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CHAPTER IV

TRANSPORTATION AND GENERAL AVIATION IN VIRGINIA

INTRODUCTION

Virginia, the site of the first permanent English settlement in America in 1607, and one of the original 13 colonies, has occupied an important position in the history of the United States.[1] Richmond, its capital, was the capital of the Confederacy and Virginia and the site of many important battles in the Civil War. Because of its central location along the Atlantic Coast and its excellent harbor at Hampton Roads, Virginia is an important government, port, and shipbuilding center.

Geographically, the Commonwealth may be divided into four regions: (1) **The Coastal Plain** is divided into peninsulas by the action of the James, York, Rappahannock, and Potomac Rivers—all navigable from the Chesapeake Bay to the fall line extending roughly from Richmond to Washington. (2) Here, the **Piedmont Plateau** begins, a region of rolling hills divided into farms and woodlands, sloping gradually to the Blue Ridge, which divides it from (3) the **Great Valley of Virginia.** (4) The very southwestern part of the state is in the **Appalachian Plateau** region, an area of steep mountains and hollows.

In 1974, the population of Virginia ranked thirteenth in the nation, with an estimated 4,908,000 persons or 2.3 per cent of the United States total. Population increased 17.2 percent in the decade of the 1960's, and since 1970 it has increased an additional 5.6 percent. In 1970, 63 percent of the population was urban. The densest portions occur in Virginia's eight Standard Metropolitan Statistical Areas (SMSAs), which account for 66 percent of the population. In order of size these are: (1) and (2) Norfolk and Newport News-Hampton, the two SMSAs located in the Hampton Roads area (with 1,073,000 people); (3) Northern Virginia (with 986,000 people), containing many federal government and military installations; (4) Richmond (with 556,000 people), a manufacturing, commerce, and headquarters city; (5) Roanoke (with 212,000 people), the manufacturing, trade, and transportation center for the western part of the state; (6) Lynchburg (with 140,000 people), a manufacturing city; (7) Petersburg-Colonial Heights-Hopewell (with 127,000 people), a manufacturing area with some federal activity; and, (8) Bristol, another manufacturing center. The remaining 34 percent of the state's population is in small urban and rural areas. Politically, the state is divided into 95 counties, 38 independent cities, and 192 incorporated towns. The independent cities are politically independent of the counties in which they exist; incorporated towns are not.

Important elements in the economy of the state are manufacturing, federal government employment, commerce, agriculture, tourism, fisheries, and natural resources. Manufacturing, employing one-fifth of the state's civilian labor force, is highly diversified and geographically well dispersed. Principal industries are textiles, apparel, chemicals, food processing, transportation equipment, and electrical equipment. Principal manufacturing centers are in Richmond, Newport News, Norfolk, Lynchburg, Danville, Martinsville, and Roanoke.

Federal government employment is concentrated in both Northern Virginia and the Hampton Roads area. In addition, many Northern Virginia residents work for the federal government in Washington, D.C. Commerce is important because Virginia's location in the middle of the Atlantic Seaboard causes a great deal of north-south shipping to pass through. In addition, it is the site of Hampton Roads, one of the world's best deepwater ports. Because of its proximity to the West Virginia coal fields, it has two coal-hauling railroads. Agriculture is important to South Central Virginia and in the Shenandoah Valley.

Tourism is important to much of the state with many water recreation opportunities on the coast; important Colonial, Revolutionary War, and Civil War sites in the east; and, many hiking and camping possibilities in the west. The Chesapeake Bay provides tourists, as well as the state's commercial fisheries, with some of the best fishing in the country.

Natural resources are important in the Western part of the state. Coal mining, important in the Appalachian region, has undergone a resurgence with the rising price of imported oil. Extensive forests cover the western mountains supporting the lumber industry.

In this chapter the diversity of Virginia will be examined with respect to its transportation facilities and services, the Virginia Air Transportation System Plan, regionalism, and

[1] The information in the introduction to Chapter IV is abstracted from Ware, Peggy (ed.) *Virginia Facts and Figures-1975* Division of Industrial Development, Commonwealth of Virginia, Richmond, Virginia

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selected case studies of individual aviation facilities within the Commonwealth.

TRANSPORTATION FACILITIES AND SERVICES

In the following sections, the Virginia highway network and the statewide intercity bus, rail, and air carrier services will be described. A description of the Virginia airport facilities will follow.

Highways

The highway network in Virginia is composed of several classes of highways ranging from interstate freeways to local roads. Figure 4-1 shows both the Interstate and the Virginia arterial networks. The Interstate system consists of I-81, through the Shenandoah Valley; I-64, from Greenbrier, West Virginia through Clifton Forge, Staunton, Charlottesville, Richmond, Newport News, to Norfolk; I-95, from Washington to Richmond, Petersburg, and toward Rocky Mount, North Carolina; I-85 from Petersburg toward Greensboro, North Carolina; and I-77, running north-south through the western part of the state.

The Virginia arterial network includes the following roads: U.S. 58 through the southern part of the state from Norfolk to Martinsville; U.S. 29 from Danville through Lynchburg, Charlottesville, Culpeper, and Warrenton to Gainesville; U.S. 360 from South Boston to Richmond and on to Tappahannock and Reedsville; U.S. 17 from Chesapeake to Fredericksburg and Warrenton; U.S 13 on the Delmarva peninsula; U.S. 460 from Norfolk through Petersburg and Lynchburg to Roanoke; and from Christiansburg to Bluefield, through a part of West Virginia, and then from Bluefield through Tazewell to Grundy; U S 301 from the Toll Bridge over the Potomac at Newburg to Bowling Green and then Virginia 207 from Bowling Green to I-95 at Carmel Church; U.S. 225 from Martinsville through Roanoke to Clifton Forge; U.S. 58 Alternate, from Abingdon through Norton to Pennington Gap, U.S. 23 from Pound through Norton to the Tri-City area; Va. 7 from Washington to Winchester; U.S. 522 from Winchester to the State Line; U.S. 33 from Ruckersville to Morrisonburg; and, U.S. 211 from Warrenton to New Market.[2,3]

Intercity Bus

Figure 4-2 shows the intercity bus routes in Virginia, operated primarily by Greyhound and Trailways. Some small amount of service is also provided by other bus lines: D&M Bus Company is South Central Virginia, James River Bus Lines around Richmond, and Bristol-Jenkins Bus Lines in Western Virginia.

Most intercity bus services in Virginia are operated as parts of a national network. The greatest amount of service is from Richmond to Washington along I-95 as part of the major East Coast service. Another major route is from the Northeast to Tennessee, operating in Virginia from Washington, D.C to the Shenandoah Valley and along I-81. There is, in addition, a north-south service along U.S. 29. A subsidiary part of the East Coast service operates along the Delmarva peninsula to Norfolk There are very few east-west routes, the major ones being Norfolk - Richmond - Charlottesville - Staunton, and Norfolk - Richmond - Lynchburg - Roanoke. The entire state is served by at least one bus per day, and many communities isolated by other intercity modes are served by bus lines.[4]

Rail Passengers

There are four main scheduled railroad routes through Virginia, three run by Amtrak and one by Southern Railway as shown in Figure 4-2 The major north-south services operate from Washington. Amtrak operates three trains a day to Richmond and south, splitting at Petersburg; and, one train a day to Charlottesville, then to Charleston, West Virginia, and west Southern Railway also operates from Washington to Charlottesville, Lynchburg, Danville, and points south. Three trains run to Lynchburg and two go beyond. Southern has filed application to abandon some of its service

In addition to the north-south routes two run east-west one on the Chesapeake & Ohio from Newport News through Richmond and Charlottesville, connecting with the Washington section to the west; and, the other on the Norfolk & Western from Norfolk through Petersburg, Lynchburg, and Roanoke to Cincinnati.[5,6]

Air Carriers

The major air carrier airports in the state are located at Roanoke, Richmond, Norfolk,

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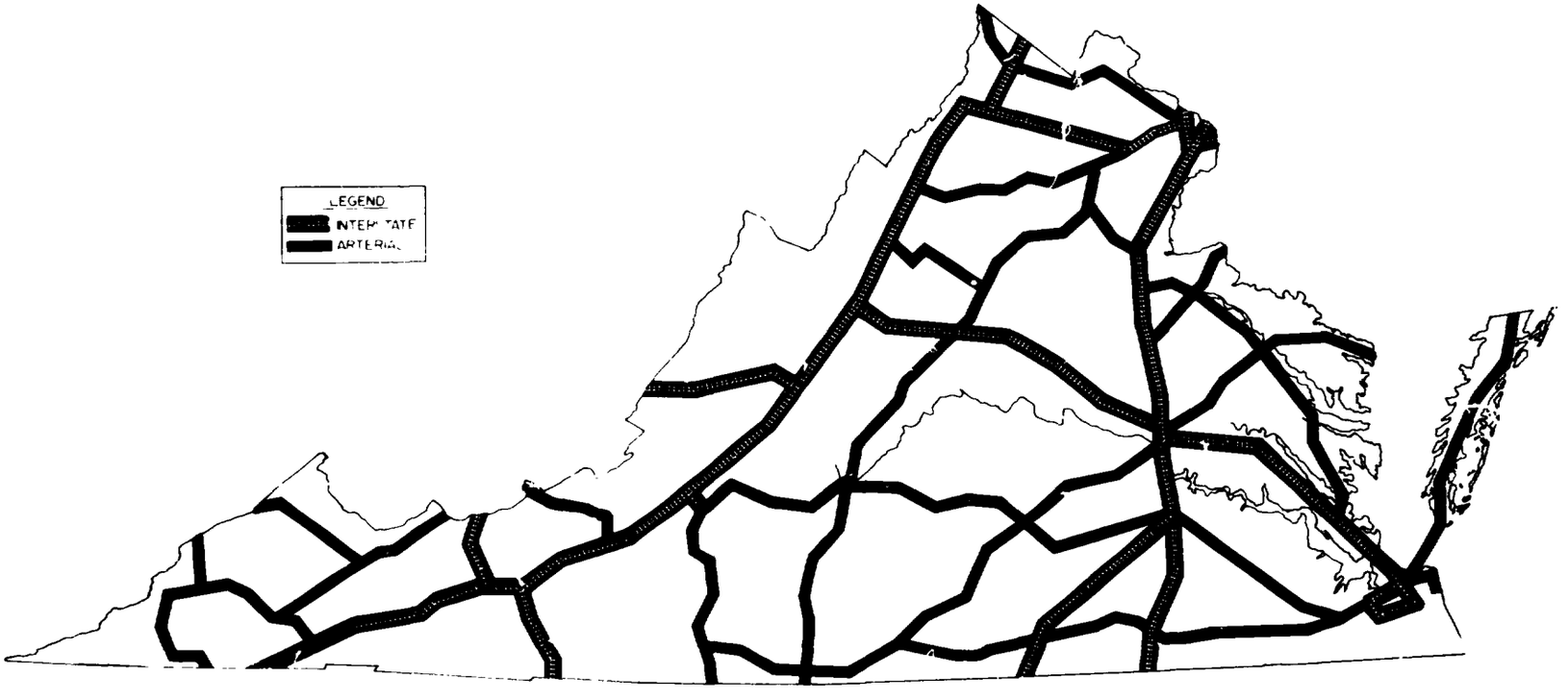
[2] Rand McNally Golden Anniversary Edition *Road Atlas* Rand McNally Chicago Ill 1973

