

AIRPORT MASTER PLAN STEAMBOAT SPRINGS, COLORADO

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WORKING PAPER 4 DEVELOPMENT ALTERNATIVES



This is the third of four newsletters that will be distributed during the Airport Master Plan. The purpose of the newsletters is to provide updates on the progression of the study, announce upcoming meetings and to ensure the involvement of the community in order that all interested parties are given consideration and that they remain informed about the progress of the Airport Master Plan.

OVERVIEW

The Facility Requirements provided the basis for formulating development alternatives concepts. Working Paper 4 focuses on the logical alternatives the City of Steamboat Springs should consider for the existing and future airport configuration of Steamboat Springs Airport. In order to recommend a development concept, several important questions need to be answered:

- How can the existing facilities accommodate the future activity?

- Is a runway extension feasible?
- How much land should be acquired to protect the airport from incompatible land uses and provide for future development?
- How should short-term and long-term hangar development be accommodated?
- How can the airport be developed in an environmentally and fiscally responsible way?

The alternatives evaluated in this working paper are not

requirements for development at the Steamboat Springs Airport, they are options that the City of Steamboat Springs should consider to meet existing and future forecasted demand. The only development that would be required in the future would be safety related items, such as wildlife perimeter fencing.

Initial and future development items would include those necessary to meet existing demand and future development with a B-II Airport Reference Code (ARC).

AIRPORT DEVELOPMENT ALTERNATIVES

Instrument Approach Minimums Alternative

Two options have been identified for future instrument approach minimums. The first option would be to plan for a future instrument approach with approach minimums lower than 3/4-mile. This would result in larger protection and safety areas surrounding the airport along with increased runway to taxiway separation requirements. The second option would be to plan for instrument approach minimums to be 3/4-mile or greater. This would result in smaller protection and safety areas surrounding the airport and reduced runway to taxiway separation requirements. A future instrument approach procedure with minimums lower than 3/4-mile is not feasible at Steamboat Springs Airport due to terrain in the vicinity of the airport (Seattle FAA flight Procedures Office). Therefore, it is recommended that the future minimums be planned for "not lower than 3/4-mile" and the parallel taxiway be developed at 240 feet from the runway centerline.

Runway Development Alternatives

Each airside development alternative addresses the needs for accommodating existing and future aviation demand identified in the Facility Requirements Chapter. Estimated development costs for each alternative have been evaluated in order to conduct an overall comparative analysis.

The following alternatives were evaluated:

Runway Development Alternatives		
Alternative	Runway Extension Length	Runway Length
A	600'	5,052'
B	1,328'	5,780'
C	2,978'	7,430'
D	3,748'	8,200'
E (No Action)	-	4,452'

Runway Alternatives Cost Comparison				
Alternative	Total Cost	Federal Cost	State Cost	Local Cost
A	\$10,050,000	\$9,547,500	\$251,250	\$251,250
B	\$19,350,000	\$18,382,500	\$483,750	\$483,750
C	\$43,765,000	\$41,576,750	\$1,094,125	\$1,094,125
D	\$52,845,000	\$50,202,750	\$1,321,125	\$1,321,125
E	-	-	-	-

Runway Extension Local Share Break Even Analysis with City Providing Fuel				
Alternative	Runway Length	Local Development Cost	Estimated Increased Gross Revenue (20 Years)	20-Year Net Revenue or Subsidy (+,-)
A	5,052'	\$251,250	\$2,295,007	+\$2,043,757
B	5,780'	\$483,750	\$4,993,863	+\$4,510,113
C	7,430'	\$1,094,125	\$6,663,397	+\$5,569,272
D	8,200'	\$1,321,125	\$7,005,939	+\$5,684,814

Information assumes 2007 Dollars.

Runway Extension Local Share Break Even Analysis with Private FBO Providing Fuel				
Alternative	Runway Length	Local Development Cost	Estimated Increased Gross Revenue (20 Years)	20-Year Net Revenue or Subsidy (+,-)
A	5,052'	\$251,250	\$340,843	+\$89,593
B	5,780'	\$483,750	\$741,663	+\$257,913
C	7,430'	\$1,094,125	\$989,613	-\$104,512
D	8,200'	\$1,321,125	\$1,040,486	-\$280,639

Information assumes 2007 dollars.

