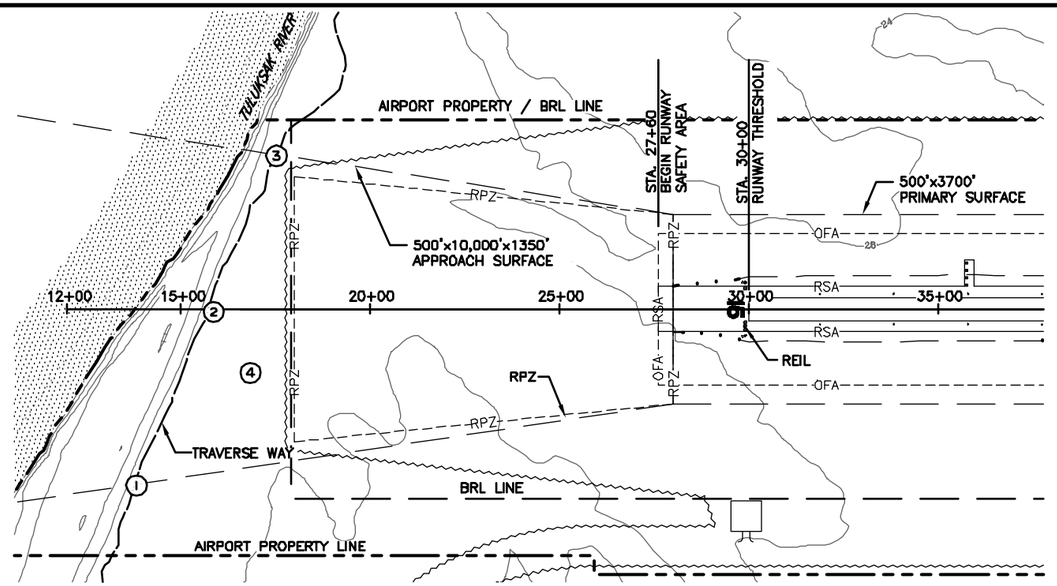
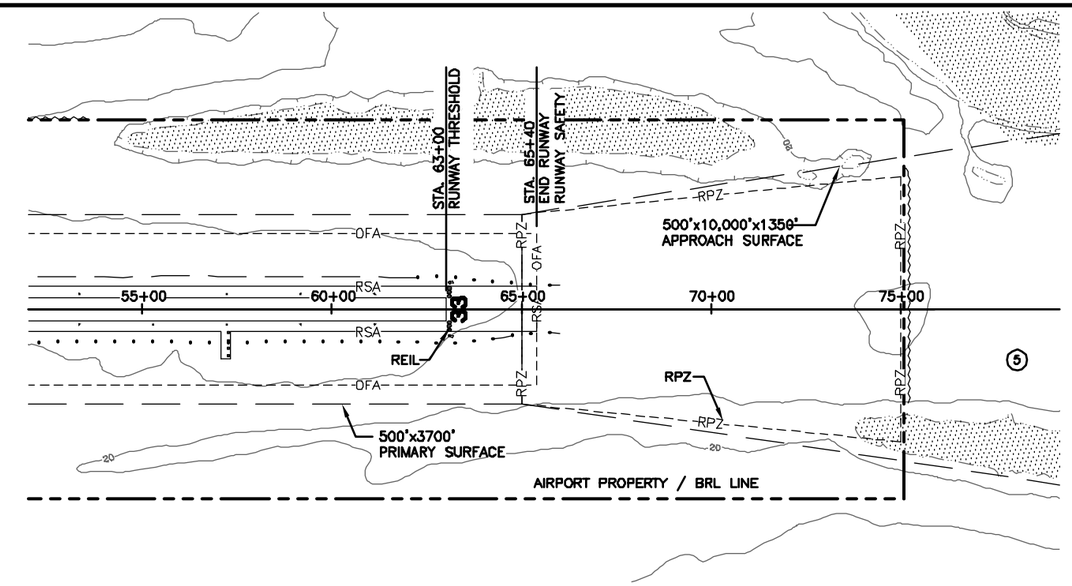
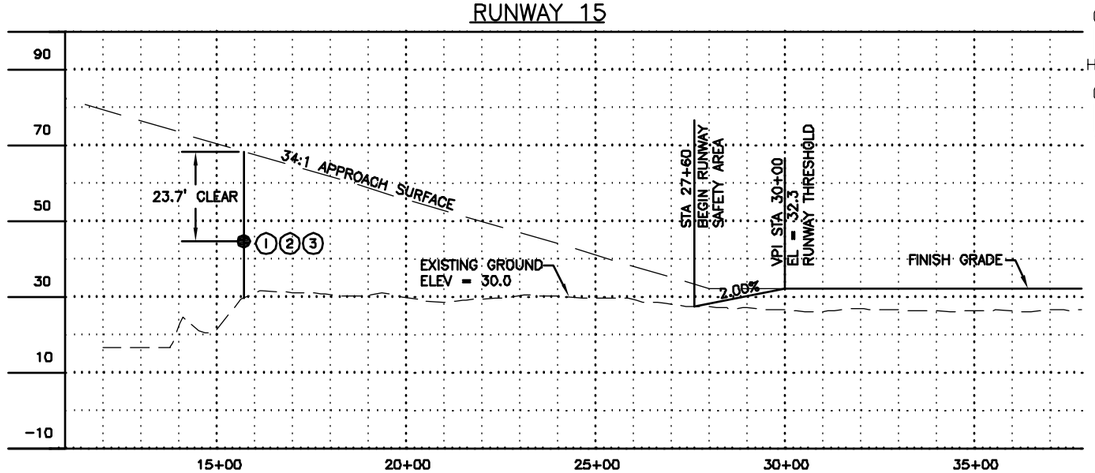
Drawn By: PWinfree
Checked By:





