

PART 3: FINANCING GENERAL AVIATION AIRPORTS

PRIVATE SECTOR ROLE IN FINANCING GENERAL AVIATION AIRPORTS

Winfield S. Beyea, Environmental Science and Engineering, Inc.

Summary

Traditionally, the financing of general aviation airports under public sponsorship has been accomplished by subsidies. The Airport and Airways Development Act of 1970 has been a principle means of providing subsidies to the publicly sponsored general aviation airports. In contrast, privately-owned, public-use airports have not been eligible for this subsidy and, thus, have relied on activities such as flight training, airframe and powerplant repair, banner towing, agricultural spraying and other business activities to cover their operating costs and the cost of any capital improvements.

One potential role for the private sector is as a joint sponsor at an airport. For example, a private enterprise could sponsor the construction and operation of the landside facilities of an airport and recoup its investment through fees, concessions, and other revenue sources. This role provides for private involvement and lessens the public sponsor's share of the development costs.

A second potential role for the private sector is as airport developer and recipient of federal aid. The Airport and Airway Improvement Act of 1982 has provisions for funding any privately-owned, public-use reliever airport; or a private airport that receives scheduled service and enplanes 2,500 or more passengers annually. This paper presents a case study of a planned new general aviation airport which became financially feasible for a private enterprise after it qualified for funding under the 1982 Act.

Introduction

In the traditional sense, the financing of general aviation airports under public sponsorship has been accomplished primarily through the means of a subsidy. The publicly-owned general aviation facility has functioned basically as a utility which was not expected, like its parent government to cover its own expenses. Long-term fixed lease agreements with little, if any, rental income have been characteristic of general aviation airports.

With the advent of the Airport and Airways Development Act of 1970, public sponsors have received significant portions of the required capital funds to help finance the necessary improvements for their respective facilities. Other contributors to general aviation financing have included the states, as well as other agencies such as the Economic Development Administration (public works monies) and interstate commissions such as Appalachian Regional Commission (economic development). Debt management vehicles, such as general obligation bonds, have also been utilized for new airport site development; however, these projects were primarily set forth, initially, under the Airport Development Aid Program (ADAP), which was the programming arm of the 1970 legislation. At this point, it is important to note that the availability of development funds for general aviation airports, which were issued in the form of ADAP block grants to the states, has been extremely low relative to air carrier and air commuter development funds. Hence, much of the capital required

for many general aviation airports was not available. It is important to note, also, that the establishment of many of the publicly-owned general aviation airports prior to 1970 was the result of quit claim deed transfers from the U.S. Department of Defense. Many states, of course, took a lead role in the development of their own general aviation system with their own funds as was the case in Ohio in the mid-1960's. However, these were exceptions to the general trend.

The privately-owned, public-use airport was traditionally owned and operated as any private enterprise, with the major entrepreneurial activity focused on flight training, airframe and powerplant repair, banner towing, agricultural spraying, etc. Generally speaking, the private airport did not function, originally, as a public utility per se. This function was provided by the public sector. However, as the continued plight of financing new, or of improving existing general aviation airports with public funds progressed, the privately-owned airport emerged as an important player in the overall aviation system. In examining this development in recent years at the system level, the private airport has emerged as a surrogate reliever facility to other high density air carrier and general aviation airports in many parts of the United States.

In relating this historical development to the new Airport and Airway Improvement Act which was signed into law by the President on September 3, 1982, private airports are now eligible for federal funding if they are one of the following:

- A public-use, privately-owned airport that serves or will serve as a designated reliever airport; or,
- A public-use, privately-owned airport which enplanes 2,500 or more annual passengers and receives scheduled service.

As a result, new horizons are now being established whereby financial incentives to private syndicates are being administered by the Federal Aviation Administration, to encourage further participation by the private sector in airport development.

Historical Perspective

General aviation has been viewed, historically, as that segment of aviation remaining after exclusion of scheduled air service as performed by commercial operators and the military. Based on a report published in 1974, general aviation typically represented individual ownership of aircraft used for personal purposes. (1) However, the character of general aviation is changing, due primarily to the escalation of aviation fuel prices, and the deregulation of the air carrier industry as a result of the Airline Deregulation Act of 1978.

Between 1973 and 1978, the most significant growth of aircraft utilization was realized by the turbine-powered airplanes and rotorcraft. Conversely, the single-engine piston airplane experienced very little growth in total hours flown. Consequently, it can be understood that the larger aircraft classifications increased in utilization at a greater rate than other components of the general aviation fleet. (2) Between 1979 and 1980, total hours flown for the general aviation fleet decreased by 5.4 percent; however, executive aircraft such as the twin turboprop and turbojet types increased by 6.6 percent. (3) This category was the only aircraft classification which experienced an increase in utilization between 1979 and 1980.

