

Federal Aviation Agency



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AIRPORTS

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SUBJECT : AIRPORT PLANNING AS A PART OF COMPREHENSIVE
STATE PLANNING PROGRAMS

1. PURPOSE. Many states are developing comprehensive planning programs. The purpose of this circular is twofold; first, it is to encourage states to include airport planning in their comprehensive planning program and second, it is to provide guidance and general methodology for developing a statewide airport planning program as part of the state's comprehensive planning program. It is for use by planners who may not be experienced in planning for aviation facilities so that they may effectively consider airport planning as part of the state's comprehensive planning program.
2. THE RELATIONSHIP BETWEEN STATE AIRPORT PLANNING AND COMPREHENSIVE STATE PLANNING.
 - a. The Need for Coordinated Planning. The comprehensive state plan provides a method of coordinating several functional state planning programs such as airports, highways, recreation, open space, water resources, flood control, education facilities and economic and resource development. In order to increase the utility of each function and to reduce the potential conflicts between functional development programs, there is a need to relate functions within the context of a comprehensive state planning program. The state planning program also provides a means of identifying future state development needs and finding ways of fulfilling such development needs. Airports are a major land use and an essential part of a balanced transportation system; therefore, it is imperative that comprehensive state planning consider airport needs. States may also find it necessary to examine the statutory authority granted to localities to permit adequate zoning.
 - b. The Department of Housing and Urban Development's "701" Program. The "701" Program, which was authorized in Section 701 of the Housing Act of 1954, may provide Federal assistance for the state airport planning program when it is a part of the state's comprehensive planning program. Federal grants are made to assist local

governments as well as state governments in solving planning problems resulting from increasing population concentrations in metropolitan and other urban areas, including smaller communities; to facilitate comprehensive planning on a continuing basis for urban development, including coordinated transportation systems; and to encourage such governments to improve planning staffs. In addition to assisting state planning agencies, grants may be made to metropolitan, county, and other planning agencies to assist in their comprehensive planning programs. Grants may cover up to two-thirds of the total costs of planning work. The remaining portion of the cost is paid by state, local or other non-Federal funds.

3. THE RELATIONSHIP BETWEEN STATE AIRPORT PLANNING AND NATIONAL AIRPORT PLANNING.

- a. Federal Program for Airport Planning. The Federal Airport Act of 1946 directs the Administrator of the Federal Aviation Agency to prepare a National Airport Plan each year. This plan sets forth the general requirements for airport development in a national system of airports for the next five years. Publicly owned or sponsored airports within the plan are deemed essential to the National Airport System and are eligible for Federal developmental assistance under the Federal-aid Airport Program.
- b. The State Airport Planning Program. When a state planning agency develops its state airport plan, such plan generally reflects the state's airport development needs and not necessarily the needs of a larger political or geographic entity. Furthermore, a state airport plan might include airports used exclusively for pleasure or instructional flying which would not be considered essential to a national system of airports. It will not, of course, reflect the airport development needs of the Nation as a whole. However, for the purposes of assuring navigable airspace clearance, it is essential that the state airport plan be coordinated with the Federal Aviation Agency. Further, many airports in the state plan are eligible for inclusion in the National Airport Plan, thus a state plan can materially benefit from and contribute to improving the quality of the National Airport System.

The airport developmental requirements reflected in a state airport plan may exceed the development needs set forth in the National Airport Plan for any given airport. For example, certain airport developments such as terminal buildings are ineligible for Federal

assistance and are accordingly excluded from the National Airport Plan, although they may be included in a state airport plan. Nevertheless, mutual benefits can accrue from a continuing relationship between the state agency responsible for airport planning and FAA Airports Service personnel. Such a relationship should be nurtured and encouraged.

4. ORGANIZATION FOR STATE AIRPORT PLANNING.

- a. The state agency with authority to take the lead in organizing a state airport planning program should call a meeting of the representatives of all agencies with an interest in relevant aspects of planning and development for the state. The purpose of this meeting should be to explain the importance of a state airport plan and the objectives of an initially required comprehensive state airport study. The cooperation of airport interest groups and appropriate planning and development agencies should be solicited at this meeting.
- b. When implementing a state airport planning effort, it is advisable that it be carried out as part of the comprehensive state planning program. This insures proper consideration of related state development policies and programs and establishes eligibility for use of "701" funds for the state airport study. Also, there should be coordination with each of the agencies which have an airport interest or are affected by airport development. Such agencies might include the following:
 - (1) State Aeronautics Agency.
 - (2) Regional Planning Agencies.
 - (3) Metropolitan Planning Agencies.
 - (4) Local Planning Agencies.
 - (5) State Highway Agency.
 - (6) Mass Transit Agencies and Companies.
 - (7) Port Authorities.
 - (8) Utility Companies.
 - (9) The FAA Area Office.
 - (10) The Department of Housing and Urban Development.
 - (11) State Associations of City and County Governments.

