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United States General Accounting Office

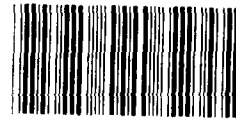
GAO

Report to the Honorable  
Robert C. Byrd, U.S. Senate

November 1987

# AVIATION SAFETY

## Commuter Airports Should Participate in the Airport Certification Program



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**Resources, Community, and  
Economic Development Division**

B-228633

November 18, 1987

The Honorable Robert C. Byrd  
United States Senate

Dear Senator Byrd:

In response to your April 20, 1987, letter and subsequent discussions with your office, we evaluated the requirements for airport participation in FAA's Airport Certification Program, with emphasis on the requirements' impact on airports receiving service from commuter airlines.<sup>1</sup> The airport certification program provides standards for equipment and procedures to enhance airport safety. The program also requires airport safety inspections by airport personnel and the Federal Aviation Administration (FAA). Our objectives in this evaluation were to (1) examine the program's participation requirements, (2) identify the program's safety benefits and certification costs including cost coverage by the Airport and Airway Improvement Act of 1982 and its proposed reauthorization, and (3) evaluate alternative participation requirements and their impact on commuter airports.

In summary, we found that

- Airports receiving their only scheduled service from commuter airlines cannot acquire certification regardless of their level of passenger activity because the airport does not meet the participation requirement of receiving service from planes with 31 or more passenger seats. In addition, many currently certified airports no longer meet the participation requirements and could have their certification downgraded or withdrawn.
- The program results in a higher level of airport safety by reducing the risk of accidents and enhancing an airport's ability to deal with an accident if one occurs. Participating in the program can increase an airport's capital and operating costs; however, grants authorized by the Airport and Airway Improvement Act can cover most of the capital costs.
- Alternative participation requirements could be implemented that would increase the number of certified commuter airports.

<sup>1</sup>Two definitions of commuter airlines are currently in use. FAA defines commuter airlines in part as those that operate planes with 30 or fewer passenger seats under Federal Aviation Regulation 135. The Regional Airline Association and section 416(b)(4) of the Federal Aviation Act, as amended and implemented by DOT, define commuter airlines as those airlines operating planes with 60 or fewer passenger seats. Commuter airlines in this report refers to the FAA definition unless otherwise indicated.

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We believe the best alternative for enhancing airport safety is to extend the participation requirements to include all airports receiving regularly scheduled service.

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## Background

In the Airline Deregulation Act of 1978, the Congress expressed concern that safety not be compromised by any changes resulting from airline deregulation. Specifically, section 5(a) of the act directed the Secretary of Transportation to take any steps necessary to ensure that a high standard of safety is maintained in all aspects of air transportation in the United States.

Commuter airlines are playing an expanding role in the nation's air transportation system largely as a result of the Airline Deregulation Act of 1978. About 324 airports in the contiguous United States were served exclusively by commuter airlines<sup>2</sup> in 1986, according to the Regional Airline Association (RAA). Over the last 10 years, total commuter airline<sup>2</sup> passenger enplanements grew at an average annual rate of about 12.7 percent, increasing from 9.2 million in 1977 to 28.3 million in 1986. RAA expects 8.3 percent average annual growth for the next 10 years, reaching 68 million annual passenger enplanements by 1997.

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## Airport Certification Program Participation Requirements and Standards

The Airport and Airway Development Act of 1970<sup>3</sup> empowered the Administrator, FAA, to establish minimum safety standards for airport operation and to certify certain airports that complied with these standards. In accordance with this authority, FAA established the Airport Certification Program in 1972.

There are two types of airport certification. Full certification is required for airports receiving or expecting to receive regularly scheduled service from aircraft with 31 or more passenger seats. A full certificate holder must generally comply with all of the standards imposed by the regulations in order to obtain and maintain certification. Airports receiving unscheduled or occasional service from aircraft with 31 or more passenger seats are required to obtain a limited operating certificate. Limited certificate holders are required to have proper and adequate equipment to conduct safe operations; however, they are not necessarily required

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<sup>2</sup>Flying planes with 60 or fewer passenger seats.

<sup>3</sup>P.L. 91-258, section 51(b)(1).

to comply with all of the specific provisions of the regulations. In particular, many of these airports are not required to obtain crash/fire/rescue (CFR) equipment.

Airport certification standards can be categorized as risk reducing and accident mitigating. (See app. I.) The risk reducing standards are intended to decrease the likelihood of accidents. Included in this category are standards for runway structure, runway lighting and marking, traffic and wind indicators, snow removal procedures, bird hazard mitigation, and annual FAA inspections to ensure continued compliance. The accident mitigation standards are intended to minimize loss of life and property in the event of an accident. Included in this category are requirements for CFR equipment and preparing an emergency plan.