In relating these trends to the actual airport facilities, it becomes apparent that the role of the general aviation airport has changed dramatically over the past ten years. As the effects of the deregulated airline industry and higher fuel prices have materialized, the need for transportation services in air taxi, business and the executive fleets has evolved.

In an attempt to meet the demands placed on general aviation airports, both public and private sponsors have been faced with the proposition to upgrade their respective facilities to meet the new demands, set forth from general aviation, with limited capital. As was discussed previously, general aviation airports have not, historically, been capable of meeting their expenses without subsidy. Long-term lease agreements with fixed rates and charges are only one example of the financial constraint placed on airport sponsors. On the private sector side, the situation has been somewhat different. Most owners of private airports have been proprietors exercising direct control over the delivery and cost of services. However, the capital required to upgrade the airfield, for instance, would place a much greater burden on the private owner due to the lack of "outside" financing, other than from commercial banking institutions.

With regard to federal and state funding, only publicly-owned general aviation airports have been eligible for funding in the past. With regard to ADAP funds, each state and U.S. territory received block grants for general aviation airport development. At the state level, the FAA Airports District would disburse the individual grants to public sponsors, based on a priority system. However, the monies available for many states did not represent a fraction of the capital funds necessary to meet the development needs of individual airports. Private airports, of course, were not eligible and thus, the capital available for their expansion was extremely limited.

As a result of foregoing events, the privately-owned airport has evolved, in a sense, as an endangered species. Without the means to receive federal grants in the past, the capability to expand their facilities to meet the new corporate demand on general aviation has been severely restricted. Under the new Airport Improvement Program, this dilemma in the private sector has been somewhat alleviated.

Private Sector's Role As A Joint Sponsor

In examining the private sector's role as a joint sponsor of a publicly-owned, general aviation airport, a sound, financially attractive lease structure should be established to provide sufficient revenue for the sponsor to amortize its investment in the facility. As was noted earlier, however, long-term lease agreements with fixed fee structures have been characteristic of many publicly-owned, general aviation facilities.

In the establishment of a set of rates and charges with private investment on the airport, it is necessary to create a "partnership" between the public and private sectors. This is particularly important in today's economy. Through the means of an adequate set of minimum standards, the development of the landside facilities could be absorbed, totally, by private enterprise, which would drastically reduce the public sponsor's share of the development costs. The actual lease income would be derived from a combination of raw and developed land rentals based on the return-on-investment value of the land, and the cost of the apron. The amortiza-

tion schedule would be based, initially, on the prime interest rate in effect at the time of agreement would be initiated. Presently, the prime interest rate is in the neighborhood of 12 percent. The amortization schedule would coincide with the depreciation schedule of the investment and escalation clauses should be included, based on an accepted indicator such as the Consumer Price Index.

Obviously, the construction of landside facilities by the fixed base operator is not a unique method in airport lease agreements. However, the impetus here is that the rates and charges, applied through the land lease, are based on a return-on-investment fee structure which would be applicable to any type of capital investment by private enterprise. This method would, in turn, generate rental income for the public sponsor, based on current interest rates, while encouraging capital investment on the airport. Historically, the ownership of the given landside facility has reverted back to the public sponsor at the anniversary of the lease. If this stipulation is applied in the lease, the pro rata share of the value of the facility, based on the depreciation schedule, should be established prior to the execution of the lease in the event that the particular facility is destroyed and is in need of a replacement.

As a result of the establishment of a joint sponsorship approach, the lease income derived from the private investment on the airport would be reviewed in the same vein as any other investment in the market place.

Concerning airfield expenses, fuel flowage fees are, by far, the most prevalent source of income. Landing fees have been applied in the past; however, the administrative burden experienced at various airports has outweighed the financial benefits of the fee. Another potential source of airfield income presented by other authors on this subject focuses on a differential set of airfield user charges, based on a prescribed level of activity. The differential sets of charges would be viewed from the perspective of an aviation system, whereby the fee structure for each facility within the given aviation system would be based on the benefit, or level of service provided by that facility. While the specifics of this approach were not available, it would still appear that the administrative burden, experienced previously in the application of landing fees at general aviation airports, would still be apparent under this scheme. Perhaps the application of an annual user fee, based again on the return-on-investment of the airfield construction cost, would be possible. However, the recording of accurate information pertaining to each airport user's level of activity, would be difficult to administer.

The Private Sector: A New Sponsor

Up to this point, the major focus has been on the historical relationship of the private sector to general aviation. The previous section attempted to link the lessor/lessee agreement on the airport to a joint business partnership that is involved in the investment and operation of an aviation enterprise. Recent experience on the planning and financial feasibility assessment for a new, privately-owned, public-use reliever airport in the Houston Aviation System, can show how privately-sponsored airports can play a greater role in the development of the general aviation system.