- c. The state agency taking the lead in the state airport planning program should also establish a mechanism which provides a continuing planning relationship with the various agencies having a relevant interest in the airport planning program.

5. A GENERAL CHECKLIST OF ELEMENTS TO BE INCLUDED IN THE STATE AIRPORT PLANNING STUDY. The state airport plan should reflect a balancing of the needs of the state and the appropriate manner by which state airports fit into broader plans such as multistate or national plans. Determining the state's airport needs is a complex problem; therefore, it is essential that the plan ultimately states the planning standards employed in its preparation. The following checklist of elements to be included in the state airport planning study is intended to provide a basis for such an approach but should not be considered definitive or exhaustive for any particular state. The essential elements are:

- a. An inventory of existing airport facilities serving the state.
- b. A forecast of future aviation activity of the state and an inventory of local plans relating to such activity.
- c. An analysis of each airport to determine the adequacy of existing airports to serve future aviation requirements.
- d. A long-range plan for future airport development in terms of new airport requirements and improvements to existing airports.
- e. The five-year state airport plan.
- f. The continuing state airport planning program.

The Federal Aviation Agency is available to provide valuable and useful advisory service and technical assistance for all phases of airport planning. All airport studies carried out by either a planning agency staff or planning consultants should be submitted by the state planning agency to the FAA Area Office serving the particular state, for informal review and assistance.

6. A DESCRIPTION OF ELEMENTS TO BE INCLUDED IN THE STATE AIRPORT PLANNING STUDY.

- a. Inventory and Analysis of Existing Airport Conditions and Needs. The objectives of this element are to identify and analyze existing state airport resources in terms of capacity and demand through:

- (1) Identification of existing airports directly serving the population of the state in terms of their existing physical facilities and their current volume of aeronautical usage.
- (2) Development of a historical analysis of airport development within the state including a review of financial, legal and administrative backgrounds pertaining to such development and identification of local and regional planning studies which have relevance to the state study.
- (3) Identification, by location and extent, of airport problems relating to such matters as:
 - (a) Inadequate facilities and their deterrent effect on the development of aviation.
 - (b) Inadequate surface accessibility.
 - (c) Incompatible surrounding land use.

- b. A General Forecast of Future Aviation Activity in the State and An Inventory of Local Plans Relating to Such Activity. The objective of this phase is to measure the expected growth of aviation activity and determine its effect on future airport requirements. Aviation activity is composed of (1) Air carrier activity and (2) General aviation activity. Air carrier activity is measured by the number of air carrier aircraft operations -- takeoffs and landings in a given period of time. The number of such operations depends on the volume of passengers and cargo transported and on the type of aircraft utilized. Passengers and cargo are forecast for the region served by numbers of passengers and tonnage of cargo. The forecasts provide a measure of demand which is then used to estimate aircraft arrivals and departures based on (a) type of aircraft, (b) load factors, and (c) schedules. Such general forecasts do not preclude the need for more detailed analysis but such studies should not be included in those parts of the study assisted by the 701 Program.

General aviation activity is similarly measured by the number of aircraft operations in a given period of time. For analysis purposes, however, it is generally advisable to measure such activity by the subtypes of flying comprising the total of general aviation activity (business, commercial, instructional and pleasure). Special attention should be given to air taxis and their function as a supplement to air carrier service in meeting the air transportation requirements of the state. The historical growth trend of each subtype is normally the basis for forecasting future growth. The more definitive steps are as follows:

- (1) Preparation of a forecast of air carrier passenger traffic embracing the following:
 - (a) Analysis of passenger traffic for past years.
 - (b) Comparison of the state's passenger growth trends with national passenger growth trends.
 - (c) Comparison of growth trends with state population growth trends.
 - (d) Comparison of passenger growth trends with state economic growth trends.
- (2) Preparation of a forecast of air cargo traffic embracing the following factors:
 - (a) Analysis of recent air cargo traffic growth trends of the state.
 - (b) Analysis of the effect of state and area economic growth on future air cargo traffic.
- (3) Preparation of a forecast of air carrier aircraft operations based on the forecasts of air carrier passenger traffic and air cargo traffic.
- (4) Preparation of a forecast of general aviation activity by subtype for (a) individual state airports and (b) the state as a whole, embracing the following factors:
 - (a) Analysis of recent trends in general aviation aircraft operations at airports throughout the state in comparison with national trends and forecasts.
 - (b) Analysis of the effect of state and area economic growth on general aviation aircraft operations.
 - (c) Analysis of the effect of state and area population growth on general aviation aircraft operations.
 - (d) Analysis of the effect of new and improved general aviation aircraft on operations.
- (5) Analysis of local plans relevant to future aviation activity in the state.

