



CITY OF WASILLA

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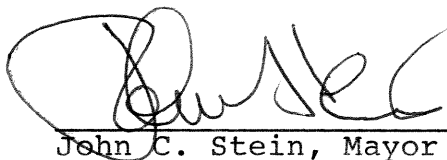
INFORMATION
MEMORANDUM
NO. 90-01

TO: Council

FROM: Mayor Stein

DATE: December 21, 1989

The attached final engineering design report on the new Wasilla Airport is a good synopsis of the subject and is provided for your information.



John C. Stein, Mayor

JCS/sbh

MEMORANDUM

State of Alaska Department of Transportation & Public Facilities

TO: Tommy Gene Heinrich, P.E.
Director, Design and Construction
Central Region


DATE: August 15, 1989


FILE NO:

TELEPHONE NO:

THRU: Keith R. Morberg, P.E.
Chief, Design Branch
Central Region

SUBJECT: New Wasilla Airport
Project No. 55908

THRU: 
Steve Van Horn, P.E.
Design Section Chief
Design Section II

FROM: John G. Wahl, P.E. 
Project Manager
Design Section II

A. INTRODUCTION

Design Section II received a project for the design of a new general aviation airport for the city of Wasilla. The site for the airport had previously been selected by the city of Wasilla.

B. SCOPE OF WORK

This project will consist of constructing a general utility airport at the site, identified by the city of Wasilla, south of Jacobsen Lake and west of the City. The project will include the following:

1. Construction of a 75' x 3,700' runway with a 150' x 4,300' runway safety area.
2. Construction of a 700' x 1600' aircraft parking apron.
3. Construction of two 40' x 185' taxiway interlinks.
4. Construction of a 40' x 1,725' access road.
5. Installation of a medium intensity lighting system.

C. FUNDING SOURCE

Funding for this project is under the Airport Improvement Program (AIP) administered by the Federal Aviation Administration. Matching funds are provided by the State.

D. HISTORY OF PROJECT

The existing Wasilla airport is located north of the Parks Highway approximately one mile west of its intersection with the Goose Bay and Wasilla-Fish Hook Roads. The existing runway is 2,100 feet long with a parallel taxiway on the north side. Lease lots are located to the north of the taxiway.

Over the years, the city of Wasilla has grown up around the airport. A shopping center and other businesses were constructed south and west of the runway. A school was constructed to the east. Several towers have been constructed. It became obvious that the current location of the airport would not allow growth. The rapid growth of the community around the airport also has the potential for posing a safety hazard since the State had no control over protecting the air space around the airport.

In 1982 the city of Wasilla obtained a grant from the State to study the relocation of the Wasilla Airport. The City hired the firm of Unwin, Scheben, Korynta and Huettl (USKH) to study the relocation. USKH investigated several sites in the area. In June 1986 a final location was chosen south of Jacobsen Lake and the Alaska Railroad, two miles west of the existing airport.

Following completion of the study, the City requested the State develop a new airport at the site.

E. DESIGN STANDARDS TO BE USED

Various Federal Regulations and Federal Aviation Administration Advisory Circulars will be used including the following:

FAR Part 77 - Objects Affecting Navigable Airspace
AC 150/5300-4B - Utility Airports

F. CRITICAL DIMENSIONS

Runway Length	3,700'
Runway Safety Area Length	4,300'
Runway Width	75'
Runway Safety Area Width	150'
Runway Centerline to Parallel Taxiway Centerline	300'
Taxiway Width	40'
Taxiway Safety Area Width	80'
Taxilane Centerline to Parked Aircraft	50'

G. GENERAL HORIZONTAL AND VERTICAL ALIGNMENT

Wind data was collected at the new airport site over a period of approximately 16 months. This data indicated that the predominant wind direction was from the northeast. This data confirmed reports received from people living and flying in the area who also indicated a predominant northeast wind.

With the wind data in hand, the site was analyzed to provide the best runway alignment. The site was constrained by the Alaska Railroad to the north and Lucile Creek to the east and south. To provide the desired runway length, a final runway bearing of N56-15E was chosen. This alignment provided 99% wind coverage.

H. SOIL CONDITIONS

The area of the proposed airport was glacial in origin. The site is characterized by low hills interspersed with small streams and bogs. The area is predominantly tree covered.

Borings and test holes were taken at the site in the fall of 1988. The soils found at the site consist generally of glacial tills. The tills are overlain by 2' to 5' of organics and/or organic silt. The till is generally very dense

and near or above optimum moisture content. The bog areas had organic depths from 3' to 8'.

The materials report recommended that an average of 4.5' of materials in the excavation be considered waste. A closer examination of the cross sections showed that the actual waste in the areas to be excavated was less. A total of approximately 130,000 cubic yards of waste can be anticipated.