[3] Department of Highways *Virginia 1974—Official State Highway Map*, Commonwealth of Virginia Rand McNally Chicago Ill 1974

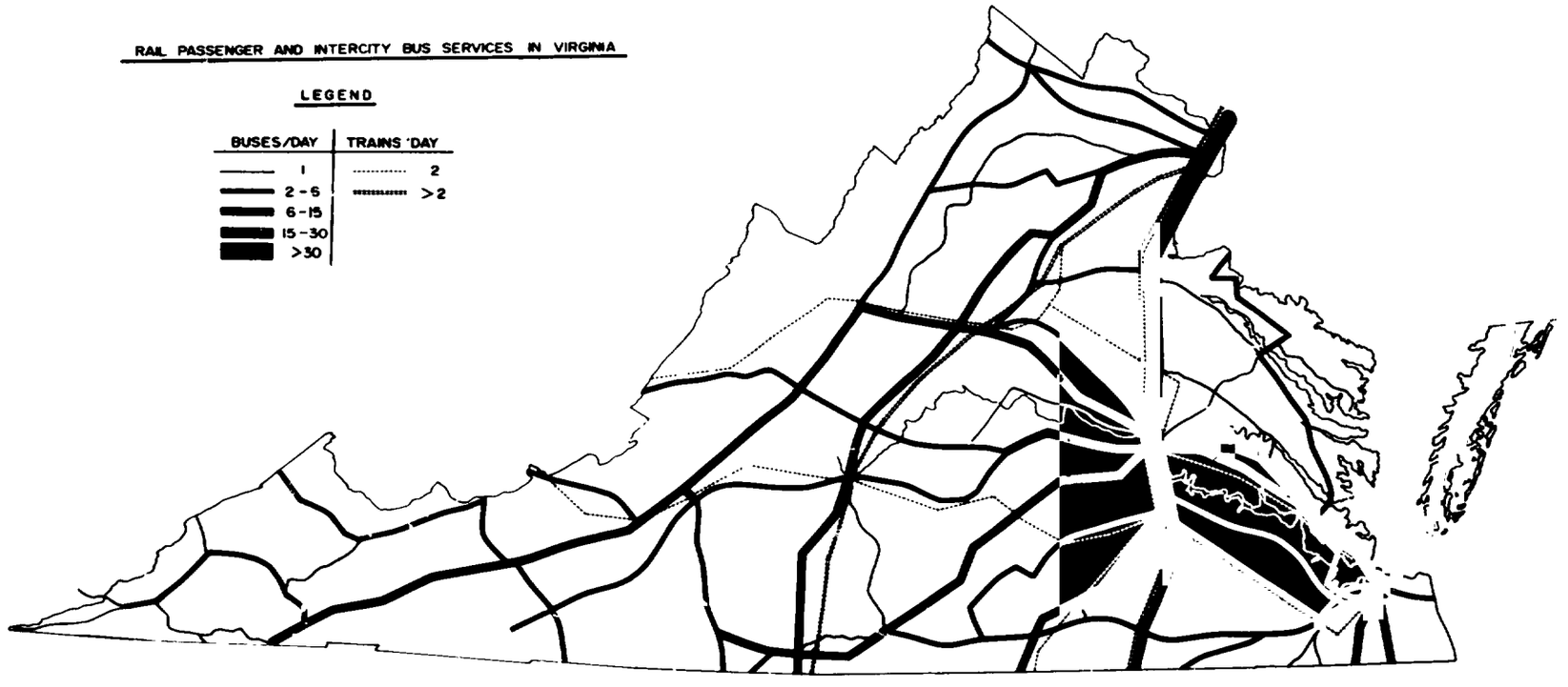
[4] *Russell's Official National Motor Coach Guide* Russell s Guides Inc Volume 47 No 8 Cedar Rapids Iowa May 1975

[5] Amtrak *All-America Schedule*, Washington May 15 1975

[6] ..... *Official Railway Guide, The* North American Freight Service Edition National Railway Publication Company Volume 107 No 5 New York, March April 1975



MAJOR HIGHWAY SYSTEMS IN VIRGINIA
FIGURE 4-1



RAIL PASSENGER AND INTERCITY BUS SERVICES IN VIRGINIA
FIGURE 4-2

TABLE IV-I
VIRGINIA AIRPORT OWNERSHIP

Description	Public (N - 49)		Private (N - 151)	
	Number	Percent	Number	Percent
Paved	**47**	**96**	**25**	**17**
Lighted	45	92	20	13
Unlighted	2	4	5	3
Unpaved	**2**	**4**	**126**	**83**
Lighted	0	—	7	5
Unlighted	2	4	119	79
Runway Lengths (feet)				
Under 3,000	9	18	124	82
3,000 to 3,999	15	30	23	15
4,000 to 4,999	7	14	3	2
5,000 to 5,999	10	20	1	1
6,000 to 6,999	4	8	—	—
7,000 to 7,999	1	2	—	—
8,000 to 8,999	2	4	—	—
9,000 to 9,999	1	2	—	—

Source: *Preliminary Draft of the Plan for the Virginia Air Transportation System,* Richmond, Virginia, December 1974.

Newport News, and Washington, D.C., served by National and Dulles airports—both operated by the federal government. As shown in Figure 4-3, intrastate service is heavily focused on Washington National Airport, with 8-10 flights a day to and from the major Virginia airports. The major intrastate air carrier is Piedmont Airlines. Other carriers serving the state include Allegheny, United, Eastern, and National Airlines. The best interstate service is offered at Richmond and Norfolk, with Roanoke, Newport News, and Tri-City providing lesser amounts. Several commuter air carriers also serve Virginia airports with Philadelphia, Baltimore, and Washington Dulles being principal destinations from Virginia cities.[7]

Virginia Airport Facilities

At present 227 aircraft landing facilities exist in the Commonwealth of Virginia, both publicly and privately owned.[8] Of these, three are seaplane bases, and 24, heliports. The remaining 200 airports vary from mere grass strips offering little or no auxiliary services to the mammoth Dulles Airport with its 11,500-foot runway capable of handling jumbo jets.

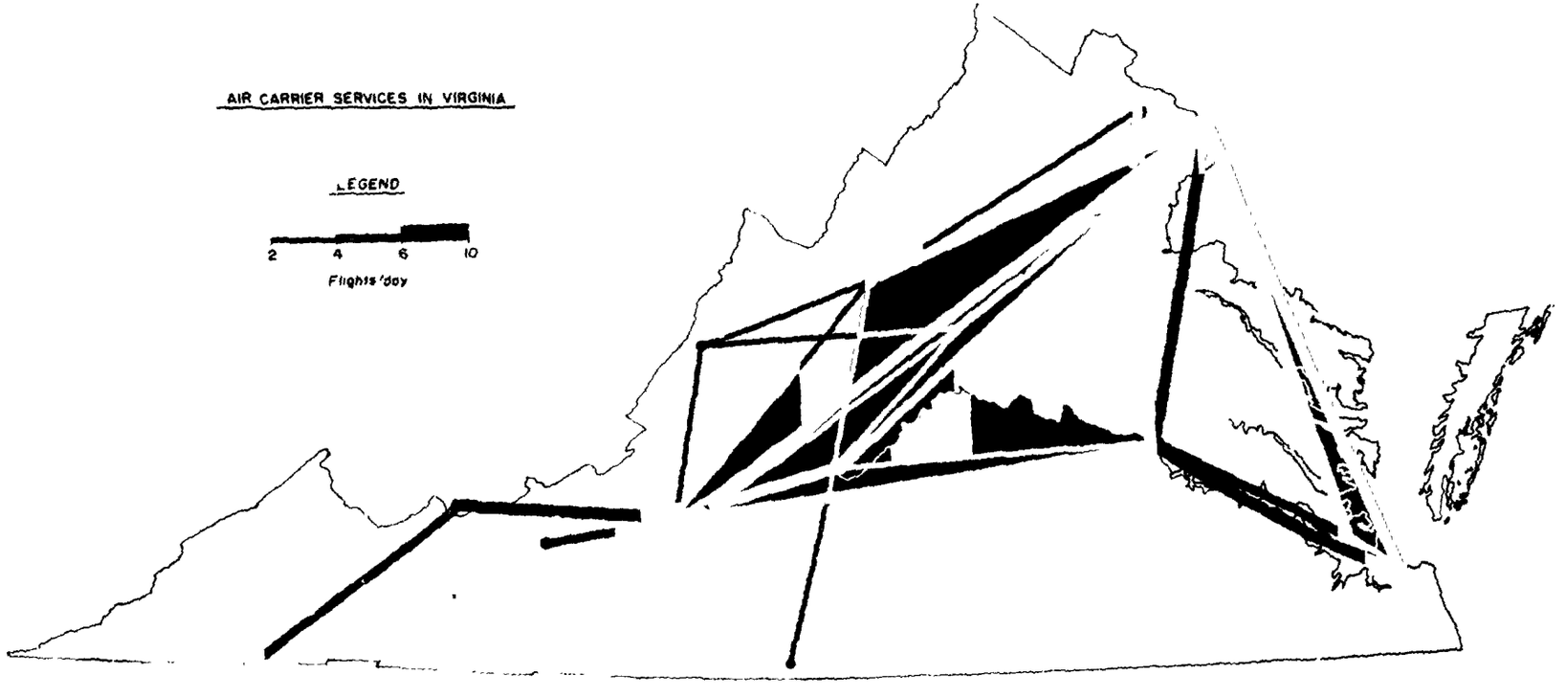
Only 49 airports, or roughly one-quarter of the total in the state, are publicly owned, as shown in Table IV-I. Several municipalities, of course, jointly operate airports through airport authorities such as the Peninsula Airport Commission, which is sponsored collectively by York County, James City County, Newport News, and Hampton. Despite the small number of publicly owned facilities, 92 airports (46 of them privately owned) are listed by the FAA as open to the public. Interestingly, three publicly owned facilities are not included within this category. In addition, six airports were abandoned in 1974, one of them publicly owned.