Of the 324 airports in the contiguous 48 states served exclusively by commuter airlines,<sup>4</sup> about 209 airports hold full certificates and 54 hold limited certificates. These airports are certified because they previously met the participation requirements and continue to comply with program standards, or because the airlines providing service use planes larger than 31 passengers. Sixty-one commuter airports are not certified.

## Program Benefits and Costs

The airport certification program is widely believed to provide important, although often intangible, safety benefits. Participation in the program can increase airport capital and operating costs. The experience of recently certified airports suggests that these costs can vary widely primarily because of variations in airport condition and facilities. Grants authorized by the Airport and Airway Improvement Act can cover a significant portion of the capital costs associated with obtaining certification.

## Program Benefits

In 1984 the National Transportation Safety Board (NTSB) evaluated certification program effectiveness in increasing the level of airport safety. The report found that a reduction in the rate of airport-related accidents since program implementation indicated a distinct safety improvement. However, NTSB was unable to correlate the improvement directly to the

<sup>4</sup>Flying planes with 60 or fewer passenger seats. Statistics are not available for airports served exclusively by airlines flying planes with 30 or fewer passenger seats.

airport certification program because of factors that could not be quantified, such as technological improvements in aircraft systems and upgraded navigational facilities.

To supplement the NTSB study, we reviewed NTSB accident data bases and held discussions with FAA officials to evaluate the safety benefits of airport certification. From 1982 to 1985, 46 commuter airline accidents occurred at airports, 6 involving fires. Several NTSB accident reports credited CFR accident mitigation measures with saving lives and reducing equipment losses. Safety benefits associated with risk reduction measures are difficult to identify because by preventing accidents, they do not produce quantifiable data.

Despite the lack of cause/effect evidence, we found that the program's risk reducing standards have widespread support among FAA officials, airport managers, and industry groups. For example, the American Association of Airport Executives, which includes executives from small airports in its membership, and the Air Transportation Association believe that the program's risk reduction standards are more cost-effective than the accident mitigation standards. These groups believe that risk reduction items, such as improved navigational aids and lighting, provide a relatively low-cost means to reduce the risk of accidents. They do not believe that CFR benefits justify its high costs, especially at smaller airports.

Air Line Pilots Association representatives told us that in some ways airports served by small planes have a greater need for airport safety standards than airports served by larger planes. Among their reasons were that small aircraft (1) have higher accident rates, (2) operate into airports with the fewest navigational aids, (3) are flown by pilots with less experience, and (4) are more susceptible to damage on impact because of less demanding standards for construction.

Other program benefits that government and industry representatives identified are (1) FAA airport surveillance and enforcement, (2) increased leverage for FAA to get safety improvements, and (3) additional clout for airport operators to obtain funding for safety-related improvements.

## Airport Certification Costs Can Cover a Wide Range

In order to obtain and maintain an airport operating certificate, airports may incur capital and operating costs. Airports incur capital costs if they need to procure equipment or facilities. Certification-related airport operating costs result from (1) employing and training CFR personnel, (2) equipment and facilities maintenance, and (3) required self-inspection activities. FAA costs are for certification-related staff time and travel requirements.

We examined the capital and operating costs at six airports that obtained full certification since 1984. We also examined operating costs at eight commuter airports that have been fully certified for several years. FAA's cost was based on its estimate of the type and amount of staff time devoted to airport certification and related travel costs. (Our cost estimates are discussed in app. II.) Certification costs per airport at the six airports ranged from \$25,000 to \$313,000 for capital costs, \$8,200 to \$77,000 for annual operating costs, and \$820 to \$2,100 for annual FAA inspection and recertification. CFR expenses accounted for about 87 percent of the capital costs at fully certified airports. As described in appendix II, some airports with limited certificates use low-cost CFR alternatives. The wide range for capital costs was due primarily to differing equipment needs, while the range of operating costs was due to differences in CFR personnel salaries and the type of expenses attributed to certification activities.

## Federal Assistance for Certification Costs

The 1982 Airport and Airway Improvement Act<sup>5</sup> provided a grant program that can significantly assist airports with certification-related capital costs. About 90 percent of capital costs is covered by federal grant money at most airports. FAA's policies and procedures provide funding priority for those types of airport development required by law, with safety-related items receiving the highest priority. Eligible development includes all capital projects associated with the airport certification program, including high-cost items such as CFR equipment and safety fencing. Airports in some states are also eligible for state matching grant funds for capital projects. The grant program does not cover operations and maintenance costs associated with airport certification. Operating costs at the airports we examined were covered by local funds, sometimes augmented by user fees.