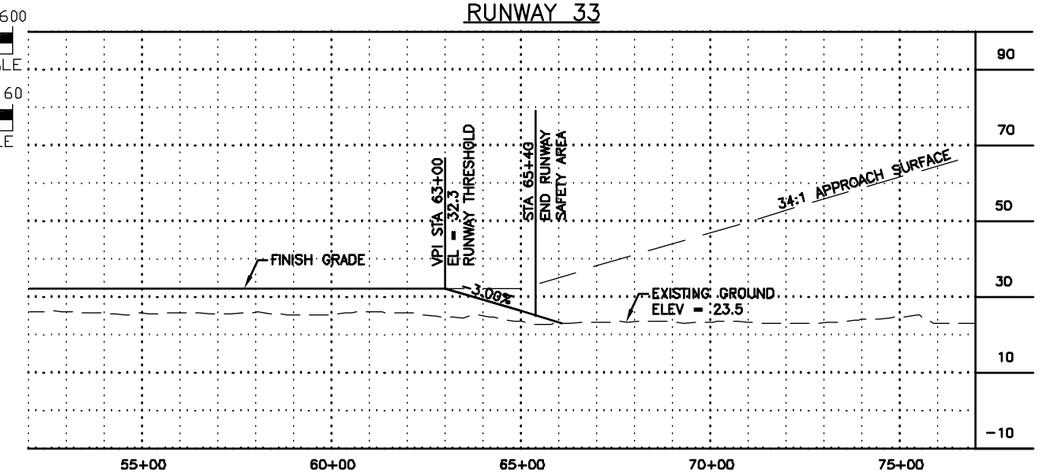
RUNWAY 15



0 200 400 600
HORIZONTAL GRAPHIC SCALE

0 20 40 60
VERTICAL GRAPHIC SCALE

RUNWAY 33



RUNWAY 15

APPROACH SURFACE OBSTRUCTION TABLE (INNER PORTION RW 15)

ID	DESCRIPTION	STATION/ OFFSET	ELEVATION	SURFACE PENETRATED	SURFACE ELEVATION	AMOUNT PENETRATION	DISPOSITION	STAGE TO CORRECT
4	TREES*	–	–	–	–	–	–	–

* TREES PENETRATING APPROACH SURFACE TO BE VERIFIED BY SURVEY AND REMOVED.

NOTES

1. NO THRESHOLD SITING SURFACE OBJECT PENETRATIONS.
2. THRESHOLD SITING SURFACE IS CLEAR FOR INSTRUMENT STRAIGHT-IN NIGHT OPERATIONS.
3. OBSTACLE CLEARANCE SURFACE EXTENDS 10,000' AT 50:1 OR FLATTER.

RUNWAY 33

APPROACH SURFACE OBSTRUCTION TABLE (INNER PORTION RW 33)

ID	DESCRIPTION	STATION/ OFFSET	ELEVATION	SURFACE PENETRATED	SURFACE ELEVATION	AMOUNT PENETRATION	DISPOSITION	STAGE TO CORRECT
5	TREES*	–	–	–	–	–	–	–

* TREES PENETRATING APPROACH SURFACE TO BE VERIFIED BY SURVEY AND REMOVED.

NOTES

1. NO THRESHOLD SITING SURFACE OBJECT PENETRATIONS.
2. THRESHOLD SITING SURFACE IS CLEAR FOR INSTRUMENT STRAIGHT-IN NIGHT OPERATIONS.
3. OBSTACLE CLEARANCE SURFACE EXTENDS 10,000' AT 50:1 OR FLATTER.