Eleven airports in the state are served by scheduled air carriers, with most of the remaining 189 airports possessing only general aviation capability often extremely limited at best.[9] Two-thirds of Virginia airports, for example,

[7] *Official Airline Guide,* (OAG) North American Edition, Reuben H. Donnelly Publishers, Oak Brook, Ill., May 15, 1975.

[8] FAA *Bulletin 70-83,* Washington, D.C., May 27, 1975.

[9] Division of Aeronautics, *Preliminary Draft of the Plan for the Virginia Air Transportation System,* Richmond, December, 1974.



AIR CARRIER SERVICE IN VIRGINIA
FIGURE 4-3

have maximum runway lengths under 3,000 feet and 86 percent have runways shorter than 4,000 feet (see Table IV-I), yet publicly owned airports possess by far the better facilities, with 45 of the 49 offering runways both paved and lighted. Forty have maximum runway lengths of at least 3,000 feet and well over one-third of all publicly owned airports have runways in excess of 5,000 feet By contrast privately owned airports boast only 20 facilities (out of a total of 151) with runways both paved and lighted. Most have runways less than 3,000 feet and only one airport has a maximum runway length over 5,000 feet Thus, the private airport in Virginia, characteristically, is of very limited capacity, while the publicly owned facility usually maintains a much higher capability and can accommodate more numerous and more varied types of aircraft.

THE VATS PLAN

The Virginia Air Transportation System (VATS) Plan attempts to identify airports that are expected to be needed in the Commonwealth of Virginia by 1990.

Financed in part through an Airport System Planning Grant, pursuant to the Airport and Airway Development Act of 1970, the planning and research that resulted in the final proposal was the joint effort of a special consulting team and the Virginia Division of Aeronautics. Because any airport expecting federal funding must be included in the state plan as well as in the National Airport System Plan (NASP), the significance of the VATS Plan to each locality should not be underestimated. In addition, as the planners were careful and insistent in pointing out, **actualization of the plan depends almost entirely on local initiative and local justification.** Federal and state support for each airport will not be automatic.

Seven goals of the VATS Plan (which was scheduled for public release shortly after this document went to press) have been proposed by the planners. These are to:

(1) Provide a system of airports which effectively complements a balanced total transportation system for the state.

(2) Provide an air transportation system which is compatible with the recognized developmental policies of the state, region, and community

(3) Develop an air transportation system which is both adaptable and flexible to changes in air transportation demand and to technological innovations in transportation service.

(4) Provide an air transportation system which will be technically, economically, and politically feasible for implementation.

(5) Provide a system of airports which will produce social and economic benefits to citizens of the Commonwealth.

(6) Develop an air transportation system which provides an effective means to safe, reliable, and convenient intra- and interstate travel.

(7) Minimize loss and inefficient use of natural resources, and avoid degradation of human and natural environments.[10]

The system concept that was selected essentially requires, first, the expansion of existing facilities and, second, the establishment of a limited number of additional facilities where present airports do not exist or cannot be expanded to meet expected demand. The fifteen-year plan is structured around three stages of development—1976, 1980, and 1990. Determinants for establishing the facility requirements of each planning district in the Commonwealth (there are 22 districts in all) are the forecasts of based aircraft and annual operations during each of these time frames. For example, in Planning District 3, Virginia Highlands Airport, with 30,000 annual operations and 24 based aircraft in 1974, is expected to have 111,774 annual operations and 39 based aircraft by 1990.[11] This will then require facility expansion from "Basic Utility" to "General Utility" and an expenditure of $1.43 million in public funds.[12] Similarly, two other existing airports in the planning district are scheduled for expansion based upon these same criteria; however, the planners emphasize, and rightly so, that the development of the system depends not so much on forecasts made in 1975 but rather on events as they actually unfold in the next fifteen years. In short, "the plan is intended to identify a **probable** development and the development of **options** that should be kept open (emphasis added)."[13] (Figure 4-4 shows the classification scheme used in the VATS Study to categorize the operational capabilities and the navigational aid (NAVAID) standards of Virginia airports.)

Overall, the VATS Plan will involve 96 airports in 72 different counties and will vary from large air carrier facilities to unpaved strips pro-

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Ibid pp 3-8

According to FAA figures for December 1974

Preliminary Draft of the Plan for the Virginia Air Transportation System op cit

Ibid, p 1

FIGURE 4-4

CLASSIFICATION OF GENERAL AVIATION AIRPORTS IN VIRGINIA

Operational Roles

BASIC UTILITY (BU): This type of development accommodates about 95 percent of the general aviation propeller fleet under 12,500 pounds. There is no special activity criterion required for this type of airport.

GENERAL UTILITY (GU): This type of airport accommodates substantially all general aviation propeller aircraft under 12,500 pounds. At least 500 annual itinerant operations of aircraft between 8,000-12,000 pounds are required.

BASIC TRANSPORT (BT): These airports accommodate all general aviation aircraft up to 60,000 pounds MGW, including propeller transports and business or executive jets. A BT airport must indicate at least 500 (existing or forecast) annual itinerant operations by aircraft between 12,500-60,000 pounds MGW.

AIR CARRIER (AC): These airports generally accommodate transport category aircraft between 60,000 pounds and 175,000 pounds MGW. The minimum requirement for this type of airport is at least 10 existing or forecast itinerant DEPARTURES per week (or 1,040 itinerant operations per year or season) by either the critical type aircraft or ONE of the appropriate families of aircraft.

LOCAL SERVICE (LO): These airports have known or forecast development limitations or expansion constraints.

Limitations and constraints include:

(a) Environmental
(b) Airspace
(c) Topography
(d) Proximity of similar services
(e) Land use incompatibility
(f) Ownership status
(g) Financial infeasibility
(h) Surrounding development strangulation
(i) Low activity projections

viding limited service. Seventy-seven existing airports are included in the system, 26 of them now privately owned. In addition, 15 existing facilities which are presently open to the public, have been excluded from the system. Although no new air carrier airports are planned to supplement the 11 now serving the state, 19 new general aviation facilities will be constructed as shown in Table IV-II. Eventually seven airports will be "deleted" or phased out as these newer ones replace them, so that by 1990, 89 airports will comprise the entire system. Fifty-four of these airports already have paved and lighted runways and an equal number also have runways in excess of 3,000 feet. The plan proposes that no public funding be expended for expansion or improvement of 33 airports. Seven of these will be deleted entirely from the system, 20 downgraded, in classification, and six will remain unchanged. However, 44 existing airports **will** be funded with most of them merely maintained at their present levels and the rest upgraded either one or two levels. As indicated in Table IV-II, the largest single category of general aviation airports will be "General Utility," followed by "Local Service."[14] A map showing these airport locations is shown in Figure 4-5.

[14] *Ibid*

FIGURE 4-4 (continued)

Navaid Standards

BASIC UTILITY AIRPORT (BU)

VOR Approach—if possible from existing facility, either on or off the airport; otherwise, SDF* or NDB* if over 10,000 annual total operations.
SAVASI or VAPI*

GENERAL UTILITY AIRPORT (GU)

VOR with straight in approach—if possible from existing facility, either on or off the airport; otherwise:
TVOR if over 10,000 annual total operations
SDF* or NDB* if under 10 000 annual total operations.
VASI-2
REIL at instrument approach end of runway.

BASIC TRANSPORT AIRPORT (BT)

ILS/MALSR if 35,000 total operations or more (MLS after 1980)
VOR with straight in approach and final approach fix—if possible from existing facility; either on or off the airport: otherwise; TVOR
REIL at approach end of runway if no MALS, otherwise opposite end.
VASI-2

GENERAL TRANSPORT AIRPORT (GT)

ILS/(S) SALS with RAIL if 35,000 total operations or more (MLS after 1980)
Straight in VOR approach with FAF and (S) SALS with REIL if less than 35,000 total operations
REIL at opposite end of runway from ILS
VASI-2 at each end of runway (VASI-4 with large turbo-jet operations)

SCHEDULED AIR CARRIER AIRPORT

ILS/ALS (MLS after 1980)
Straight in VOR approach with FAF
REIL at opposite end of runway from ALS
VASI-4 each end of runway

NOTE: Low cost, low power DME could be programmed with TVOR and ILS/MLS facilities.

*Indicates NAVAIDS not eligible for 100% Federal funding.

Source: *Preliminary Draft of the Plan for the Virginia Air Transportation System*, Division of Aeronautics, Richmond, Virginia, December 1974.

REGIONALISM AND AIR TRANSPORTATION

That a regional approach to air transportation has been adopted in Virginia should not be surprising. Regional problem-solving has achieved wide recognition since at least 1965 when the Water Resources Planning Act addressed the problem of development on a regional basis.[15] Such acts as the Public Works and Economic Development Act (Title V) and the Appalachian Regional Development Act have stimulated bureaucrats and politicians to look at problems on a regional level instead of using a local or state perspective. In addition, many treatments of urban transportation have focused on the need for looking at problems of an entire urban region or metropolitan area, rather than those of a series of adjoining cities. The move toward the formulation of a regional perspective for air transportation policy has received additional impetus from the following situations.

(1) The airways are becoming increasingly congested with traffic. No longer do many per-

[15] Wengert Norman, "Political and Administrative Realities of Regional Transportation Planning," in Joseph De Salvo, ed., *Perspectives on Regional Transportation Planning*, Lexington Books, Toronto, 1973, p. 387.