The Airport and Airway Improvement Act expires in 1987 unless reauthorized. The Senate and House versions of the reauthorization

<sup>5</sup>P.L. 97-248.

would not change the eligibility or priority for federal funding assistance related to airport certification.<sup>6</sup> Although both bills propose various changes in the grant program objectives and funding allocation, neither would change the high priority of safety projects or the eligibility for funding safety equipment required for obtaining airport certification.

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### Alternative Participation Requirements Could Include Commuter Airports in the Program

Airports that receive scheduled service from commuter airlines flying planes with 30 or fewer passengers are not eligible for the program. Many of these uncertified airports, however, have more activity than some certified airports. Further, many certified airports no longer meet participation requirements, although they remain certified. Alternative participation requirements could be implemented that would more accurately reflect an airport's need to participate in the program and reduce the inconsistencies resulting from the current plane size-based requirement.

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### Commuter Airports Not Eligible for Certification

We reported in August 1975 that the airport certification program did not extend safety benefits to passengers flying commuter airlines into small airports.<sup>7</sup> Because participation was not linked to airport activity, we found that some uncertified airports served more passengers than some certified airports. This anomaly still exists. In 1986, 17 uncertified airports had more passenger enplanements than 33 certified airports. (See app. III.)

Our August 1975 report concluded that passengers on commuter airlines are entitled to the same assurance of airport safety as passengers on major airlines. We recommended that FAA include commuter airports in the program. Because of concerns about its authority to modify participation requirements, FAA did not adopt our recommendation. (See app. IV for FAA's views and our reply.)

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### Many Airports Could Lose Full Certification

Although airports must initially meet program participation requirements to obtain certification, about 62 percent (130 of 209) of the fully certified commuter airports no longer receive scheduled air service from

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<sup>6</sup>H.R. 2310 and S. 1184.

<sup>7</sup>Federal Aviation Administration's Airport Certification Program: Has It Resulted in Safe Airports? (GAO/RED-76-5, Aug. 8, 1975).



planes with 31 or more seats. While these airports no longer meet program participation requirements, they remain certified by continuing to comply with program standards.

The program's regulation provides, in effect, for removal of an airport's certificate if it no longer meets the participation requirements. The regulation states that an operating certificate can be revoked for any reason that would be grounds for denying an application for a certificate.<sup>8</sup> This would seem to imply that an airport could lose full certification if it receives only unscheduled aircraft or services exclusively aircraft with fewer than 31 passenger seats. FAA's authority to remove an airport's certification, however, is based on the statutory provision, section 609, which appears to require safety-related justification for revoking certification. These differences create uncertainty over the permissible grounds for decertification.

Although FAA's current policy is not to aggressively pursue decertifying airports, a 1985 proposed rule making included a provision for changing a certificate from full to limited if the airport no longer meets the participation requirements.<sup>9</sup> As of October 1987, this rule making had not been finalized. According to the Manager of FAA's Certification and Compliance Branch, Office of Airport Standards, the proposal's intent is to reduce inspector work load by eliminating inspections of airports that would no longer qualify for the certification program. He told us that the action would be pursued only at airports that stopped receiving eligible passenger air service several years ago and have no expectations for eligible service in the future.

## Alternative Participation Requirements

Since current participation requirements do not require commuter airport certification and many certified airports could lose certification regardless of their level of activity, we developed and evaluated several alternatives to determine their effect on the number of commuter airports participating in the program. We selected alternatives that would be sensitive to commuter airline operations and use reliable, existing data.

The alternatives we examined would require certification for all airports (1) enplaning more than 2,500 passengers annually on scheduled flights,

<sup>8</sup>14 C.F.R. 139.

<sup>9</sup>Notice of Proposed Rule Making 85-22 (Oct. 23, 1985).

(2) serving scheduled aircraft with 10 or more passenger seats, and (3) with scheduled service. We also examined the effect of the status quo and strict enforcement of the current participation requirements on the number of certified commuter airports. We believe that the alternative requiring certification for all airports receiving scheduled service is most consistent with the recommendation of our 1975 report and the safety intent of the 1978 Airline Deregulation Act. (App. V shows the results of our analysis of alternatives.)

In 1980 FAA issued a notice of proposed rule making that would have required all airports serving or expecting to serve commuter air carriers and having more than 2,500 annual passenger enplanements to be issued limited certificates.<sup>10</sup> FAA proposed new participation requirements in order to be consistent with the Airline Deregulation Act. FAA withdrew the proposal in 1981 following FAA's receipt of comments challenging its statutory authority to modify the participation requirements, and it remains uncertain of its statutory authority to certify commuter airports. As discussed in appendix IV, we believe that FAA has authority to modify the participation requirements pursuant to section 606 of the Federal Aviation Act of 1958, as amended; however if the FAA continues to interpret section 606 as not granting sufficient authority to certify airports servicing aircraft with 30 or fewer passenger seats, we suggest that FAA seek specific statutory authority.