BY	DATE	REVISION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

TULUKSAK AIRPORT
TULUKSAK, ALASKA
AIRPORT LAYOUT PLAN

INNER PORTION OF APPROACH SURFACE

DATE: 1/16/07
SHEET: 4 OF 6

Designed By:
Drawn By: PWinfree
Checked By:
Date Plotted: 1/17/2007, 8:37 AM
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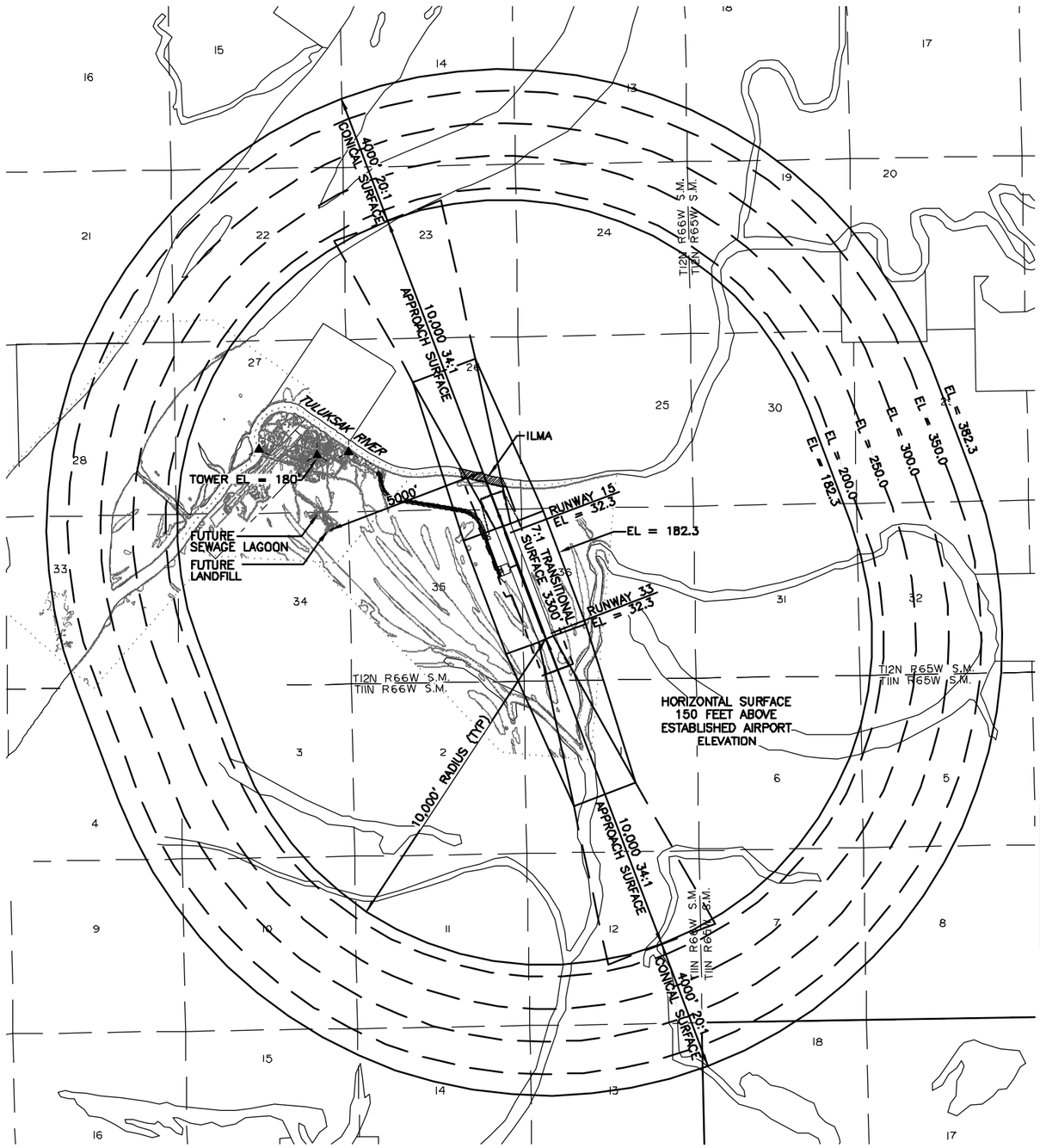
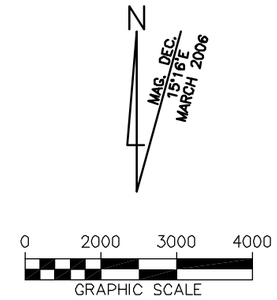


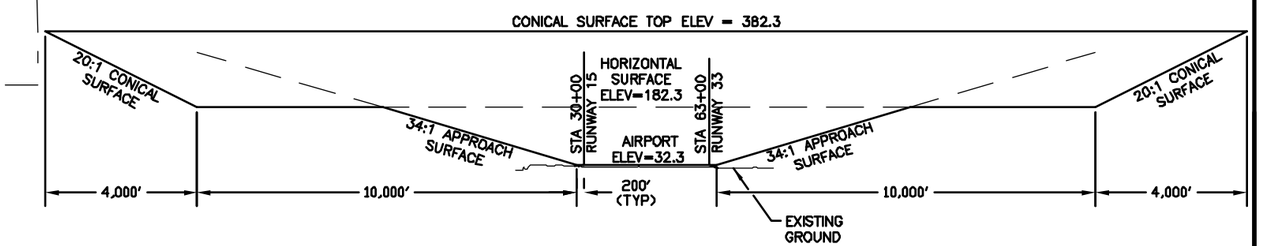


NOTES:

1. ALL ELEVATIONS AND CONTOURS ARE BASED ON NAVD88.
2. ESTABLISHED AIRPORT ELEVATION IS 32.3 FEET.
3. NO OBSTRUCTIONS, INCLUDING GROUND PENETRATIONS, ARE REPORTED WITHIN F.A.R. PART 77 IMAGINARY SURFACES.
4. TULUKSAK AIRPORT IS PLANNED FOR NPI APPROACHES WITH VISIBILITY MINIMUMS NOT LESS THAN 1 MILE. AIRPORT REFERENCE CODE B-I UTILITY RUNWAY.
5. BASE MAP DATA FROM USGS QUAD, RUSSIAN MISSION (A-6).
6. REFER TO THE INNER PORTION OF THE APPROACH SURFACE DRAWINGS FOR INNER PORTION OBSTRUCTION TABLE.
7. PRIMARY SURFACE WIDTH IS 500'.
8. THERE ARE NO KNOWN HEIGHT RESTRICTIONS.