TABLE IV-II
CLASSIFICATION OF VATS AIRPORTS

Categories	1975 Existing	Planned	To Be Built	1990 Total
LO	12	25	0	25
BU	41	3	0	3
GU	7	18	16	34
BT	6	13	3	16
AC	11	11	0	11
TOTAL	77	70	19	89

Sources: Data compiled from *FAA Bulletin No. 75-83*, May 27, 1975; *The Virginia 1975-76 Airport Directory; 1974 A O P A Airport Directory;* and *Preliminary Draft of the Plan for the Virginia Air Transportation System*, December 1974.

sons acquainted with air transportation planning feel it sufficient for each airport to have its own master plan and from there on to "let a hundred flowers bloom."[16] Specifically, the regional airport plan

> ...is a representation of the aviation facilities required to meet the immediate and future air transportation needs of the regional/metropolitan area and is considered a subsystem of the State airport system. It recommends the extent, type, nature, general location, estimated cost, and timing of airport development required to meet the aviation needs of the regional/metropolitan area and provides the framework for definitive and detailed individual airport master planning.[17]

(2) General aviation aircraft often impede, or are impeded by, the activities of commercial carriers at hub airports leading to the demand for reliever airports in the vicinity and the need for some type of plan encompassing more than just one airport; though possibly stopping short of being a full statewide plan.

(3) Ideally there should be a transportation planning policy which attempts to coordinate air and ground transportation for maximum efficiency; however, by "regional transportation policy" vis-à-vis the airplane, one typically means a consideration of air policies for a region of a state without too much regard for the existence of alternative transportation modes or the desirability of their development.

An additional impetus for dealing with a problem on a regional basis came from the Advisory Commission on Intergovernmental Relations which described in a series of studies the need for treating the metropolitan area in a more coordinated way. Regional cooperation was further encouraged by the Federal Intergovernmental Cooperation Act of 1968, designed to create a national policy of including for consideration local, regional, and state interests when administering federal aid programs for local development.[18] As Wengert has pointed out, one must add "where" to Harold Lasswell's definition of politics as "who gets what when and how" to stress the importance of the geographical allocation of benefits and costs.[19]

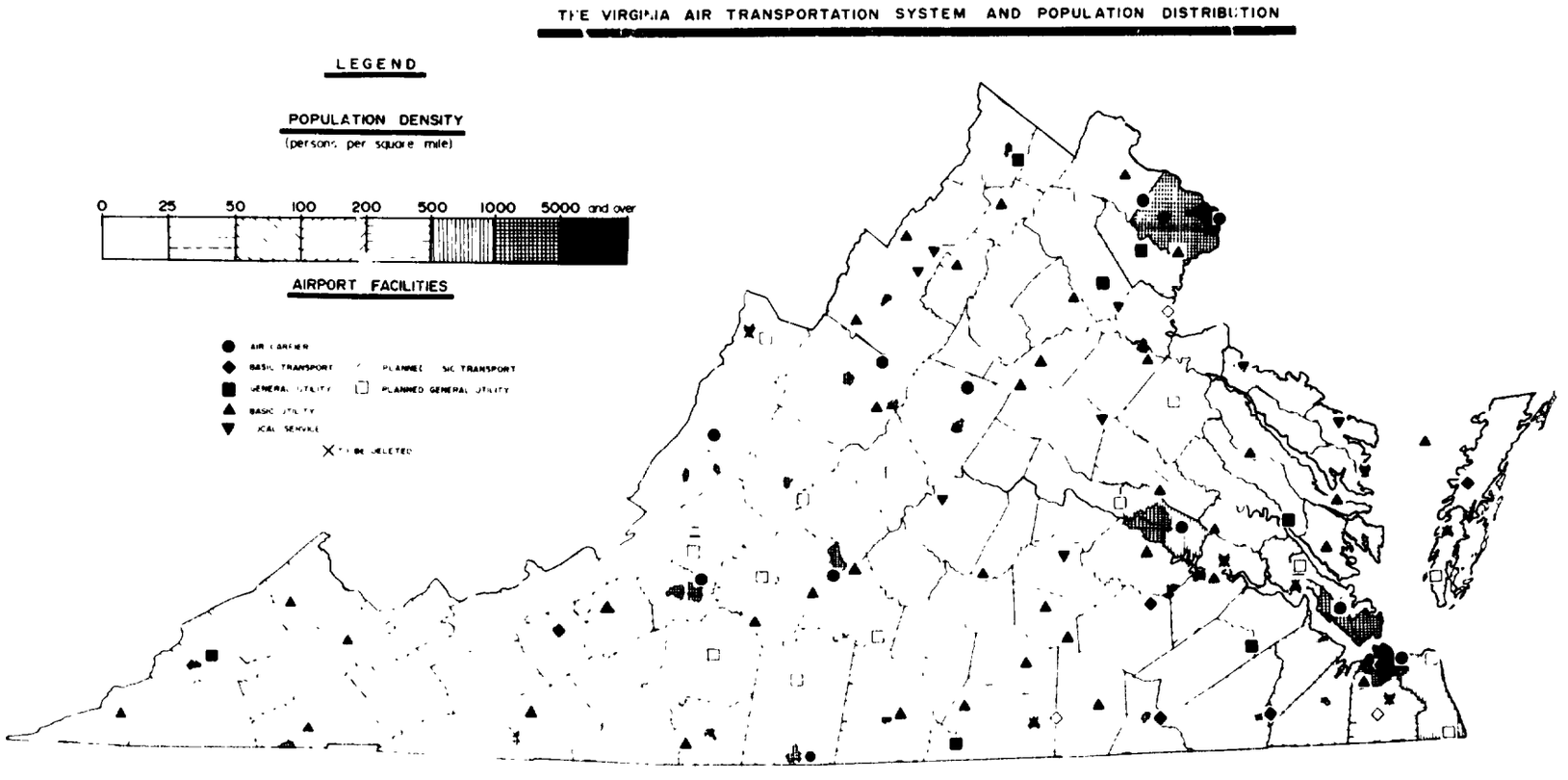
One of the most important decisions, if not **the** most important, made in any regional analysis is the decision as to where to locate the boundaries of the region. The boundary location decision may alter significantly whatever decisions are to be made on a regional basis. Usually a variety of criteria are used for drawing boundaries. For example, the decision to form one planning district for aviation development for the combined New River Valley, Fifth, Central, and West Piedmont planning districts of Virginia was motivated by the perceived existence of close economic ties interrelated multimodal travel patterns, and simi-

[16] "Planning the State Airport System" AC 150/5050-3A, Department of Transportation, Washington, D.C., June 1972, p. 4.

[17] *Ibid*, p. 4.

[18] Wengert *op cit*, p. 387.

[19] *Ibid*, p. 389.



THE VIRGINIA AIR TRANSPORTATION SYSTEM AND POPULATION DISTRIBUTION
FIGURE 4-5

lar urban versus rural environments of these four regional areas.[20] The National Resources Planning Board in 1935 concluded that there were no general criteria for regional administrative boundaries, and that generalized regions could probably not be determined.[21]

Regionalism often benefits some at the expense of others. An illustration of this can be seen from a study of the proposal to expand the Roanoke Virginia airport versus a decision to construct a new regional facility to serve three communities, including Roanoke.

Theoretically, local, regional, and statewide planners each function with the welfare of the public as a paramount goal; however, what seems to be in the best interest of a local community may be seen as obstructive and counter-productive to the interests of a whole state or even of a substate region. The Roanoke airport controversy is illustrative of one of the most difficult areas of conflict resolution, namely the problem which arises when a single regional airport is proposed to serve two or three urban centers. In order to understand the conflict which arose in the Roanoke area, one must examine in some detail that city's position related to its airport facilities.

In March 1974 a steering committee from four Virginia planning districts (New River Valley, Fifth, Central, and West Piedmont) approved a study design for an air transportation system study of the area. The study was funded by a $100,000 grant from state and federal agencies; its purpose was "to develop a realistic plan which will furnish information and guidance for the governing bodies of the counties, cities and towns to be concerned principally with the provision of adequate air transportation facilities..."[22] Even as this regional airport study commenced, some were concerned that its recommendation would be the construction of a regional airport, something many Roanoke city officials opposed.

The cities of Lynchburg and Martinsville had expressed an interest in having a regional airport which would serve those two cities plus Roanoke (see Figure 4-6). Roanoke officials felt that the city of Roanoke could not benefit from such an airport since it would mean downgrading Woodrum Airport, the Roanoke facility located just a few minutes away via Interstate 581. Roanoke city officials pointed out that Woodrum contributed over $300,000 annually to the city and this figure would stabilize or even decrease if a regional airport were to attract passengers who would normally fly out of Woodrum. Figure 4-7 shows the facilities presently existing at Woodrum.

Meanwhile, the Director of the Virginia Division of Aeronautics, said he saw no obstacle preventing the four-district study by the summer of 1974. He observed that an "unlimited" opportunity existed. The four-district area could have a plan that would look ahead 40-50 years and serve the 30 cities, counties, and towns represented in the four planning districts.[23]

Several months later the Virginia Air Transportation System planners who were charged with planning air transportation facilities for the whole state through 1990, made a **preliminary** recommendation that future transportation needs in the state could be met principally by expanding facilities to handle future growth.[24]

With respect to the Roanoke case, this meant that state planners favored the expansion of Woodrum to meet projected 1990 aviation needs. Statewide planners were careful to say that this did not necessarily mean that a regional airport serving Roanoke, and other cities, was not feasible. Specifically, for the four planning districts which had decided to plan their air transportation facilities together, the state planners had scheduled the construction of a reliever airport to be built in Botetourt County to handle excessive general aviation traffic. The program manager for the VATS Study emphasized that the individual locality must approve any airport construction plans before they are carried out.

In October 1973, the City of Roanoke submitted a priority list of airport projects to the FAA. Included in this list was a proposed 900-foot extension of the east-west runway of Woodrum. Land not currently part of the airport would have to be acquired and federal funds were sought for this purpose. A formal request for funds was not submitted pending the results of an engineering study and the completion of the environmental impact statement.