Taxiway Development Alternatives

The estimated taxiway development costs are shown in the table below.

Taxiway Development Alternatives Cost Comparison						
Runway Length	Partial Parallel (RW 14)	Partial Parallel (RW 32)	Total Cost	Federal Cost	State Cost	Local Cost
4,452'	\$4,700,000	\$7,000,000	\$11,700,000	\$11,115,000	\$292,500	\$292,500
5,052'	\$8,000,000	\$7,000,000	\$15,000,000	\$14,250,000	\$375,000	\$375,000
5,780'	\$12,000,000	\$7,000,000	\$19,000,000	\$18,050,000	\$475,000	\$475,000
7,430'	\$22,000,000	\$7,000,000	\$29,000,000	\$27,550,000	\$725,000	\$725,000
8,200'	\$26,000,000	\$7,000,000	\$33,000,000	\$31,350,000	\$825,000	\$825,000

Landside Development Alternatives

Landside facilities are another important aspect of the airport. Landside facilities serve as the processing interface between the surrounding community and the airport operating environment. Likewise, it offers the traveler the first impression of the airport and local area. Landside facilities house supporting infrastructure for airside operations and often generate substantial revenues for the airport.

The following landside alternatives were evaluated:

Landside Development Alternatives	
Alternative	Description
L1	Expand hangar development northeast of the existing apron area including the conversion of a portion of the automobile parking lot to hangar development.
L2	Expand apron area and hangar development area to the north of the existing hangar and apron area.
L3	Expand apron and hangar development area to the southwest of the existing landside development on the opposite side of Runway 14/32.
L4	Expand apron and hangar development area to the southeast of the existing hangar and apron area.
L5	Develop residential/industrial airpark southwest of the existing landside development on the opposite side of Runway 14/32.
L6	No Action Alternative

Landside Alternative Cost Comparison

Alternative	Total Cost	Federal Share	State Share	Local Share
L1	\$570,000	\$541,500	\$14,250	\$14,250
L2	\$7,840,000	\$7,448,000	\$196,000	\$196,000
L3	\$22,229,000	\$21,117,550	\$555,725	\$555,725
L4	\$8,050,000	\$7,647,500	\$201,250	\$201,250
L5	\$2,000,000	\$1,900,000	\$50,000	\$50,000
L6	-	-	-	-

Landside Development Local Share Break Even Analysis

Alternative	Local Development Cost	Estimated Increased Gross Revenue 20 Years	Net Revenue or Subsidy (+,-)
L1	\$14,250	\$1,205,106	+\$1,190,856
L2	\$196,000	\$1,205,106	+\$1,009,106
L.3	\$555,725	\$1,205,106	+\$649,381
L4	\$201,250	\$1,205,106	+\$1,003,856
L5	\$50,000	\$1,205,106	+\$1,155,106
L6	-	-	-

Information assumes 2007 dollars.

SUMMARY

Based on the analysis and results of the study to-date, along with Steamboat Springs Airport Steering Group and public input, the following actions are recommended:

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- 1) Accomplish all safety-related and pavement maintenance projects including wildlife perimeter fencing (these types of projects are not included in the Alternatives analysis but will be included in the Financial and Airport Development Plans).
- 2) Plan for and implement construction of a partial parallel taxiway to Runway 32 and construct a bypass taxiway at the Runway 14 end. FAA funding for a partial parallel taxiway to Runway 14 is not likely. However, if the City is able to obtain excess fill material from other projects to create the embankment then obtaining FAA funding for the paving and lighting would be a higher probability.
- 3) Plan for and implement Alternative A for a 600 foot runway extension for the initial runway extension and plan for Alternative B in the ultimate for a total runway length of 5,780 feet which would accommodate the recommended 75 percent of the small aircraft fleet. Implement the runway extension alternatives after other higher priority projects (such as wildlife fencing and L1) have been completed.
- 4) Plan for and implement Alternative L1 and plan for Alternative L2 the area located north of Alternative L2 should also be protected for future landside development occurring adjacent to Alternative L2. The potential development of Alternative L5 is also a possibility should a private developer approach the City.

NEXT STEPS

- Present the alternatives to the City Council and select the preferred alternative.
- Airport Development and Financial Chapter
- Financial Chapter overview with Steering Group