To provide a brief overview of the development of this recent project, a regional system plan was conducted for the Houston-Galveston Area Council to address the aviation system needs for the 13-county

area. This regional system plan was published in November 1981.

The major conclusions and recommendations of the study focused on approximately \$1.8 billion in 20-year improvements to the 15 existing airports in the system and the need to construct additional reliever airports in the system. (4)

As a result of the study, a private corporation in Houston purchased a land option for one of the proposed airport sites west of Houston for the purpose of developing a corporate/industrial airport as part of an overall planned industrial development. In the financial feasibility phase of this project, the total project cost was examined from a standpoint of return-on-investment and from a break-even proposition. In determining the appropriate rates and charges which could be applied, and utilizing a rate of return of 16-1/2 percent which was the prime interest rate at the time of the project, it was determined that the private sponsor would not be able to generate sufficient income on the airport to to amortize the investment. The amortization schedule was based on a 15-year period, representing the period of ownership preferred by the sponsor. However, it was determined that the sponsor could break even on his investment in the early 1990's, assuming the net operating revenue is achieved. Tables 1 through 3 provide the foregoing information in tabular form.

As a result of the financial feasibility assessment, it was concluded that the project would not be a sound investment from the perspective of a private developer. This assessment, of course, was based on the fact that federal funding would not be available. However, as was discussed in the beginning of this presentation, the President signed into law the Airport and Airway Improvement Act of 1982, which provides a 6-year authorization for a federally-financed program for airport development.

The following breakdown provides the general funding levels:

Category	Authorization by year (\$ millions)					
	1982	1983	1984	1985	1986	1987
Airport Improvement Program	450	600	793	912	1,017	1,017
Facilities and Equipment	261	725	1,393	1,407	1,377	1,164
Operations and Maintenance	800	1,434	1,274	1,271	1,306	1,362

As a result, the privately owned airport, if it fits into one of the two definitions as an eligible recipient, can receive funding for eligible development items. Under the present authorization, reliever airports are designated to receive, at least, 10 percent of total funds. It is important to note that the reliever status must be designated by the Secretary of Transportation as having the responsibility or function of relieving congestion at a commercial service airport and also providing more general aviation access to the overall community. (5)

In the case of the West Houston project the completion of the financial feasibility for development changed dramatically, since it was designated a reliever in the National Airport System Plan (NASP) by the Secretary. Consequently, the ability

to receive an adequate return-on-investment with the aid of federal funding for airfield construction became a reality. As a result of this legislative development, the private sponsor proceeded with the airport project.

Legislative Perspective: Funding Process

Previously, it was determined that the private sponsor had to be a designated reliever airport, or enplane at least 2,500 passengers with scheduled service. In the construction of a new private airport with federal funds, there has not been a definite determination from the FAA as to any other specific requirements which would be required for sponsorship.

There are various avenues that a private sponsor could pursue in establishing the administrative framework for the operation of an airport, depending of course on the enabling legislation of the state in question. In Texas, the establishment of Special Districts has been used as a vehicle by the private sector in providing public services such as water and sewer and utilities. This mechanism may be applicable to the establishment and administration of a new private, general aviation airport receiving federal funds. Another form of sponsorship could be the establishment of a non-profit organization, whereby the actual operating revenue would be held in escrow and used exclusively for airport improvements. This configuration would be attractive from a tax-liability standpoint; however, it would certainly place constraints on the sponsor insofar as the transfer of capital to other investments, etc. The actual legal ramifications of this approach is uncertain at this point, since it has not been pursued from the standpoint of private airport development with federal funds. Nevertheless, the private sponsor for the proposed reliever airport in Houston is in the process of considering these options.

With regard to the actual requirements which would be placed on the private sector as a sponsor of a public-use, general aviation airport, there has not been a clear indication from the FAA as to their requirements. It has been generally understood that all of the requirements applicable to a public sponsor would not be enforced upon a private sponsor. However, such issues as minority business enterprise (NBE), consultant selection, areas designated for exclusive use, etc., have yet to be addressed. Concerning the actual commitment the private sponsor must make to the United States concerning the maintenance of the facilities that are funded with FAA grants, it has been generally understood from various representatives at the federal and state level that the same commitments would be in force. To what extent, however, is still uncertain.