Presently, under certain weather conditions, jets with full loads are not able to leave Woodrum using its 5,900-foot runway. Woodrum is one of the fastest growing airports in the state. In terms of takeoffs and landings it

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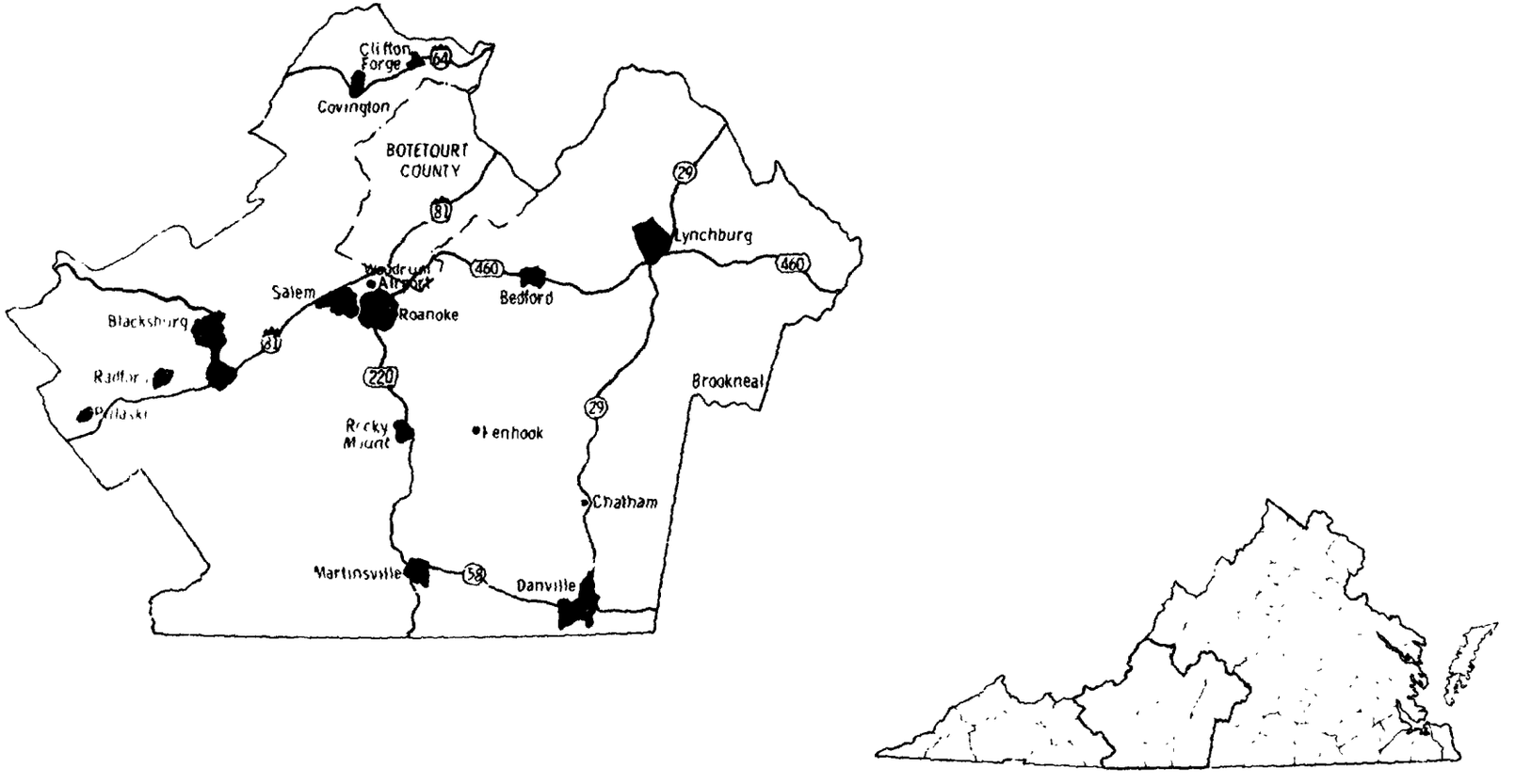
[20] Blue Ridge Air Transportation System Study, *Program Narrative*, p. 2.

[21] Wengert, *op. cit.*, p. 399.

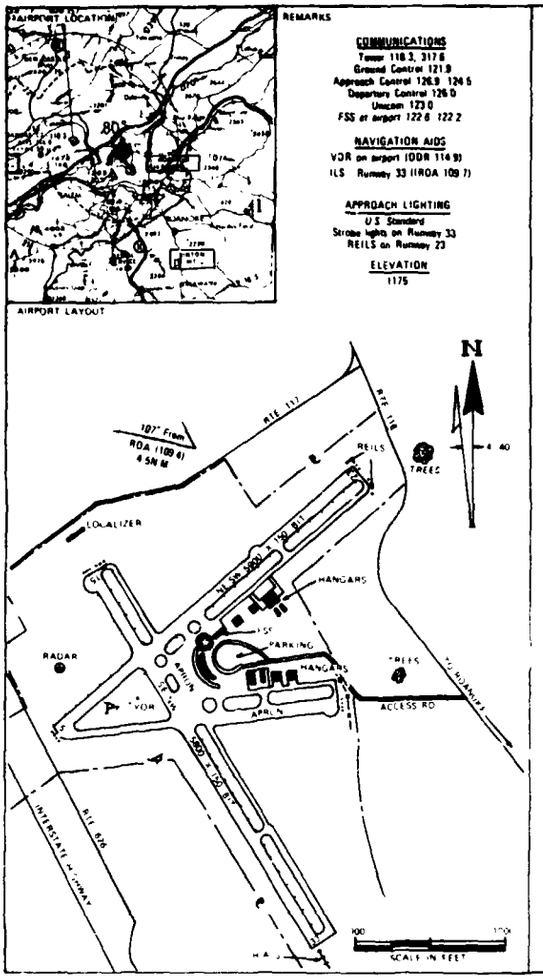
[22] Regional Airport is Joker in Deal, The Roanoke *Times*, March 19, 1974.

[23] *Ibid.*

[24] *Preliminary Draft of the Plan for the Virginia Air Transportation System*, *op. cit.*, p. 2.



BLUE RIDGE AIR TRANSPORTATION SYSTEM
FIGURE 4-6



ROANOKE

ROANOKE MUNICIPAL (WOODRUM) AIRPORT

Sectional Chart: Cincinnati **Elevation:** 1175'
Lat.: 37° 19' **Long.:** 79° 58' **Location:** 3 N Miles NW
Runway: 15-33/5800'x150' Paved **Runway Markers:** No
Traffic Pattern: Standard Left unless otherwise directed by Control Tower
Runway Lights: Dusk-Dawn **Rotating Beacon:** Dusk Dawn
Fuel: Shell/80 & 100 Octane, Jet **Maintenance:** A & P Major
Manager: M L. Harris **Phone:** 703/981-2531
Res.: 703/362-3885
Operators: Hillman Flying Service, Phone: 703/366-0911, Piedmont Aviation, Inc, Phone. 703/366-0696; Air Transport Associates, Phone· 703/563-1686; Ellis Flying Service, Phone: 703/366-0332
Remarks: Attended 24 hrs. (Fuel 0600-2300), Flight Instruction, Charter Restrooms, Taxi, Rental Cars, Restaurant, Limousine, Lodging Nearby, Airline. **Public Telephone:** Yes
Pts. of Int.: Fairy Stone State Parks, Children's Zoo on Mill Mountain, Douthat State Park, Natural Bridge, Virginia Western Community College.
Published Instrument Approach: Yes

Source: *Virginia 1974-75 Airport Directory*, Division of Aeronautics, State Corporation Commission, Richmond, Virginia.

ROANOKE MUNICIPAL (WOODRUM) AIRPORT
FIGURE 4-7

could support the additional air traffic which a lengthened east-west runway would provide. Increased air traffic at Woodrum would mean a crowding of the general aviation facilities there; however, the tentative state plan calls for a reliever airport at Botetourt County to accommodate general aviation traffic, leaving Woodrum (expanded) freer for the larger jet carriers

Early in 1975, FAA officials wrote to the City of Roanoke that funds for extending the runway would not be forthcoming pending the results of the regional study which was considering building a new regional airport to serve the Roanoke-Lynchburg-Martinsville area Any major airport expansions would have to wait until the results of that regional study were completed. On the other hand, the Assistant Director of the Division of Aeronautics said that he "couldn't endorse Virginia airport projects lying dormant until 1990."[25] He said the Virginia Air Transportation System Study, although not yet public, would not depart from its basic concept that airports in the 4th, 5th, 11th, and 12th planning districts (which comprise the South Urban planning district of Virginia) should expand existing facilities rather than building new regional airports.

In February 1975, the project manager for the Blue Ridge Air Transportation System Study of the four Virginia planning districts said that there had been a misunderstanding and that the extension of the runway at Woodrum should not be held up pending the results of the regional

[25] Airport Runwa, Plan Called Premature Roanoke *Times* January 8 1975

air transportation study. Echoing the arguments of Roanoke city officials, the argument was made that Woodrum is already a regional airport, the fastest growing one in the state. Roanoke city officials were urged to apply formally for federal funds to extend the Woodrum runway without delay.[26]

Additional reasons for withholding funds for acquisition of the land to allow a 900-foot extension of the east-west Woodrum runway (estimated to cost over $4 million) included a general shortage of federal funds for eligible capital projects throughout the country, and a series of letters to the FAA from residents near the proposed runway expansion site protesting that expansion.

Meanwhile, within the environs of Roanoke itself, opinion became divided as to whether or not the Woodrum runway extension was advisable. In March 1975, the Roanoke County's supervisors went on record opposing the extension on the grounds that (1) there had been citizen protests and (2) regional planners should have an opportunity to study the whole regional situation.

The chairman of Roanoke City's airport commission claimed that the county supervisors should have checked with the airport commission before issuing a negative statement about the proposed runway extension. He also pointed out that if the city waited for the results of the regional planning study before extending the runway at Woodrum—a wait of approximately a year—the expansion would cost an extra $500,000 due to rising construction costs and inflation; thus, it would be priced out of existence. Those who argued in favor of a new regional air facility maintained that such an airport would help attract more air service to the Roanoke area as well as serve passengers from Lynchburg and Martinsville. Besides, expansion of Woodrum is somewhat limited in the long run by geographic considerations since Roanoke is surrounded by mountains. A new regional facility could be located so as to insure continued expansion without interfering with already existing residential or commercial land uses.

Toward the end of May 1975, the controversy over a proposed regional air facility versus extending the runway at Woodrum intensified. At a meeting held to get citizen input on the goals and objectives of a regional air transportation study, opponents of the Woodrum extension proposed a regional airport to be located in the Penhook section of Franklin County (see Figure 4-6) to be used by Roanoke, Lynchburg, and Martinsville. A county supervisor said that Woodrum was beginning to have a blighting effect on the surrounding community and he questioned the advisability of further expanding that facility. Further, the argument that a 900-foot extension of the east-west runway would result in bringing in larger aircraft such as the Boeing 727 on a regular basis was questioned.[27]

A new regional airport might result in nonstop service to Florida and the West Coast. Such flights from the region's three airports which service commercial airlines currently have layovers in Washington, D.C., Chicago, or Atlanta.