SURFACE OBSTRUCTION TABLE

ID #	DESCRIPTION	STATION/ OFFSET	ELEVATION	SURFACE PENETRATED	SURFACE ELEVATION	AMOUNT PENETRATION	DISPOSITION	STAGE TO CORRECT
NONE	–	–	–	–	–	–	–	–



RUNWAY PROFILE

0 2000 3000 4000
GRAPHIC SCALE

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

BY	DATE	REVISION

TULUKSAK AIRPORT
TULUKSAK, ALASKA
AIRPORT LAYOUT PLAN

F.A.R. PART 77 SURFACE

DATE: 1/16/07
SHEET: 5 OF 6

Date Plotted: 1/17/2007, 8:37 AM
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Drawn By: PWinfree
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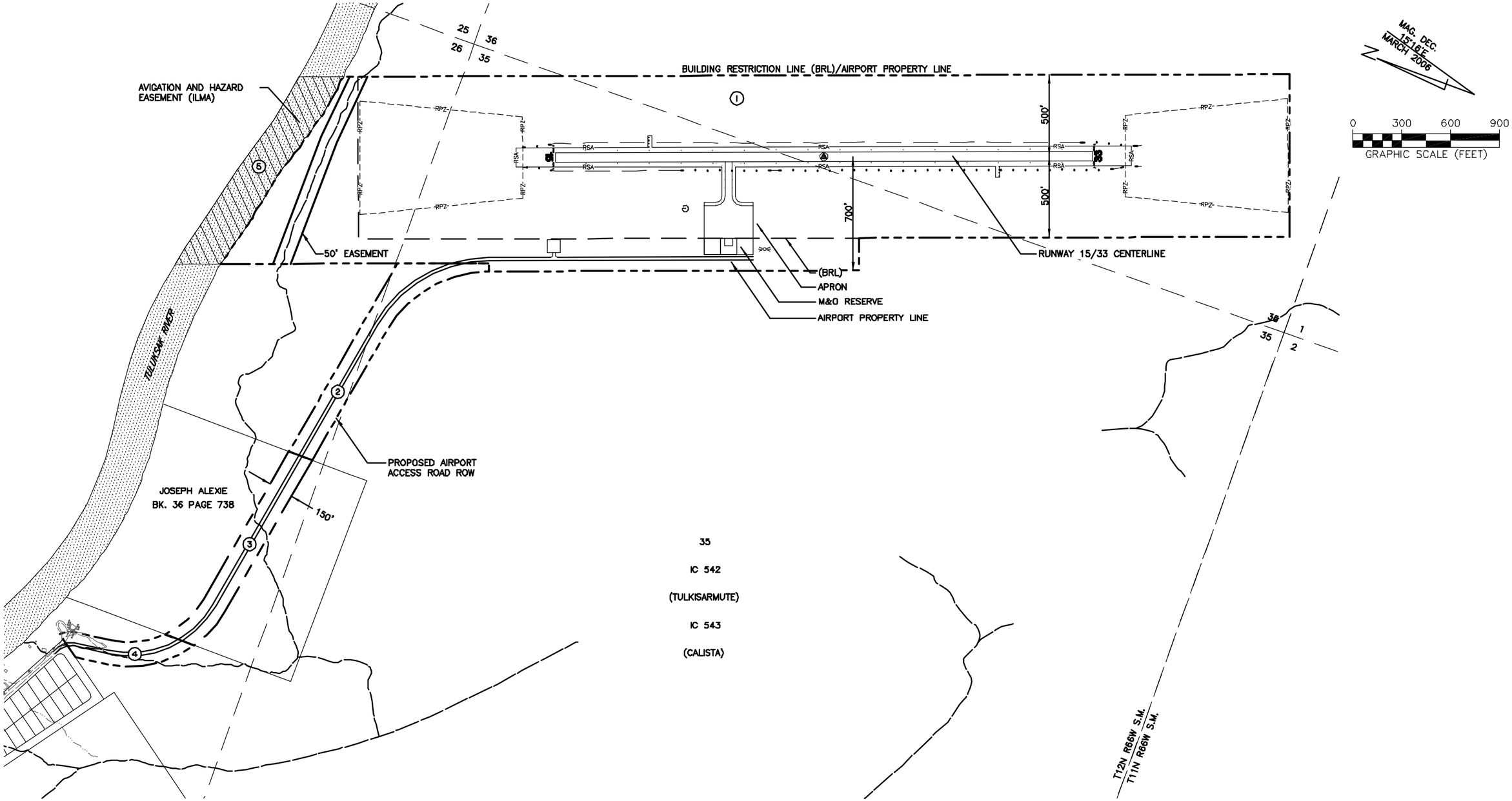