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## Conclusions

In light of the increased role that commuter airlines are playing as a result of airline deregulation, we continue to believe, as we did in 1975, that airports receiving scheduled service should be certified, regardless of the size or type of plane providing the service. Smaller planes, in some ways, have a greater need for airport safety standards than large planes. Communities that receive regularly scheduled service from commuter airlines should not be subject to a potentially lower level of airport safety because smaller planes provide the service; however, the type and extent of safety regulations should be balanced with the level of airport activity and the airport's ability to finance certification costs.

The Congress expressed concern that safety not be compromised by any changes resulting from the Airline Deregulation Act of 1978, and directed the Secretary of Transportation to take those steps necessary to ensure that a high standard of safety is maintained in all aspects of air transportation in the United States. We believe FAA could use existing

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<sup>10</sup>Notice of Proposed Rule Making 80-10 (June 12, 1980).

statutory authority to modify program participation requirements to provide safety standards for commuter airports; however, FAA is still uncertain of its authority to certify commuter airports. Therefore, we believe that FAA should request specific authority from the Congress to include commuter airports in the airport certification program.

FAA should develop a new category of certification for low-activity airports with regularly scheduled service that requires full implementation of risk reduction standards but allows a flexible approach to CFR. Unlike limited certification, which allows partial compliance with the program's standards, this new category would require low-activity airports to implement all of the risk reduction standards specified in appendix I and allow a flexible approach only to the costly accident mitigation standards, primarily CFR.

We recognize that certification costs, particularly for CFR services, could be a financial burden for small, low-activity airports. Implementing risk reduction standards at these airports could provide a relatively low-cost means of reducing the risk of accidents and increasing the level of safety. According to the American Association of Airport Executives and the Air Transport Association, the program's risk reduction standards are more cost-effective than CFR, especially at small airports. As described in appendix II, some airports with limited certificates use low-cost CFR alternatives that might be applicable to low-activity airports.

## Recommendations

We recommend that the Secretary of Transportation direct the Administrator, FAA, to

- change the participation requirements for the airport certification program to require certification for all airports that receive regularly scheduled service. If the Secretary deems it necessary to resolve uncertainty over his authority to certify commuter airports, he should seek specific authority from the Congress.
- develop a new category of certification for low-activity airports that would require full implementation of the risk reduction features of the airport certification program and allow the use of alternatives for CFR.

In conducting our review we examined pertinent legislation, regulations, FAA handbooks and advisory circulars, NTSB studies, and previous GAO reports. We also interviewed officials at selected commuter airports,

FAA, NTSB, and industry associations. We performed our review in accordance with generally accepted government auditing standards. Our scope and methodology is described in more detail in appendix VI.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time we will send copies to the Secretary of Transportation, and the Administrator, FAA, and make copies available to others upon request. We discussed the results of our review with agency officials and have included their comments where appropriate. At your request, we did not ask the agency for official comments on a draft of this report. This work was done under the direction of Ken Mead, Associate Director. Major contributors are listed in appendix VII.

Sincerely yours,

A handwritten signature in cursive script that reads "J. Dexter Peach".

J. Dexter Peach  
Assistant Comptroller General



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# Contents

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Letter	1
Appendix I Airport Certification Program - Accident Mitigation and Risk Reduction Standards	14
Appendix II Costs Associated With Airport Certification	15
Appendix III Comparison of Passenger Activity at Selected Commuter Airports	18
Appendix IV FAA Efforts to Revise Participation Requirements	20
Appendix V Alternative Participation Requirements for the Airport Certification Program	22

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<b>Appendix VI</b>		24
<b>Scope and</b>		
<b>Methodology</b>		

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<b>Appendix VII</b>		26
<b>Major Contributors to</b>	Resources Community and Economic Development	26
<b>This Report</b>	Division	
	Los Angeles Regional Office	26
	Atlanta Regional Office	26

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<b>Tables</b>	Table I.1 Risk Reducing and Accident Mitigating Standards	14
	Table II.1: Capital Costs for Full Certification	15
	Table II.2: Capital Costs for Limited Certification	16
	Table II.3: Operations and Maintenance Costs for Full Certification	17
	Table III.1: Passenger Activity at Selected Uncertified and Certified Airports, 1986	18
	Table V.1: Effect of Alternative Participation Requirements on Commuter Airport Certification	23

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**Abbreviations**

ALPA	Air Line Pilots Association
CFR	Crash/Fire/Rescue
DOT	Department of Transportation
FAA	Federal Aviation Administration
GAO	General Accounting Office
NTSB	National Transportation Safety Board
RAA	Regional Airline Association

# Airport Certification Program - Accident Mitigation and Risk Reduction Standards

Airport certification standards can be categorized as risk reducing and accident mitigating. The risk reducing standards are intended to decrease the likelihood of accidents. The accident mitigation standards are intended to minimize loss of life and property in the event of an accident. Table I.1 shows how we divided the standards in the program into these categories.