The Blue Ridge Air Transportation System (the name the four planning districts chose) Study in June 1975 continued a series of open meetings designed to elicit public opinion about the future of air transportation in the South Urban region of the state. Planners carefully listed two regional development alternatives, pointing out that nothing definite had yet been decided about building a new regional airport versus expanding Woodrum.

(1) Upgrading existing facilities within physical limits, providing a "reliever" airport for Roanoke.

(2) Upgrading existing facilities within physical limits only.

(3) Consolidating services now provided at Roanoke, Lynchburg, and Danville at a new regional airport site.

(4) Developing a regional airport at the existing Roanoke site.

(5) Developing a regional airport at the current Lynchburg site.

In late June 1975, the Blue Ridge Air Transportation System planners scheduled public meetings in each of the four regional planning districts. With the promise of evenhandedness and fairness, the Blue Ridge Air Transportation System planners will attempt to walk the narrow line between aeronautical requirements and political ramifications.

The Woodrum airport controversy is not simply a case of the city planners versus the aroused local citizenry who oppose expansion. Except for those persons living right around the airport, most people who are aware of the issue

[26] "Planner Says Study Needn't Stall Runway Aid," Roanoke *Times*, February 21, 1975.

[27] "Relocation of Airport Stirs Fuss," Roanoke *Times*, May 24, 1975.

seem to want the east-west runway extended. This will mean the Woodrum will continue to bring in revenue for the city and continue to be the central air facility in the vicinity. Opposition to this course of action comes largely from residents in the immediate vicinity of the airport and persons living in the Lynchburg and Martinsville areas who favor the construction of a regional air facility, but for two different reasons. The people who live around Woodrum want the regional facility in the hopes that Woodrum will not be expanded and they will not be disturbed by the noise and pollution of jet traffic. People who live in the other two cities favor a regional airport because it would offer better air service than they now have, in a fairly accessible place (presumably somewhere equidistant from the three cities) but far enough away from them that their own residences would not be affected. The forces favoring extension of Woodrum's runway cite the initial recommendations of the **preliminary** VATS study which favors expansion of existing facilities rather than the building of completely new regional airports. Those favoring a new regional airport approve of the stand taken by the Blue Ridge Air Transportation System planners who say that Roanoke and Woodrum will receive due consideration, but that there are 16 counties and many cities in the area being studied and all will get just consideration.

Attitudes about the expansion of Woodrum airport versus the building of a new regional facility are very much a function of one's geographical location. Moving major air transportation facilities away from Roanoke will please some and will disappoint others. One might be tempted to dismiss the problem with a superficial "let some objective person living in Richmond or Washington, D.C. decide what is best for the region." On the other hand, what of the doctrine of local control? Should the persons living in a region have the right to decide about the future of air transportation in their area? If so, should it be majority rule in that area? Such considerations are known for their complexity, and in the end, some type of compromise must be made. In this particular case a lack of federal funds for brand new airport construction may force a decision in favor of expanding Woodrum and possibly building a reliever airport in Botetourt County

SELECTED CASE STUDIES

Rationale

Communities and their airports, like people, have individual personalities reflecting the historical, geographical, cultural, and socio-economic characteristics of the area. A study of general aviation's role in community development must address itself to this fact and to the dissimilarity that often exists between communities with comparable general aviation facilities and between airports serving comparable communities. The study of unique characteristics of each community is a necessary supplement to statistical analyses which are based on state and national date.

For this reason a determination was made that several communities with general aviation services should be studied in depth. The communities and/or aviation facilities selected for study and the general criteria used for selection are given in Table IV-III. An attempt was made to obtain a broad cross-section of community types and associated general aviation facilities.

Richmond is a large urban community with a publicly owned air carrier/general aviation airport providing most of the general aviation services in the area. The interaction between air carrier and general aviation along with recent financial failures of two general aviation operators on the airport provided good factors for a study dealing with airport financing and FBOs.

Williamsburg presently has a privately owned airport which serves the small urban community whose primary activities are tourism and the College of William and Mary. The Peninsula Airport Commission has sponsored a study of the need for additional general aviation facilities to serve the Williamsburg area and act as a reliever for the Patrick Henry Airport in Newport News.

Some question exists concerning the merits of developing a new airport as compared to expanding the existing private field. The study dealt with the question as well as with the related question of the development limitations of privately owned airports.

Virginia Beach represents a fast growing tourist and recreational community. State planners have selected the community for two new proposed airports to be developed during the next 15 years. Since the community does not have a general aviation airport at the present time, the community served as an interesting case for the study of the initial phases of planning.

Chesapeake is a suburban/rural community presently served by two general aviation private airports and one air carrier facility. A new airport is proposed by Chesapeake City planners to provide expanded general aviation services as an inducement for new industry.

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TABLE IV-III
VIRGINIA COMMUNITIES
FOR CASE STUDY

		Community Factors			Aviation Factors				
Community	Airport	Type	Population (SMSA)	Attitude Towards Airport	Airport Ownership	NASP Role	Operational Role	Annual Operations	Development Plans
(1) Richmond	Richard E Byrd	Urban Semi-Industrial (Capital)	518,319	Positive	Public	Secondary Medium Density	Basic Transport	190,200	Terminal and Ramp Expansion
(2) Williamsburg	Williamsburg-Jamestown	Urban Residential Tourist	9,069	Mixed	Private	Feeder Low Density	General Utility	70,000	New Airport proposed for development
(3) Virginia Beach	New Airport	Urban Recreational	172,106	Neutral	None	—	—	—	Two new airports proposed for development
(4) Chesapeake	New Airport	Urban Rural	89,580	Neutral	None		—	—	New Airport proposed for development

Unlike other communities studied in this section, Chesapeake involved few major issues or planning problems but did highlight the fact that some facilities can be planned and developed routinely.

Richmond

Introduction

Richard E. Byrd International Airport was selected as a case study for two reasons:

(1) Its community of interest spans many political boundaries. Yet, the airport losses were being borne by its sponsor alone. The pending solution may be of interest to other airport communities with the same problem.

(2) Although Richmond has sufficient activity to support financially healthy fixed based operators (FBOs), two have failed recently while others have indicated a less than desirable financial status.

Both of the above problems are discussed in the following sections.

Community Characteristics

Byrd airport serves Richmond, the capital of Virginia; Henrico County, in which it is located; Chesterfield County, which has its own general aviation airport; and, other communities composing the Richmond Standard Metropolitan Statistical Area. The populations of these areas are:[28]

	Population	% of SMSA
Richmond	249,621	48
Henrico County	154,364	30
Chesterfield County	76,855	15
Other	37,479	7
Richmond (SMSA)	518,319	100

The City of Richmond has a mixed industrial base, which includes some of the largest corporations in the chemical, metal, tobacco, paper, and other manufacturing industries. The city has experienced the common outflow of affluent residents from the central city to the suburbs, and the resulting financial difficulties resulting from this exodus. The delinquent tax rate has risen, welfare roles have swollen, and the city population has decreased.

Presently the black population comprises about one-half of the total population in spite of the annexation of a portion of the predominately white Chesterfield County.

Blacks in the community do not see the airport to be of either a direct or indirect benefit to them. They disapprove of the burden it creates on the city budget, although the airport has never become a major political issue. The black leaders in the community would be satisfied if the losses resulting from airport sponsorship were borne equitably by all of the communities benefiting from the airport. They estimate that only 40 percent of the airport use originates in the City of Richmond.

Airport History and Development

Byrd Field was constructed in 1928 by the City of Richmond for use as a general aviation airport (Figure 4-8). During World War II it was used by the Army, developed extensively, and returned to the city in 1947. Over the years it has developed into a basic transport (BT) category airport served by three certificated carriers (formerly four) and one commuter airline. The airport enplanes approximately 503,000 air carrier passengers per year.[29] Military air carrier and general aviation contributed to the 178,525 operations per year, of which the air carriers accounted for 25,174; the scheduled air taxis for 10,568 and general aviation for 98,543.[30]

Nearby air carrier airports are Dulles and Washington National, one hundred miles to the north; Roanoke, 100 miles to the southwest; Charlottesville, 60 miles to the west; Patrick Henry and Norfolk about 55 and 80 miles to the southeast, respectively.

Byrd is surrounded by general aviation airports of varying sophistication: Chesterfield County Airport 13 miles southwest; Hanover County Municipal Airport 20 miles north, New Kent County about 10 miles east; and, Hopewell 17 miles southeast. All of these have some impact on the general aviation market in the Richmond SMSA.

The City of Richmond, as previously stated, sponsors and operates the airport. It is therefore responsible for funding improvement or expansion programs at the airport. It has recently undertaken such a program, with an estimated value of $10 million dollars, $7 million of which had been invested by 1971. These improvements included the reconstruction of the terminal and an increase in the number of gates from four to five. Three more gates could be added at an additional cost of approximately $7 million. This portion of the improvement program, along with $2.7 million in other improvements, has been postponed for fiscal reasons. The ramp was also expanded extensively to accommodate additional aircraft parking positions.

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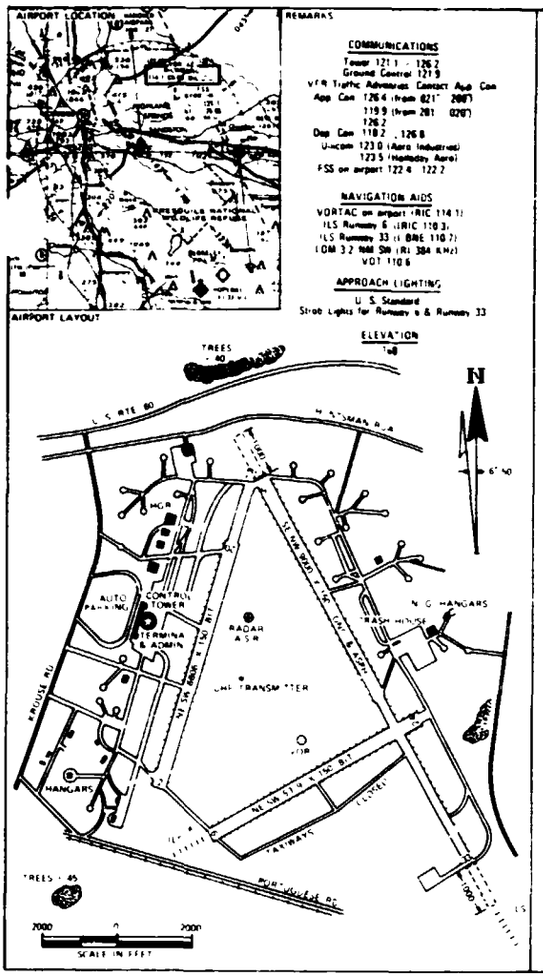
[28] 1970 Census

[29] *National Airport System Plan*. United States Department of Transportation, Washington, D.C. (updated 1974).