- c. An Analysis to Determine the Adequacy of Existing Airports to Serve Future Aircraft Requirements. The objective of this phase is to evaluate the adequacy of existing state airports to accommodate the air traffic which has been forecast for the state. The analysis includes studies to determine such items as: (1) The adequacy of existing airports including conveniently located airports in neighboring states; (2) Convenience of access and (3) Compatibility with adjacent land uses; and (4) Consideration of the relative value of improving existing airports as contrasted with building new ones. In this phase each study factor is related to each existing airport directly serving the state.

The following guidance is intentionally general and only appropriate for long-range planning purposes. It is emphasized that this guidance is not a substitute for special engineering studies.

- (1) A general evaluation of the following factors in relationship to the developed forecast of aviation activity for each airport:
 - (a) Airspace.
 - (b) Runway capacity.
 - (c) Taxiway capacity.
 - (d) Holding apron and bypass taxiway capacity.
 - (e) Terminal apron and aircraft parking aprons capacity.
 - (f) Terminal building capacity.
 - (g) Auto parking capacity.
 - (h) Compatibility with surrounding land uses.
 - (i) Prospects for V/STOL service.
- (2) Determination of the probable "Life Expectancy" of privately owned public airports.
- (3) Determination of military air traffic requirements and how they will influence future state airport development. (NOTE: FAA field offices can assist this undertaking.)

- (4) Determination of the availability of land to meet airport expansion requirements.

d. A Long-Range Plan for Future Airport Development. The objective of the long-range plan is to describe the airport facilities required to meet the long-range aviation needs of the state. As such it must be coordinated with the long-range comprehensive planning program for the state. The long-range comprehensive plan provides a statement of the goals and objectives for a variety of state development activities, including highways, recreation, open space, water resources, flood control, education facilities and economic and resource development. The definition of what constitutes "long-range" in terms of time is determined locally. A 20-year period is often used because it approximates one generation of population, but both longer and shorter planning periods are also used. The basic steps for formulating the long-range airport plan are as follows:

- (1) Development of a preliminary long-range development plan based on the forecast of future aeronautical requirements determined by foregoing phase b. The plan should include the following elements:
 - (a) A listing by type, size and location of required airports, heliports and other supporting facilities necessary to meet long-range future demands and the estimated cost of development to meet such demands.
 - (b) A narrative stating how the long-range development plan for new and expanded airports will be implemented and then utilized for air carrier and general aviation, including usage of helicopters and other V/STOL aircraft which are expected to become commonly operational within the long-range planning period.
- (2) A narrative reflecting coordination of the preliminary long-range plan for statewide airport development with the long-range comprehensive planning program for the state. The narrative should identify appropriate future changes in the state's long-range comprehensive planning program which are needed to accommodate the long-range state airport plan. The state airport plan, however, must be sufficiently flexible so that whenever necessary it can be modified to remain consistent with statewide development objectives.

- e. The Five-Year State Airport Plan. The objective of this plan is to develop a five-year capital investment program for state airport development. This involves development of a five-year state airport plan which is consistent with the long-range state plan for future airport development and which identifies the priorities, cost and timing of all developments planned for accomplishment during the initial five-year period of the long-range plan. The five-year plan should be concerned with optimizing the relationship among all airports directly serving the state, particularly with respect to their ability to complement and substitute for each other.
 - f. The Continuing Planning Program. The objective of this phase is to develop a continuing planning program for updating the long-range state airport plan and the five-year state airport plan. It requires development of a program which ensures periodic updating and revision of both instruments. Such updating should be coordinated with the FAA area office to assure proper consideration in the National Airport Plan and in the annual program for the Federal-aid Airport Program (FAAP). There is considerable value in state planning agencies providing for ongoing staffing with airport planning capability both for development of state airport plans and for the continuing state airport planning program. Such staffing may be eligible for financial assistance under HUD's 701 Program (see par 2b).
7. HOW TO GET THIS PUBLICATION. Obtain additional copies of this circular, AC 150/5050-1, "Airport Planning as a Part of Comprehensive State Planning Programs," from the Federal Aviation Agency, Printing Branch, HQ-438, Washington, D. C. 20553.


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