**Table I.1 Risk Reducing and Accident Mitigating Standards**

## **Risk Reduction Standards (from subparts C and D)**

Section 139.33:	Portions of Airport Operations Manual.
Section 139.43:	Pavement areas.
Section 139.45:	Safety areas.
Section 139.47:	Marking and lighting runways, thresholds, and taxiways.
Section 139.51:	Handling and storing hazardous articles and materials.
Section 139.53:	Traffic and wind direction indicators.
Section 139.57:	Self-inspection program.
Section 139.59:	Ground vehicles.
Section 139.61:	Obstructions.
Section 139.63:	Protection of navigation aids.
Section 139.65:	Public protection.
Section 139.67:	Bird hazard reduction.
Section 139.69:	Airport condition assessment and reporting.
Section 139.71:	Identifying, marking, and reporting construction and other unserviceable areas.

## **Accident Mitigation Standards (from subparts C and D)**

Section 139.33:	Portions of Airport Operations Manual.
Section 139.49:	Airport crash/fire/rescue equipment and service.
Section 139.55:	Emergency plan.



# Costs Associated With Airport Certification

Three types of cost are associated with airport certification—capital, operating, and maintenance. We obtained information on capital costs related to full certification and limited certification. Limited certification capital costs provide information on the impact of low-cost CFR measures. We also collected data on operating and maintenance costs connected with full certification. The airports that we obtained cost information from, and estimates of their associated costs, are shown in the tables that follow.

## Capital Costs of Full Certification

We examined eight airports that obtained full certificates since January 1984. Cost data was not available from two airports. Table II.1 shows capital cost data for these six airports.

**Table II.1: Capital Costs for Full Certification**

<b>Airport</b>	<b>CFR</b>	<b>Runways</b>	<b>Lighting</b>	<b>Other</b>	<b>Total</b>
Bullhead/ Laughlin, AZ	\$14,140	\$6,880	\$14,107	\$41,601	<b>\$76,728</b>
Lake Havasu City, AZ	500	20,861	0	4,435	<b>25,796</b>
Eagle County, CO	292,500	0	0	20,000	<b>312,500</b>
Naples Municipal, FL	215,100	0	0	0	<b>215,100</b>
Athens Clarke Co. Municipal, GA	139,500	0	0	0	<b>139,500</b>
Pitt-Greenville, NC	254,471	0	0	30,000	<b>284,471</b>

**Appendix II  
Costs Associated With Airport Certification**

**Low-Cost CFR Measures at Limited Certificate Airports**

Some limited certification airports arrange to place CFR equipment and personnel from local fire departments at the airport during flight operations. Because flights at these airports are infrequent, this requirement is usually not burdensome or expensive, and CFR can be provided at low or no cost to the airport. These low-cost CFR measures could provide a model for flexible CFR arrangements at low-activity airports receiving regularly scheduled commuter airline service. For example, an airport enplaning 2,500 passengers per year equates to an average of about 7 passengers per day. It is likely that many of them are receiving only a few commuter flights per day. This low activity should enable many of these airports to make arrangements with local fire departments to provide CFR equipment and personnel.

**Table II.2: Capital Costs for Limited Certification**

<b>Airport</b>	<b>CFR</b>	<b>Runways</b>	<b>Lighting</b>	<b>Other</b>	<b>Total</b>
Barstow-Daggett, CA	\$0 <sup>a</sup>	\$3,000	\$0	\$0	<b>\$3,000</b>
Needles, CA	0 <sup>a</sup>	2,500	0	0	<b>2,500</b>
Ukiah, CA	0 <sup>b</sup>	0	0	0	<b>0</b>
Mojave, CA	0 <sup>c</sup>	0	0	0	<b>0</b>
Mammoth Lakes, CA	426,766 <sup>d</sup>	0	0	4,000	<b>430,766</b>
Hernando County, FL	0 <sup>e</sup>	0	0	0	<b>0</b>
Ocala Municipal, FL	3,600 <sup>c</sup>	0	0	97,766	<b>101,366</b>
St. Augustine, FL	0 <sup>f</sup>	0	0	0	<b>0</b>
Space Center Executive, FL	0 <sup>c</sup>	0	0	0	<b>0</b>
University- Oxford, MS	0 <sup>e</sup>	0	0	16,396	<b>16,396</b>
Bobby L. Chain, MS	0 <sup>c</sup>	0	0	0	<b>0</b>
Dalton Municipal, GA	0 <sup>e</sup>	0	0	0	<b>0</b>

<sup>a</sup>Provided by the Department of Forestry.