PROPERTY STATUS							
ID	INTEREST	GRANTOR	GRANTEE	PARCEL SIZE	DATE ACQUIRED	RECORDED DOC NO.	ACQUIRED AIP NO.
1	FEE SIMPLE	TULKISARMUTE CORP.	ADOT&PF	156.63 ACRE	TO BE ACQUIRED	–	–
2	FEE SIMPLE	TULKISARMUTE CORP.	ADOT&PF	5.81 ACRE	TO BE ACQUIRED	–	–
3	FEE SIMPLE	JOSEPH ALEXIE	ADOT&PF	4.69 ACRE	TO BE ACQUIRED	–	–
4	FEE SIMPLE	TULKISARMUTE CORP.	ADOT&PF	2.48 ACRE	TO BE ACQUIRED	–	–
5	AVIGATION AND HAZARD EASEMENT	ALASKA DEPARTMENT OF NATURAL RESOURCES	ADOT&PF	7.42 ACRE	TO BE ACQUIRED	–	–

BY	DATE	REVISION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

TULUKSAK AIRPORT
TULUKSAK, ALASKA
AIRPORT LAYOUT PLAN

PROPERTY MAP

DATE: 1/16/07
SHEET: 6 OF 6

Designed By:
Drawn By: PWinfree
Checked By:
Date Plotted: 1/17/2007, 8:37 AM
Layout Name: Layout1
File Name: T:\Temp\BGPlot_420\51247-alp06.dwg

TULUKSAK AIRPORT RELOCATION
AIRPORT LAYOUT PLAN
NARRATIVE REPORT

AKSAS No. 51795

Prepared for:

Alaska Department of Transportation and Public Facilities
4111 Aviation Drive
Anchorage, Alaska

Prepared by:

R&M Consultants, Inc.
9101 Vanguard Drive
Anchorage, Alaska

April 2007

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2.2 Economy and Subsistence 2
2.3 Infrastructure 2
2.4 Existing Airport Facilities 3

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5.0 PROPOSED DEVELOPMENT 7

6.0 STAGE DEVELOPMENT 8

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8.1 Alaska Native Regional Corporation Lands 8
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TULUKSAK AIRPORT RELOCATION
AIRPORT LAYOUT PLAN NARRATIVE REPORT

1.0 PURPOSE AND NEED

The purpose of this project is to provide Tuluksak with an airport that meets Federal Aviation Administration (FAA) and the Alaska Aviation System Plan Update (AASPU) standards for Community Airports. The project is needed because the existing facility does not meet current standards for runway length, safety areas, lighting, clearance from adjacent development, and separation from the existing landfill. Addressing the noted deficiencies is part of a statewide and regional program of providing essential transportation facilities to the inhabitants of roadless areas.

2.0 INTRODUCTION

The community of Tuluksak is located approximately 35 miles northeast of Bethel and 350 miles west of Anchorage, Alaska. It lies on the south bank of the Tuluksak River at its confluence with the Kuskokwim River in Township 12N, Range 66W, Sections 25-27 and 34-36, Seward Meridian. The community is within the boundary of the Yukon Delta National Wildlife Refuge. Calista Corporation is the Alaska Native Regional Corporation that Tuluksak lies within. Tulkisarmute, Incorporated is the local Village Corporation. The Tuluksak Native Community (TNC) has organized itself under the 1934 Indian Reorganization Act (IRA) and is the council recognized by the Bureau of Indian Affairs (BIA). Tuluksak is not an incorporated municipality.

Native sovereignty and maintaining a traditional lifestyle is a priority of the residents of Tuluksak. The community is not connected to the state road or rail system. The Kuskokwim River offers seasonal transportation to local residents. During winter months, river ice can support snow machines, all terrain vehicles, dog sleds, and occasional automobile and truck traffic. During ice-free intervals, fishing boats, and skiffs provide surface transportation to Bethel, the region's commercial center and other villages. Tug and barge operators deliver fuel and other large freight loads. Although located on the Tuluksak River, there is no docking facility. Barges generally land on the bank on the northwest side of the existing airport runway. Siltation at the mouth of the Tuluksak River impedes barge traffic, particularly when the water level is low. The airport provides the only access to Tuluksak during fall river freezing, and spring river thawing periods.