[30] FAA Air Traffic Activity Calendar 1974. U.S. Dept. of Transportation, Washington, D.C. 1975.



RICHMOND

RICHARD E. BYRD INTERNATIONAL AIRPORT

Sectional Chart: Washington **Elevation:** 168'
Lat.: 37° 30' **Long.:** 77° 19' **Location:** 7 N Miles E of Richmond
Runway: 15-33/9000'x150' Paved **Runway Markers:** Yes/15-33 Only
Traffic Pattern: As directed by Control Tower
Runway Lights: Dusk-Dawn **Rotating Beacon:** Dusk-Dawn
Fuel: Exxon, Gulf, Shell, Texaco all types **Maintenance:** A & P Major, Radio
Manager: A. E. Dowd **Phone:** 804/222-7361
Res.: 804/353-0273
Operators: Aero-Industries, Inc., Sandston, Va. 23150, Phone: 804/222-7211; Holladay-Aero, Inc., Box 7306, Sandston, Va. 23150, Phone: 804/222-7311; Hawthorne Aviation, Byrd Airport, Sandston, Va. 23150, Phone: 804/222-7256
Remarks: Attended 24 Hours, Air Carrier Service by Piedmont, United, Altair, Eastern
Pts. of Int.: State Capitol, Poe Shrine, St. John's Episcopal Church, Confederate Capitol Building, Virginia Commonwealth University, J. Sargeant Reynolds Community College
Published Instrument Approach: Yes

Source: *Virginia 1974-75 Airport Directory*, Division of Aeronautics, State Corporation Commission, Richmond, Virginia.

RICHARD E. BYRD INTERNATIONAL AIRPORT
FIGURE 4-8

Airport officials were somewhat optimistic about the extent of the need for expansion and thus provided capacity in excess of the projected airline requirements. Prior to the expansion, the airport charged landing fees of 10.5¢ per thousand pounds of landed weight and was breaking even. At that time Byrd was served by Eastern, Piedmont, United, and National Airlines in the order of their number of enplaned passengers. During the expansion program, National applied for and was given consent by the CAB to withdraw service, leaving only three carriers to support the expansion program. Altair, a commuter airline, introduced service to Richmond in 1968.

The expansion program left an annual revenue which was about $350,000-$500,000 short of covering operating expenses, in addition to the new debt service. This resulted in a drain on the city taxes and the city looked to the airlines to cover the deficit through an increase in landing fees. The city demanded an additional 36¢ per 1,000 pounds in landing fees, and the carriers offered only 13¢. After a somewhat bitter struggle, a compromise of 18¢ was agreed to. Reduced airline schedules and a decline in the general economy, however, have still left the city with an annual deficit in the airport budget.

The sources of airport revenue break down approximately as follows:[31]

Airline Passengers	1971 in (000)	%
Direct (in ticket charge) Boarding fees (security)	294	

[31] "Revenue Expenditure Projections," Richard E. Byrd Airport," June 25, 1974 (City Staff Study)

Landing fees	184	
Terminal rental	167	
	645	**44.2**
Indirect		
Ground transportation	176	
Restaurant	69	
Miscellaneous concessions	82	
Parking lot	372	
	701	**48.0**
All Others		
Utilities	9	
Ground rentals	51	
Building and hangar rentals	53	7.8
	113	
	1,459	**100.0**

The airport has the capacity to provide the community with automobile parking, terminal, gates, and ramp facilities which are adequate to meet air carrier passenger demands for some years to come. Available aviation services include scheduled airline service connecting to most parts of the world; commuter airline service; air cargo service; express cargo service; air charter in fixed-wing or helicopter; aircraft maintenance including major repairs and alteration; aircraft interior design, installation, and upholstering; aircraft painting; parts sales for most aircraft; avionics sales and repairs; fueling and line or ramp service; aircraft parking and storage; hangar and office rental; aircraft sales; and, a unique large commercial operator service devoted exclusively to flying live eels to the Netherlands to satisfy a somewhat unique culinary demand.

General aviation operations account for 100,000 to 120,000 of the 178,000 total operations at Byrd Field. The mix of this traffic includes 68 percent itinerant and 32 percent locally based.

To serve approximately 130 based aircraft, the airport has provided faciliteis to house three full-service FBOs.[32] These facilities have usually been constructed by the FBOs, on land leased from the airport. The FBO owns the facility until the expiration of the lease, at which time ownership reverts to the airport. Of the three current operations, one has been in business for over 30 years and the second for over 16 years. The third has been in business for over 13 years and is presently involved in bankruptcy proceedings. A portion of his business, in the form of a flight school and a charter operation seems to have survived the bankruptcy and continues to exist as a fourth FBO. Only one of the existing FBOs is a full-service FBO. The other two are complementary; i.e., they do not compete in the services they provide. For all practical purposes then, there are two full-service FBOs.

The FBO leases generally provide for an annual ground rental of 10¢ to 12¢ per square foot for the use of the land on which their own buildings are constructed; a similar but higher rate for ramp area; a varying rate for building rental or buildings owned by the airport; a fuel flow charge of 1.5¢ per gallon on fuel used or sold; and, a requirement that the FBO maintain the premises (including ramp) in satisfactory condition at his own cost and expense. Other terms are similar to typical leases at other comparable airports.

Airport Role and Support

Although the airport has had some disputes with the airlines, and has experienced some mild opposition to expenditures from councilmen, it appears to enjoy a rather comfortable position in the community.

Some of the largest corporations in the country, with based aircraft in the Richmond SMSA, are: Allied Chemical, DuPont, Phillip Morris, Universal Leaf Tobacco, Ethyl, Reynolds Metal, Robins Chemical, Thalheimers, and Chesapeake Co. It has been assumed by the city council members and the city administrators that these industries benefit from the existence of the airport and that the city benefits from the existence of the industries. Neither group felt the airport was dispensable, and all favored reasonable development if the costs were equitably distributed.

All city council members interviewed showed enthusiasm for future industrial or commercial development for Richmond. They all recognized, however, that with 75 percent of its land already developed, the city itself has little or no land left for such development. Thus, they are willing to accept regional expansion as a substitute for city expansion. Although the benefits to the city may not be direct, these benefits are nevertheless sufficient to warrant the support of city council members for the concept of regional expansion.

Presently the airport itself makes the following contribution to the community payroll:

	Number of Employees	Payroll (000)
Airport Department	78	$ 704
Employed on Airport (Full Time)	1,400	11,000
Military (Part Time)	900	(not available)
		$11,704

[32] A full service FBO is one providing all of the first 8 services listed in the General Operations Section of Chapter I

Applying the generally accepted 2.7 multiplier discussed in Chapter III, the total impact on the community could approach $31.5 million.

Commission or Authority

The only significant community dispute involving the airport involves several surrounding communities benefiting from its existence. Henrico County, which provides an estimated 30 to 35 percent of the enplaned passengers using the airport, has imposed ad-valorum taxes (personal property, sales, etc.) on both property and transactions at the airport. Depending on the estimator, it is reported that these taxes range from $150,000 to $250,000 annually. Henrico County does not make this information available to the public. The city taxpayers insist that they are mostly in the lower income brackets and that they derive little use from the airport, while those in the surrounding counties who are gaining the most in convenience, are not sharing the fiscal burden. They believe that the burden should be shared by the creation of an authority or commission composed of all users and that the debt service should be spread equitably among those users.

This loss of revenue from the airport by a political jurisdiction which does not contribute to the support of the debt service, encouraged Richmond to seek legal means for capturing this taxing authority by extra-territorial powers.

On three occasions the airport staff has examined the license plates on autos in the long- and short-term parking lots to determine the mix of autos from surrounding counties. Although this may not be an exact indicator of the origins of enplaned passengers, it appears to have sufficient correlation to make it worthy of examination. The results were as follows:

Location	1969 %	1971 %	1974 %
Richmond	30	17	30
Henrico (Co.)	29	27	32
Chesterfield (Co)	11	23	10
Other	30	33	28
	100	100	100

Although the state legislature did not take affirmative action on approving the extra-territorial power of Richmond, as requested, it did imply unofficially that unless the dispute was settled locally between the city and the county, it would intervene and settle it for them. The legislature also passed legislation enabling the creation of a joint commission.

Henrico County and Goochland County have indicated a willingness to join in the formation of such a commission to operate the airport and to share in some as yet undetermined pro-rating of the losses.

Goochland County, adjacent to Henrico on the northwest, has no airport and by joining such a commission could gain some say in the future of the airport with a presumably low share of the deficits.

Henrico, on the other hand, is already enjoying the benefits of the airport without sharing the debt and is further collecting revenue from its operation without renewing future obligations. Its motives in agreeing to the commission may be somewhat more subtle. Opinions of those interviewed included the following:

(1) Realization that if they did not agree, the legislature would probably revoke their taxing authority on the airport and extend it to Richmond by extra-territorial powers. The loss of tax, and the possible threat of granting the extra-territorial powers to the city in recognition of the regional character of the airport, could be extended to other areas and might eventually lead to annexation on a "community of interest" basis.

(2) Recognition of the fact that the increase in traffic and the resulting increase in revenues at the airport within the next few years should result in a break-even operation and the county could therefore "buy in" with a gradually diminishing exposure for future obligation.

(3) Recognition by the courts of the benefits derived by the county from the airport and its consequent responsibility for contributing to its support.

Chesterfield County apparently has rejected participation in such a commission. It has been suggested that this attitude may have developed from previous attempts on the part of the city to take land and population from Chesterfield by annexation, without their concurrence.