<sup>b</sup>Provided by the city and the Department of Forestry.

<sup>c</sup>Available on site prior to certification.

<sup>d</sup>Purchased for essentially new airport.

<sup>e</sup>Provided by the city.

<sup>f</sup>Provided by local fire department.

**Appendix II  
Costs Associated With Airport Certification**

**Operations and  
Maintenance Costs for Full  
Certification**

Eight older airports with full certificates were added to the list of airports selected for the capital cost data in order to obtain well established operating cost data.

**Table II.3: Operations and Maintenance  
Costs for Full Certification**

<b>Airport</b>	<b>CFR</b>	<b>Other</b>	<b>Total</b>
Oxnard, CA	\$19,500	\$30,000	\$49,500
San Luis Obispo, CA	48,000	16,110	64,110
Visalia, CA	75,000	2,000	77,000
Flagstaff, AZ	17,950	10,400	28,350
Kingman, AZ	14,100	12,000	26,100
Page, AZ	5,700	28,100	33,800
Bullhead/ Laughlin, AZ	1 <sup>a</sup>	0	1 <sup>b</sup>
Lake Havasu City, AZ	1 <sup>a</sup>	0	1 <sup>b</sup>
Eagle County, CO	27,600 <sup>a</sup>	0	27,600 <sup>b</sup>
Naples Municipal, FL	42,890	0	42,890
Athens Clarke County Municipal, GA	8,228	0	8,228
Pitt- Greenville, NC	74,455	0	74,455
Santa Maria, CA	Data are not available		
Santa Rosa, CA	Data are not available		

<sup>a</sup>Annual CFR vehicle lease cost only. Because certification was recently obtained, total CFR cost is uncertain.

<sup>b</sup>Because certification was recently obtained, total certification cost is uncertain.

# Comparison of Passenger Activity at Selected Commuter Airports

The participation requirements for the Airport Certification Program are based on the size of the planes servicing an airport. Some airports served exclusively by planes smaller than the participation requirement threshold are excluded from the program regardless of their level of activity. Table III.1 shows that in 1986, 17 uncertified airports had more passenger activity than 31 certified airports.

**Table III.1: Passenger Activity at Selected Uncertified and Certified Airports, 1986**

Airport	Enplanements
<b>Uncertified Airports With More Than 2,500 Annual Enplanements</b>	
Oak Harbor, WA	27,061
Provincetown, MA	17,149
East Hampton, NY	12,693
Inyokern, CA	11,739
Kansas City/ Downtown, MO	7,582
Merced, CA	7,179
Owensboro, KY	6,807
Friday Harbor, WA	6,154
Coeur D'Alene, ID	5,917
Oneonta, NY	5,522
Spencer, IA	5,236
Cumberland, MD	3,802
Jackson, TN	3,564
Eastsound, WA	3,348
Kearney, NE	3,233
Sedona, AZ	3,091
Sidney, MT	2,819

(continued)

**Appendix III  
Comparison of Passenger Activity at Selected  
Commuter Airports**

<b>Airport</b>	<b>Enplanements</b>
<b>Full Certificate Airports With Fewer Than 2,500 Annual Passenger Enplanements</b>	
Ft. Huachuca/Sierra Vista, AZ	79
Parsons, KS	92
Manistee, MI	179
Clinton, IA	225
Telluride, CO	242
Alliance, NE	337
Ottumwa, IA	395
Chicopee, MA	494
Manitowoc, WI	524
Rocky Mount, NC	561
McAlester, OK	631
Columbus, NE	721
Hutchinson, KS	740
Jackson, MI	978
Yankton, SD	992
Worthington, MN	996
McCook, NE	1,059
Enid, OK	1,066
Menominee, MI	1,141
Blythe, CA	1,179
Devil's Lake, ND	1,209
Lamar, CO	1,257
Goodland, KS	1,383
Ponca City, OK	1,401
Kirksville, MO	1,452
Santa Rosa, CA	1,630
Hot Springs, AR	1,944
Mansfield, OH	2,056
Harrison, AR	2,110
Salem, OR	2,168
Brownwood, TX	2,393

Source: RAA, Apr. 1987.

# FAA Efforts to Revise Participation Requirements

FAA previously attempted to revise the participation requirements to require certain commuter airports to participate in the program. In 1981 FAA withdrew the rule making because of uncertainty over its authority to modify the participation requirements—a position that remains unchanged. We continue to believe, as we did in 1975, that FAA has authority to modify the participation requirements to include commuter airports in the program.