I. PAVEMENT DESIGN

Ultimate development of the airport includes the paving of the runway and taxiways. FAA Advisory Circular 150/5340-6C recommends a 2" asphalt pavement, with a total depth of structural pavement of approximately 12 inches, which is suitable for aircraft up to 30,000 pounds. While this is suitable for aircraft, it may not be suitable for the maintenance vehicles which weigh substantially more. With this in mind, it is proposed using a pavement design which was developed for use at the Talkeetna Airport and on various State roads in the Mat-Su Borough such as Schrock-Pittman Road and which was proposed for Church Road. This consists of a structural section as follows:

Asphalt Pavement	2"
Crushed Aggregate Base Course	6"
Borrow, Class A	36"

Initial construction of the airport will include a gravel surface. Due to the moisture sensitivity of the subgrade material, it is recommended that the runway not be paved immediately to insure that all settlement has stopped. At that time paving could proceed. The proposed project includes a structural section as follows for the runway:

Aggregate Surface Course	6"
Borrow, Class A	30"

With the above section, paving could be accomplished by the addition of 6" of crushed aggregate base course and 2" of asphalt pavement over the runway.

J. RIGHT OF WAY

The State is acquiring title to the property on which the airport is located with the exception of three parcels located in the clear zones of the airport. These parcels will have aviation and hazard easements.

A copy of the property plan is included in the appendix.

K. AIRPORT ACCESS

Access to the airport will be from the Parks Highway at Mile Post 46.5, then via Rocky Ridge Road and Neuser Road to the airport access road. The airport access road is located on airport property and is therefore eligible for federal assistance under the AIP program. The two public roads, Rocky Ridge and Neuser, are not on airport property and are not eligible for federal assistance. Rocky Ridge and Neuser Roads are within the Matanuska-Susitna Borough which is undertaking the upgrading of these roads.

Access during construction will be through Rocky Ridge and Neuser Roads to the Saska's Meadows Subdivision and then to the southwest end of the project via an easement line trail. With the construction of the airport access road, access through the subdivision will be stopped.

An alternate access for the purpose of hauling material is proposed from the Parks Highway east of Jacobsen Lake. There is a narrow trail which may have provided access to a homestead on which part of the airport will be built. The trail is approximately 10' wide and will require substantial upgrading. A temporary railroad crossing will be required along with a qualified ARR flagman. The crossing will be removed following completion of the project. The crossing could, however, be reinstalled for future projects.

L. DRAINAGE

There are two major drainage channels through the project area. One is at the north end of the airport and the second crosses the airport through the apron at approximately Station 30+00. These areas consist of swampy areas which

drain into Lucile Creek or has standing water. Borrow fill material will be placed in each area prior to unclassified embankment material. Culverts will be placed as required to provide drainage across the airport.

Local drainage from the runway, taxiways, apron, and access roads will be handled by ditching and culverts.

M. UTILITIES

With the exception of an electric power line running across the north end of the airport site there are no utilities at the airport site.

The power line across the north end of the runway parallels the railroad tracks and the poles are approximately 35' in height. While the poles are slightly below the glide path for a visual approach, they may pose a threat to landing and departing aircraft in inclement weather. As part of this project, three power poles crossing the north end of the runway will be removed and the line buried in this section. The work will be performed by the Matanuska Electric Association under a utility agreement.

The airport will require electricity for the operation of the airport lighting system and for apron flood lighting. This project will include the extension of power service to the apron. The power line will parallel the new access road. The work will be performed by the Matanuska Electric Association under a utility agreement.

The city of Wasilla is in the process of investigating the installation of water and sewer service to the airport.

N. PERMITS

The Department has obtained a construction permit for the construction of an airport from the Matanuska-Susitna Borough.

The Department is in the process of obtaining a fill permit from the U.S. Army, Corps of Engineers for construction of the airport fills.

O. ENVIRONMENTAL COMMENTS

The Environmental Section prepared an environmental assessment for the project. After review, FAA issued a Finding of No Significant Impact. A copy of the document is in the files.

P. COST ESTIMATE

It is estimated that the cost for the project will be \$5,279,804.48. This includes all work including the lighting system and power line removal. This includes \$565,000 in design engineering costs which covers all engineering costs for the land acquisition and construction projects.

The total appropriation for the construction project is \$4,000,000. This leaves a shortfall of \$1,279,804.48. During the 1990 fiscal year, there is an additional appropriation of \$3,000,000. This funding would have covered closing of the old airport and paving of the new airport. We propose using some of this appropriation to cover the shortfall in the current project. Paving is not recommended for initial construction as noted in section one previously.

APPENDIX

1. Project Development Authorization
2. Preliminary Plans
3. Soil Logs and Materials Recommendations
4. Cost Estimates
5. Project Status Summary
6. Property Plan
7. Mat-Su Borough Permit