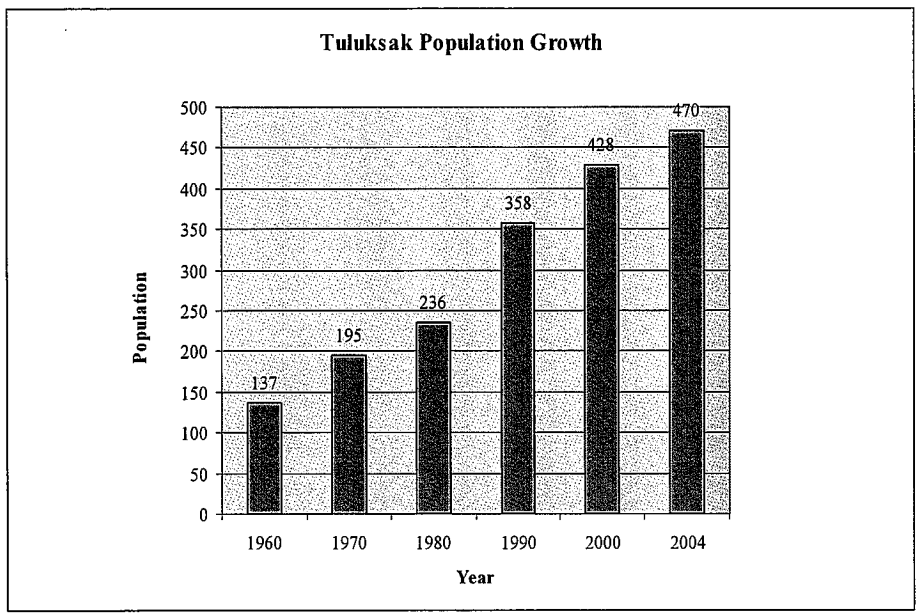
The existing Tuluksak Airport was built by the Federal government and later transferred to the State of Alaska and is administered by Department of Transportation and Public Facilities (DOT&PF). The airport is situated at the southwestern edge of the village. The airport is classified within the AASPU as a Community Class Airport. Generally, Community Class Airports are served by scheduled, non-scheduled, and air taxi operators and are designed to accommodate the needs of rural towns with at least 25 permanent residents.

2.1 Demographics

Tuluksak is primarily a Central Yup'ik Eskimo community (approximately 95% of the population is native). According to the State Demographer's estimate, the 2004 population was 470. The recent annual rate of population growth varies between 2% and 5%, with an average annual growth rate of approximately 3%. Historic population data is shown in Table 2-1.

TABLE 2-1

POPULATION OF TULUKSAK



2.2 Economy and Subsistence

Hunting and commercial fishing are the primary subsistence occupations in Tuluksak. However, in recent years, the commercial salmon fishery on the Kuskokwim River has collapsed, and commercial fishery openings have been cut back to a few openings each summer. Other economic opportunities include employment at the general store, delivering fuel, airport runway maintenance, teaching and janitorial services at the schools, employment at the post office and a variety of other support, health and social services. Recently, state and federal capital improvement projects and programs have been a very important component of the Tuluksak economy.

2.3 Infrastructure

The IRA Council owns and operates the electric utility and water/wastewater system for the residents. A new power plant was completed in 2003 by the Alaska Energy Authority.

Tuluksak has six separate bulk fuel facilities located throughout the community, which are owned by the Yupiit School District (YSD), Tuluksak Native Community, and the Alaska Army National Guard. Current bulk fuel storage capacity is inadequate to meet the needs of the power plant, necessitating the trucking of fuel in late winter on the ice road.

Local public telephone service is provided by Unicom. There is a washeteria, general store, U.S. Post Office, and tribally-maintained public meeting facility in Tuluksak. The community also has an armory to support activities of the Alaska Army National Guard Scouts unit assigned to the community. The Yupiit School District operates an elementary and a secondary school in Tuluksak. There are two cemeteries; one is located along the banks of the Tuluksak River and the other is approximately 492 feet east of the present landfill.

2.4 Existing Airport Facilities

The existing airport includes a gravel 2,500-foot long by 30-foot wide runway with no navigational aids or runway lights. The existing airport is located immediately adjacent to the village of Tuluksak within 1,000 feet of the existing landfill and 2,200 feet from the existing sewage lagoon and a proposed landfill. Several buildings are located within the Runway Protection Zone (RPZ) and Building Restriction Line (BRL). An apron adjacent to the runway is small and irregular in shape and because of the location, residents frequently cross the end of Runway 20 to access it.

3.0 AVIATION FORECASTS

The Tuluksak Airport serves as the community's only reliable year round access. The airport provides transportation of passengers, cargo and mail. It is also used for medical evacuations, military operations and flight school training operations. Current airport activity, forecasts of future airport activity, FAA and DOT&PF standards, and the Tuluksak economy influence the rationale for improvements at the Tuluksak Airport. The following aviation demand forecasts illustrate the factors influencing the Tuluksak Airport.

3.1 Airport Activity

Due to its small size and the lack of based aircraft, the Tuluksak Airport serves only small and commuter aircraft. Aircraft activities for the airport include cargo transportation, air taxi, mail delivery, military operations (Black Hawk helicopter) and medical evacuations. For this forecast, the military operations are assumed to remain at current levels. As the population and economy grow, cargo transportation, air taxi, mail delivery and medical evacuations are projected to increase.

Air taxi and cargo operators utilizing the Tuluksak Airport include Yute Air Service, Arctic Circle Air Service, Grant Aviation, Hageland Aviation, Kusko Aviation, Craig Air, Arctic Transportation Services, Yukon Aviation, and Yuut Yaqunguiat, according to a 2005 survey. These operators are all based in Bethel.

The Tuluksak Clinic has indicated the number of medical evacuations varies but there are a minimum of one to two per month. During the flu season those numbers increase. The Tuluksak School estimated at least one flight per week transports students when sporting events are in season. The airport is the primary source of transportation for the students. The National Guard utilizes Tuluksak Airport to shuttle Guard members to Bethel for training and for pilot training; the National Guard also provides emergency medivacs on occasion.