In 1980 FAA issued a notice of proposed rule making that would have required all airports serving or expecting to serve commuter air carriers and having more than 2,500 annual passenger enplanements to be issued limited certificates.<sup>1</sup> (FAA estimated that airports enplaning at least 2,500 passengers per year were the smallest that would be economically capable of complying with airport certification requirements.) In the rule making FAA indicated concern that the airport certification program did not require many airports used by commuter airlines to be certified, although the traveling public was likely to assume that the same level of service and safety would be provided by all airports. FAA proposed new participation requirements in order to be consistent with the Airline Deregulation Act of 1978, which called on FAA to ensure that passengers traveling on commuter air carriers would be afforded a level of safety equivalent, to the maximum feasible extent, to that provided to passengers of major air carriers.

In January 1981, following the receipt of comments from the Commuter Airline Association of America<sup>2</sup> among others, FAA withdrew the rule making. The FAA explained that after “review of these comments and reconsideration of our own position it must be conceded that our authority in this matter is not clear.”

## FAA Authority to Modify Participation Requirements

We concluded in our August 1975 report that FAA has authority to inspect and certify commuter airports under section 606 of the 1958 Federal Aviation Act as amended. This section provided FAA authority to inspect, classify, and rate air navigation facilities available for the use of civil aircraft, and to issue certificates to such facilities. In commenting on that report, FAA officials said that evidently the authority provided by section 606 was not considered adequate for the type of airport certification program desired or envisioned by the Congress in

<sup>1</sup>Notice of Proposed Rule Making 80-10 (Jun. 12, 1980).

<sup>2</sup>Now known as the Regional Airline Association (RAA).

large part because the Congress added section 612 to the 1958 act as part of the Airport and Airway Development Act of 1970. This section specifically authorized FAA to certify specific airports. We responded that the Congress enacted section 612 of the 1958 Federal Aviation Act in 1970, not because FAA previously lacked the authority to inspect and certify airports for safety, but rather to specifically indicate authorization for the action since FAA had not undertaken such a program on their own. Section 612, in our view, did not limit FAA's authority to conduct an airport certification program of commuter airports pursuant to section 606 of the act.

DOT had previously recognized its authority to certify airports under section 606. In a 1969 letter commenting on the proposed Airport and Airway Development Act of 1970, then-Secretary of Transportation Volpe said that there was no need to add a new section to the Federal Aviation Act authorizing the FAA to issue airport operating certificates and to establish minimum safety standards for airports serving air carriers. The Department of Transportation opposed the enactment of this and related provisions because FAA had authority to issue airport certificates under section 606 of the Federal Aviation Act.

# Alternative Participation Requirements for the Airport Certification Program

We evaluated the status quo, strict enforcement of current participation requirements, and three alternative participation requirements to determine their effect on the number of commuter airports required to be certified. We also identified the percentage of commuter passengers enplaning at certified airports under each. The following describes the current participation requirements under the status quo and strict enforcement, and the three alternatives and our rationale for selecting each one.

Status Quo (SQ)—Airports that receive regularly scheduled service from aircraft with 31 or more passenger seats must be certified. This alternative shows the number of fully certified commuter airports under current enforcement of the existing criteria.

Strict Enforcement (SE)—This is the same requirement as status quo; however, it represents the effect of strict adherence to existing participation requirements. This would require airports with full certification to be decertified if they no longer meet the participation requirements.

Alternative A—All airports that receive regularly scheduled service and have a minimum of 2,500 enplanements per year must be certified. We selected this alternative because (1) enplanements measure passenger activity at airports, (2) it would require “busier” airports to be certified while not burdening small, less busy airports, preventing the anomalies that exist now with a plane size-based criteria, and (3) FAA proposed this participation requirement for the airport certification program in 1980 on the basis of its estimate of an airport’s ability to finance certification costs.

Alternative B—Airports that receive regularly scheduled service from planes with a passenger seating capacity of 10 or more seats must be certified. This alternative was selected because (1) FAA has experience with a plane size-based requirement, (2) it would be sensitive to commuter airline service, (3) a large portion of the commuter airline fleet is between 10 and 19 seats, and (4) FAA uses 10 passenger seats as the breakpoint for aircraft construction standards.

Alternative C—All airports that receive regularly scheduled service, regardless of the plane size, must obtain certification. This alternative was selected for evaluation because (1) it would provide coverage for all passengers on scheduled air service, including commuter airlines, consistent with the safety objectives expressed in the Airline Deregulation Act of 1978, (2) the Air Line Pilots Association supports this alternative



**Appendix V  
Alternative Participation Requirements for  
the Airport Certification Program**

because it is consistent with their goal of one level of safety in the skies, and (3) we recommended this alternative to FAA in 1975.