Nevertheless, funds are available for private airports and at this point, the operational and programming procedures required for federal funding merit some discussion. Initially, for a new private airport, the private sponsor must complete an airspace application with the FAA, commonly known as Form 7480-1, "Notice of Landing Area Proposal". This action puts FAA on notice as to the intentions of the sponsor, and initiates the appropriate review procedure concerning airspace and airport separation requirements. Upon receipt of FAA's determination and assuming that it was positive, the sponsor would need to proceed with the physical planning stage. The minimum effort of this stage would be the development of an Airport Layout Plan (ALP). As is the case with publically-owned airports, the FAA requires an approved, updated ALP as part of their

programming procedures in grant applications. Consequently, this would be the minimum required; however, it is strongly urged to the private sponsor that a more comprehensive planning effort be conducted in order to determine the full developmental, environmental, and financial implications associated

with the airport. Master planning is an eligible item under the airport improvement program that could be pursued as part of the entire development process. In January, 1983, a private airport in Austin, Texas received an FAA grant for an airport master plan.

• Table 1. Estimated income and expenses.

Revenue Source	Estimated Annual Income	
	1985	1995
Flight Line	\$336,000	\$ 560,000
Corporate	6,600	11,000
Fuel Flowage	392,500	665,000
TOTAL	\$735,100	\$1,236,000

Operating Expenses	Estimated Operating Expenses	
	1985	1995
Personnel	\$337,800	\$384,700
Supplies	12,500	18,500
Equipment	72,000	72,000
Utilities	11,000	11,000
Electrical	15,000	15,000
Crash Fire and Rescue	50,000	50,000
TOTAL	\$498,300	\$551,200

Source: Airport Feasibility Report on the Proposed West Houston Airport, Greiner Engineering Sciences, Inc., April 1982.

Table 2. Net income projections.

Item	1985	1995
Income	\$735,100	\$1,236,000
Expense	498,300	551,200
NET OPERATING INCOME	\$236,800	\$ 684,800

Source: Airport Feasibility Report on the Proposed West Houston Airport, Greiner Engineering Sciences, Inc., April 1982.

Table 3. Return-on-investment versus breakeven.

Parameters	1985	1995
A. Return-On-Investment	\$1,696,982	\$1,696,982
Net Operating Income	236,800	684,800
BALANCE	(\$1,460,182)	(\$1,012,182)
B. Breakeven	\$625,265	\$625,265
Net Operating Income	236,800	684,800
BALANCE	(\$388,465)	\$ 59,535

Source: Airport Feasibility Report on the Proposed West Houston Airport, Greiner Engineering Sciences, Inc., April 1982.

Finally, in order to obtain construction funds, compliance with federal and state environmental regulations would be required. In the Houston project, two alternatives were available to the private sponsor in satisfying this requirement. In consultations with the FAA, it was concluded that the sponsor would have to perform an Environmental Assessment in compliance with FAA Order 5050.4, "Airport Environmental Handbook". This would include, of course, the opportunity for a public hearing. It can be generally assumed that private investors are inherently reluctant to be involved in such a public forum, which is also the case with many public sponsors. As an alternative, it was jointly concluded that if the private sponsor had the capital to construct a basic airfield system such as a general utility runway with turnarounds, stub taxiway and a small apron, and then apply for federal funding, it could be highly probable that the private sponsor would not have to develop a full environmental assessment in order to be reimbursed with federal funds. The major drawback to this alternative is that it requires the sponsor to finance the initial phase of the development program without the guarantee of funding. However, it would most likely avoid the costly and timely environmental review process. These two options are presently being examined in the Houston project.

As a result of the foregoing, the funding process for the private sponsor is also a long and deliberate process. It does appear, however, that it would not be as cumbersome as a publicly-owned, general aviation airport. With 10 percent of the total program available for reliever airports, it appears that a mandate from Congress for the continued development of reliever airports will be an ongoing commitment to both the public and private sector in general aviation. Whether or not the individual states will follow suit in the funding of private airports is a question that cannot be answered, here, at this time.

New Dimensions In Sponsoring General Aviation

This discussion has focused on the new form of joint sponsorship for federal funds for either public or private-owned general aviation airports. With the advent of the Airport and Airway Improvement Act of 1982, new dimensions in the development of general aviation have evolved as a result of the inclusion of the private sector in the system.

In the future, as the new role of general aviation emerges as a key factor in an area's economic development, the administration of the facility will need to focus on the operation of the airport as an investment and not just a public utility in order to assure that sufficient financial resources are available to maintain its level of service.

References

1. Vahovich, Stephen G., General Aviation: Aircraft, Owner and Utilization Characteristics, Federal Aviation Administration, Washington, D.C., November 1976.
2. Eastman, Samuel Ewer, General Aviation and the Airport and Airway System: An Analysis of Cost Allocation and Recovery, The Economic Sciences Corporation, April 1981.
3. General Aviation and Avionics Survey, Federal Aviation Administration, April 1981.
4. Engineers of the Southwest, Regional Airport-Airspace System Plan - H-GAC, Houston, November 1981.
5. Airportopics, Newsletter No. 24, Federal Aviation Administration, Southern Region, October 1982.