3.2 Aircraft Type

An aircraft operator's survey completed in August 2005 indicates aircraft currently using the Tuluksak Airport include the Cessna 150, Cessna 172, Cessna 182, Cessna 207, Cherokee 6 and Casa 212. Some operators anticipate using light twin-engine aircraft in the future such as the Cessna 402 or Piper PA-31 Navajo. To meet long-term requirements, the airport improvements should accommodate the Cessna 402 as the critical aircraft.

3.3 Aircraft Operations

Due to the lack of a local observer whose duties would include keeping records of the flight activities and statistical data regarding flight operations, data about the Tuluksak airport is minimal. Given enplanement information from the FAA DOT/TSC ACAIS database, the number of enplaned passengers increased between 1980 and 1995, decreased between 2000 and 2002, and increased again in 2003.

3.4 Aviation Demand Forecasts

Given that aircraft activity in small rural communities is directly related to population, aviation forecasts use historical population and aircraft operation growth to predict the level of usage for the airport in the future.

Currently, no aircraft are based at the Tuluksak Airport. The National Plan of Integrated Airport Systems (2005-2009) does not predict any aircraft will be based at the airport within the next five years. However, the population and economy growth indicate potential growth in airport operations. No itinerant operations have been documented at Tuluksak; future itinerant operations are anticipated to be negligible.

Military activity is forecast to remain constant in the long-term, based on projected operation requirements from the National Guard. An average of 10 to 20 flights per year is estimated due to military activity. In the near-term, military operations will be curtailed as the local Guard unit is on an 18-month deployment. Air cargo is expected to increase in the future at the same rate as other airport activity.

Given enplanement information from the FAA and the Air Operators Survey, the base year aircraft operations are estimated to be 790 operations per year. Almost all of these aircraft are small aircraft (10 passengers or less). Larger aircraft with wingspans for Design Groups II and III serve some airports in the region. If the Tuluksak Airport was designed and constructed to accommodate these larger aircraft, experience in this region

suggests that less than 50 operations per year would be added during the forecast period. Table 3-1 estimates the airport operations through the year 2025 using a 3% growth rate.

TABLE 3-1

AERONAUTICAL FORECASTS

AERONAUTICAL FORECASTS					
Activity	2005 (Estimated)	2010 (Projected)	2015 (Projected)	2020 (Projected)	2025 (Projected)
Operations	790	915	1060	1230	1425

4.0 FACILITY REQUIREMENTS

Current aircraft operations are conducted predominantly with A-1 aircraft and occasional A-II aircraft. Aircraft operators do not anticipate significant changes in the fleet mix over the near future; one operator indicated potential for light twin-engine aircraft use in the future; these aircraft could include the Cessna 402 and Piper PA-31 Navajo, both B-I aircraft. Based on aviation forecasts, airport improvements at Tuluksak should meet Airport Reference Code B-I standards. To improve safety in wet and icy conditions Design Group II standards are recommended for the taxiway width and safety area.

Wind analysis at Tuluksak indicates that 95% coverage may be obtained with a single runway; therefore, a crosswind runway will not be planned. To accommodate anticipated increased use of Global Positioning System equipment the runway should be orientated to allow for non-precision instrument (NPI) approaches with visibility minimums not less than one mile and a 34:1 approach surface. The AASPU recommends medium intensity runway lighting for runways with NPI approaches. Runways, taxiways and aprons will be gravel surfaced which meets the AASPU minimum level of service.

The following table illustrates current and recommended airport dimensions at Tuluksak.

TABLE 4-1

FAA AIRPORT DESIGN STANDARDS

FAA AIRPORT DESIGN STANDARDS (B-1)				
DESIGN ELEMENT	B-I STANDARD	EXISTING	NEAR-TERM	ULTIMATE
Runway Approach Slopes	20:1	20:1	34:1	34:1
Runway Length	3,300 ft	2,500 ft	3,300 ft	3,300 ft
Runway Width	60 ft	30 ft	60 ft	60 ft
Runway Surface	Gravel	Gravel	Gravel	Gravel
Runway Shoulder Width	10 ft	-	10 ft	10 ft
Runway Safety Area Width	120 ft	98 ft	120 ft	120 ft
Runway Safety Area Length Beyond R/W End	240 ft	235 ft	240 ft	240 ft
Runway Protection Zone	500 ft x 1000 ft x 700 ft	250 ft x 1000 ft x 450 ft	500 ft x 1000 ft x 700 ft	500 ft x 1000 ft x 700 ft
Runway Object Free Area Width	400 ft	394 ft	400 ft	400 ft
Runway Object Free Area Beyond R/W End	240 ft	236 ft	240 ft	240 ft
Runway Obstacle Free Zone Width	250 ft	-	250 ft	250 ft
Runway Obstacle Free Zone Beyond R/W End	200 ft	-	200 ft	200 ft
Primary Surface Width (NPI Approach)		-	500 ft	500 ft
Primary Surface Length Beyond R/W End (Hard Surface)			200 ft	200 ft
Taxiway Width	25 ft	-	40 ft	40 ft
Taxiway Safety Area Width	49 ft	-	80 ft	80 ft
Taxiway Object Free Area Width	89 ft	-	131 ft	131 ft
Taxiway Holding Position from R/W CL	200 ft-	-	200 ft-	200 ft-

Terminal facilities are the responsibility of the local operators, according to the AASPU. A pad will be constructed for a snow removal equipment (SRE) building and aviation support area. Electric energy supply facilities will need to be extended to the airport to provide energy for the medium intensity runway lighting, lighted wind cone, rotating beacon and the SRE building. The AASPU recommends a 60,000 square foot apron area. To allow for future tenants, a 100-foot depth lease lot area is recommended adjacent to the apron. The SRE building will be located within the lease lot area.