**Table V.1: Effect of Alternative Participation Requirements on Commuter Airport Certification**

<b>Alternative</b>	<b>Fully certified commuter airports</b>	<b>Change in number of certified airports</b>	<b>Commuter passenger enplanements at fully certified airports (percent)</b>
SQ	209 <sup>a</sup>	None	91
SE	79	-130	67
A	220	+11	93
B	250	+41	95
C	324	+115	100

<sup>a</sup>These airports are certified because they previously met the participation requirements or because the airlines that provide service use planes with more than 30 passenger seats.  
Source: GAO.

As shown in table V.1, of the 209 commuter airports<sup>1</sup> currently certified, only 79 still meet the participation requirements. If FAA were to strictly enforce the participation requirements among the airports that are currently certified, 130 airports could lose certification. All of the alternatives would increase the number of certified commuter airports; however, only alternative C would enable 100 percent of commuter airline passengers to enplane at a certified airport.

<sup>1</sup>Served by planes with 60 or fewer passenger seats.

# Scope and Methodology

To determine the origins and rationale for the existing participation requirements and those that preceded it, we reviewed the legislative history of the airport certification program and related legislation, such as the Airport Development Act of 1970, the Airline Deregulation Act of 1978, and the Airport and Airways Development Act of 1982. We reviewed rule making documents and interviewed FAA airport certification program officials in Washington, D.C., and FAA's Western Pacific, Northwest Mountain, and Southern regional offices. We also interviewed airport and aviation industry officials at the Air Line Pilots Association, Regional Airline Association, Airport Operators Council International, and the Air Transport Association. Because a proposed rule for the program has been pending since 1985, we maintained regular contact with FAA program officials to determine the nature of the proposed changes and the likelihood of their implementation.

To identify certification program benefits, we examined rule making documents; a special study done for FAA by HH Aerospace Design Company, Inc., on the costs and benefits of CFR services—Airport Crash/Fire/Rescue (CFR) Service Cost and Benefit Analysis; and NTSB special reports on commuter airline safety and the airport certification program. We also interviewed FAA headquarters and regional staff, NTSB headquarters staff, two airport insurance underwriters, airport operators, and five airport industry associations. To determine any relationship between accidents and airport facilities, equipment, or personnel, we studied NTSB accident investigation reports. We also interviewed commuter airport officials and aviation industry officials to obtain their perspectives on program application.

We estimated capital costs associated with commuter airport certification by obtaining cost information on airports that have been certified since January 1984. We relied on recently certified airports so that the effect of inflation would be minimized. A precise cost estimate of certifying currently uncertified airports would have required site visits to each uncertified airport and a detailed inventory of equipment and facilities necessary for certification. We rejected this methodology as too time-consuming and expensive.

We contacted eight airports that have been certified in the United States since 1984, and six of these were willing to provide cost information (two commuter airports in FAA's Western Pacific region, three commuter airports in FAA's Southern region, and one commuter airport in FAA's Northwest Mountain region). Two airports in the Eastern region declined to provide cost information. Capital costs for CFR equipment

were confirmed through interviews with three CFR equipment manufacturers. We also obtained capital cost data from 12 airports with limited certification (5 in the Western Pacific region and 7 in the Southern region) in order to examine low-cost CFR alternatives. Information on operating costs associated with airport certification was gathered from 14 airports (3 in FAA's Southern region, 10 in the Western Pacific region, and 1 in the Northwest Mountain region). These data were collected from the certification inspection files in FAA regional offices, airport officials, and local fire departments, using a structured data collection instrument. We derived FAA airport certification cost estimates from estimates provided by regional airport certification officials in the Southern and Western Pacific regions. The estimates are based on the time FAA inspectors spent on certification activities, certification division costs, and travel expenses.

To determine the extent to which the certification costs can be covered by federal grants under the Airport and Airways Improvement Act of 1982, we examined current and proposed legislation and interviewed FAA grant program officials.

In order to evaluate which airports are required to participate in the airport certification program, we analyzed the requirements used to determine whether an airport must participate in the airport certification program. We obtained a list of airports that are served only by aircraft with 60 or fewer passenger seats from the RAA to determine the actual number of commuter airports in the program, and their annual passenger enplanements. Data on airports served only by planes with 30 or fewer passenger seats were not available.

Because the participation requirements exclude airports served by commuter airlines, we developed alternative participation requirements that would include airports served only by commuter airlines. To accomplish this, we developed alternatives that used existing reliable data sensitive to commuter airline activity. We also reviewed two previous GAO reports to identify earlier recommendations concerning revised participation requirements for the certification program.<sup>1</sup> We conducted our work at FAA offices in Washington, D.C.; Atlanta; and Los Angeles between March and July 1987.

<sup>1</sup>B-164497 and GAO-RED-76-5.

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