TABLE 4-2

AASPU RECOMMENDATIONS FOR COMMUNITY CLASS AIRPORT

AASPU RECOMMENDATIONS FOR COMMUNITY CLASS AIRPORT				
DESIGN ELEMENT	AASPU RECOMMENDS	EXISTING	NEAR-TERM	ULTIMATE
Lighting	MIRL	None	MIRL	MIRL
Apron	200 ft x 300 ft	-	200 ft x 300 ft	200 ft x 300 ft
	60,000 sf	8,700 sf	60,000 sf	60,000 sf
Aviation Support Area , including M&O Reserve	100x300	-	-100x300	-100x300
Equipment Building	Recommended	None	Two bay SRE	Two bay SRE
Terminal	None	None	None	None

5.0 PROPOSED DEVELOPMENT

The existing airport is deficient in runway length, width, safety areas and apron setback. The airport does not meet FAA recommended separation to the landfill and wastewater lagoon. Due to adjacent development, it is not practical to upgrade the airport to current standards at the existing location. The local community supports relocation of the airport to a site southeast of Tuluksak. The runway will be located on an upland area between two old river channels. The elevation of the runway will be above the recorded high water elevations in Tuluksak.

The proposed runway orientation is 159.25° true north with a 97.71% wind coverage.

According to the National Geophysical Data Center (NGDC), the proposed runway location has a magnetic declination of 15°24'E changing by 0°12'W/year. Based on this declination, the proposed runway designation would be 14-32. Using FAA's memos of runway designation calculation, the runway designation will change to 15-33 in 2007. Because airport construction completion is not likely until 2008, the runway designation of 15-33 is appropriate.

The airport development will include a new runway, apron with connecting taxiway, aircraft tie-down area, lease lots, SRE building and airport lighting system. A one mile access road will be constructed from Tuluksak to the airport apron with electrical utility extensions within the road right-of-way. The airport site is currently undeveloped and is sited within uplands as much as possible to take advantage of anticipated better subsurface soil conditions.

6.0 STAGE DEVELOPMENT

If necessary, due to funding limitations, the project could be staged over several years. The planned sequence will follow the usual pattern for similar work: land acquisition, clearing, embankment construction, surfacing, lighting and SRE building erection. The estimated cost for the improvements including land acquisition and the SRE building is $11,400,000.

7.0 MODIFICATIONS TO STANDARDS

No modifications to standards are necessary for the Tuluksak Airport Relocation.

8.0 LAND STATUS

The majority of land in the Tuluksak area is owned by the village Tulkisarmute Corporation and by individuals with land conveyances.

8.1 Alaska Native Regional Corporation Lands

Tuluksak is within the boundaries of the Calista Regional Native Corporation which holds the rights to the subsurface estate for all uplands in the project area except Native Allotments and DOT&PF owned property. Excavation of subsurface materials from upland areas other than existing DOT&PF property will require an agreement with Calista Regional Native Corporation.

8.2 Village Native Corporation Land

Land surrounding the proposed airport boundary is owned by the village corporation Tulkisarmute, Incorporated.

8.3 State Land

The State of Alaska has property ownership of the existing Tuluksak Airport as listed under U.S. Survey 3797, Alaska, encompassing 175.7 acres of land. The State also owns a portion of the land identified in U.S. Survey 875 extending about 3,280 feet north of the U.S. Survey 3797 northern boundary, with a width of 150 feet each side of the runway centerline, encompassing approximately 22.6 acres. Subsurface rights for land within the DOT&PF airport boundary are owned by DOT&PF. The existing airport will be decommissioned after the new airport is in operation.

8.4 Proposed Airport

The proposed airport location is within Tulkisarmute Village Corporation Land. The airport access road is located within one private parcel (Block 36, Page 738), and Tulkisarmute Village Corporation Lands. An existing trail is located between the proposed north RPZ and the Tuluksak River, a 50-foot wide easement centered on the trail will be provided to maintain traditional subsistence access across airport property. A navigation and hazard easement should also be acquired over the Tuluksak River to protect airspace.

9.0 COORDINATION

Improvements to the existing airport were considered during the initial scoping stages of this plan's development, but meeting current standards required such impacts to the adjacent community assets that no consensus for a preferred alternative seemed possible. After about two years of internal discussions and occasional contact with DOT&PF planners, community interests agreed to the concept of a new runway about a mile east of the existing airport.

During this planning phase, public meetings were held with the Tuluksak Native Community. The community supports the new airport location.