Chesterfield County has established its own general aviation airport and acquired sufficient buffer zone land in the immediate airport vicinity to promote industrial development. It is possible, therefore, that Chesterfield could operate the airport at a loss in competition with Richmond, and derive its benefit from development of the surrounding industrial land and the subsequent land or building rentals which could conceivably support the airport in the future.

The other major problem confronting the airport concerns the FBOs and the future level

of general aviation services at Byrd Field.

The number of based aircraft, annual operations and, the relatively large number of corporate jets would seem to support several FBOs. Recent developments, however, have yielded the conclusion that three or more operators will dilute the existing business such that the financial health of all operators will be in jeopardy. As previously mentioned, one firm which has been in operation for 13 years is presently in bankruptcy. This failure was preceded by that of another firm which had been in business for a shorter period. In addition to these two failures, one of the other operators is prepared to sell if business conditions fail to improve.

Key airport officials and existing operators are of the opinion that Richmond can support no more than two FBOs. The airport has taken the position that at this time it is not seeking a tenant for the facilities to be vacated by the failing FBO. The FAA, however, informed the airport staff that since they had accepted federal funds for airport development, they were obligated to entertain all applications and to permit anyone who is reasonably responsible to locate on the airport regardless of the total business available. This obligation stems from the "open to public" clause of the Airport and Airway Development Act of 1970.

Airport officials are presently preparing compliance standards to assure a level of activity and investment on the part of the new FBO that will not discriminate against the present FBOs who have extensive investments in the airport.

All of the FBOs agreed that fuel sales, line services, and tenant facility leases (hangar rental and offices) were the most profitable activities and required the least investment. Following in order of profitability are avionics repair, aircraft repair, and flight school and charter. It seems obvious that minimum standards are necessary to prevent a third operator from coming in with a minimal investment and skimming the top off the fuel and line service revenue.

The outlook for Byrd Field, compared to other airports today, seems to be satisfactory. It appears that air carrier traffic will continue to grow at this field. An economic recovery will help such growth. Many persons interviewed believed that increases in schedules by the airlines would be in order—but all seemed to recognize the need to generate additional passengers to warrant compliance with that request. Presumably, the resulting increase in revenue will offset the amortization deficit within the next ten years. The establishment of a commission will eventually spread the burden of the deficit over a more equitable base.

The future of healthy FBO operations seems to depend heavily on preventing the forced introduction of unnecessary competition. This may be accomplished by the development of minimum FBO standards by the airport staff.

The shift to commission or authority control is consistent with the trend toward recognizing the regional nature of small-to-medium hub airports. It could shift the temporary tax burden to a broader base, thereby dispelling the only severe political opposition to the continued healthy growth of Byrd Field.

Williamsburg

Introduction

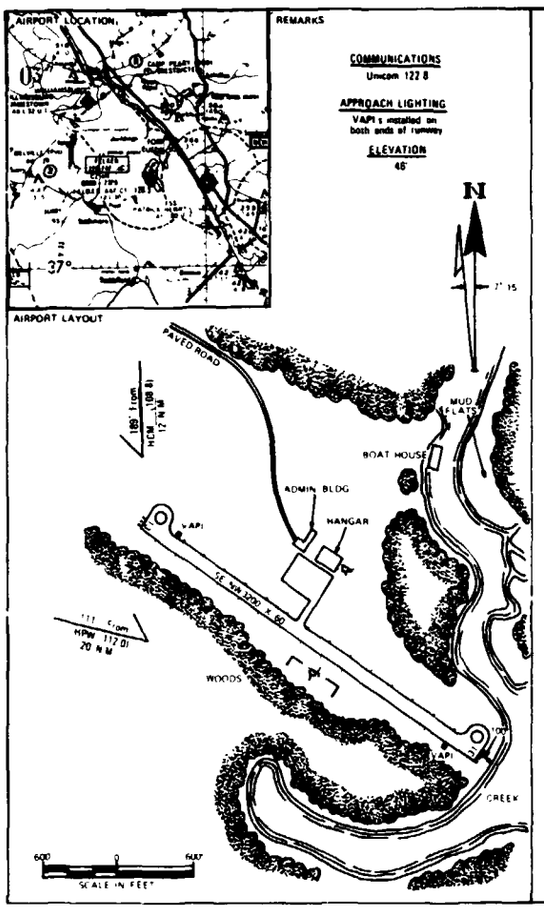
There appears to be some interest in determining whether present airport facilities in the northern peninsula area of Tidewater should be expanded, or whether a new airport should be built.

Some argue that present airport facilities in the area can expand to meet predicted aviation needs and that new facilities or even significantly expanded facilities are, or will be, needed in the next 20 years. The **final draft** of the Virginia Air Transportation System Plan has projected that a new general utility airport for the northern peninsula area is feasible.[33] Also the Peninsula Airport Commission has contracted for the preparation of a master plan studying the feasibility of a new airport.

At present there exists a privately owned general aviation airport in Williamsburg (Figure 4-9). One justification which is being cited for the construction of new airport facilities is the possible lack of premanency of that airport, since private airports can be sold at any time at the discretion of their owners (although no evidence of possible sale exists at the present time).

Three basic questions will be dealt with in connection with air transportation facilities on the peninsula: (1) What is the community attitude toward the need for new general aviation facilities? (2) What factors lead to the various conclusions about need? (3) What are the possible ways of meeting such a need?

[33] *Virginia Air Transportation System Study, Final Draft*, Richmond, Virginia July 1975



WILLIAMSBURG

WILLIAMSBURG-JAMESTOWN AIRPORT

Sectional Chart: Washington **Elevation:** 46'
Lat.: 37° 14' **Long.:** 76° 43' **Location:** SW Edge of Town
Runway: 13-31/3200'x60' Paved **Runway Markers:** Yes
Traffic Pattern: Right traffic Runway 13
Runway Lights: Dusk-Dawn **Rotating Beacon:** Dusk-Dawn
Fuel: Exxon/80 & 100 Octane **Maintenance:** A & P Major
Manager: I. Lenchner **Phone:** 804/229-9256
Res.: 804/877-1853
Operators: Colonial Air Center, 100 Marclay Road, Williamsburg, Va. 23185
Remarks: Attended Daytime, Flight Instruction, Charter, Restrooms, Rental Cars, Taxi, Snacks, Food & Lodging Nearby. **Public Telephone:** Yes
Pts. of Int.: Colonial Williamsburg, Jamestown, Jamestown Festival Park, Yorktown, College of William & Mary, Williamsburg Pottery Factory, Sherwood Forest and other James River Plantations
Published Instrument Approach: No

Source: *Virginia 1974-75 Airport Directory*, Division of Aeronautics, State Corporation Commission, Richmond, Virginia.

WILLIAMSBURG-JAMESTOWN AIRPORT
FIGURE 4-9

Community Characteristics

Williamsburg is located in the upper Virginia peninsula. Table IV-IV summarizes the socio-economic characteristics of York and James City Counties, and the City of Williamsburg. Since land is scarce in Williamsburg, the highest rates of growth have occurred in York and James City Counties. Due to the tourist industry, the localities hope to establish orderly growth patterns to support continued tourist appeal. James City County has recently articulated its goals in a document which stated that these goals include the promotion of "sound, long-term, and balanced economic development," and the adoption of "necessary controls so as to limit the population of James City County to no more than 75,000 persons by the year 2000."[34] In the area of transportation facilities, the document encouraged the development of a regional plan, with emphasis on the buffering of transportation facilities from adjacent neighborhoods. There was no specific mention of an airport.

Williamsburg is currently revising its **Comprehensive Plan,** which was developed in 1968. In a brief section of that report, Williamsburg's inactive Central Airport was mentioned as a good location for a new airport, with both the size of the site and the lengths of the runways noted as adequate.[35] At the time this plan was published, the Williamsburg-Jamestown Airport was being developed in the midst of a heated controversy.[36] Both of these airports are shown in Figure 4-10.

Seeking greater industrialization, York County recognizes the importance of a general aviation facility in the upper peninsula. A revised comprehensive land-use plan for the

[34] *James City County Community Goals and Objectives*

[35] *The Comprehensive Plan*, Williamsburg Virginia 1968

[36] 'Williamsburg Council is Opposed to Name Site of New Airport,' Newport News *Daily Press*, June 9, 1967

TABLE IV-IV
DEMOGRAPHIC CHARACTERISTICS OF THE UPPER PENINSULA

Item	York County	James City County	Williamsburg
Population	33,203	17,853	9,069
Density (No./Sq. Mi.)	257.4	117.5	1,813.8
Median age	24.5	27.6	23.1
Median family income	9,902	8,835	10,266
% with income $15,000+	21.7	15.9	28.0
Median school year finished	12.1	11.4	13.3
Persons/Household	3.58	3.38	2.47
% in Manufacturing	17.5	9.5	4.4
% in White Collar	49.5	44.5	61.6
% Government Workers	38.7	33.7	42.8
Total Employed	10,277	6,083	3,676
% Rural Farmland	5.6	2.6	—

Source: 1970 U.S. Census Data.

county is currently under consideration. In the plan, some parts of the upper county which are close to Williamsburg are to be opened to light industry.[37] The proximity of a general aviation facility has been noted as a factor in industrial development.

The major industry in the area is tourism, with Colonial Williamsburg, Busch Gardens, Jamestown Festival Park, Jamestown Island, and the Yorktown Battlefield as points of interest. Other principal employers include the College of William and Mary, and Eastern State Hospital. The following major manufacturing establishments are located within the area served by the airport: Dow Badische (synthetic fibers); Anheuser-Busch, Inc. (malt liquors); American Oil Company, Inc. (petroleum refinery); Jeffco Manufacturing Company (aluminum cans); Synthe-Tex Corporation (carpet yarns); and, the seafood industries in York County (packaged seafoods).

History and Development of Williamsburg Aviation Facilities

In February 1967, the Central Airport owned by the College of William and Mary, and serving the Williamsburg area was closed to the public. This left the upper peninsula without general aviation facilities at a time when the tourist business in the area was growing. Shortly thereafter, the construction of a new private airport on a fifty-acre site on College Creek was proposed. The new general aviation airport was to relieve Patrick Henry International Airport in Newport News by attracting general aviation planes to the upper peninsula. The airport would eventually handle as many as 250 general aviation planes and construction of a hangar large enough to accommodate 10 light planes was planned.[38]

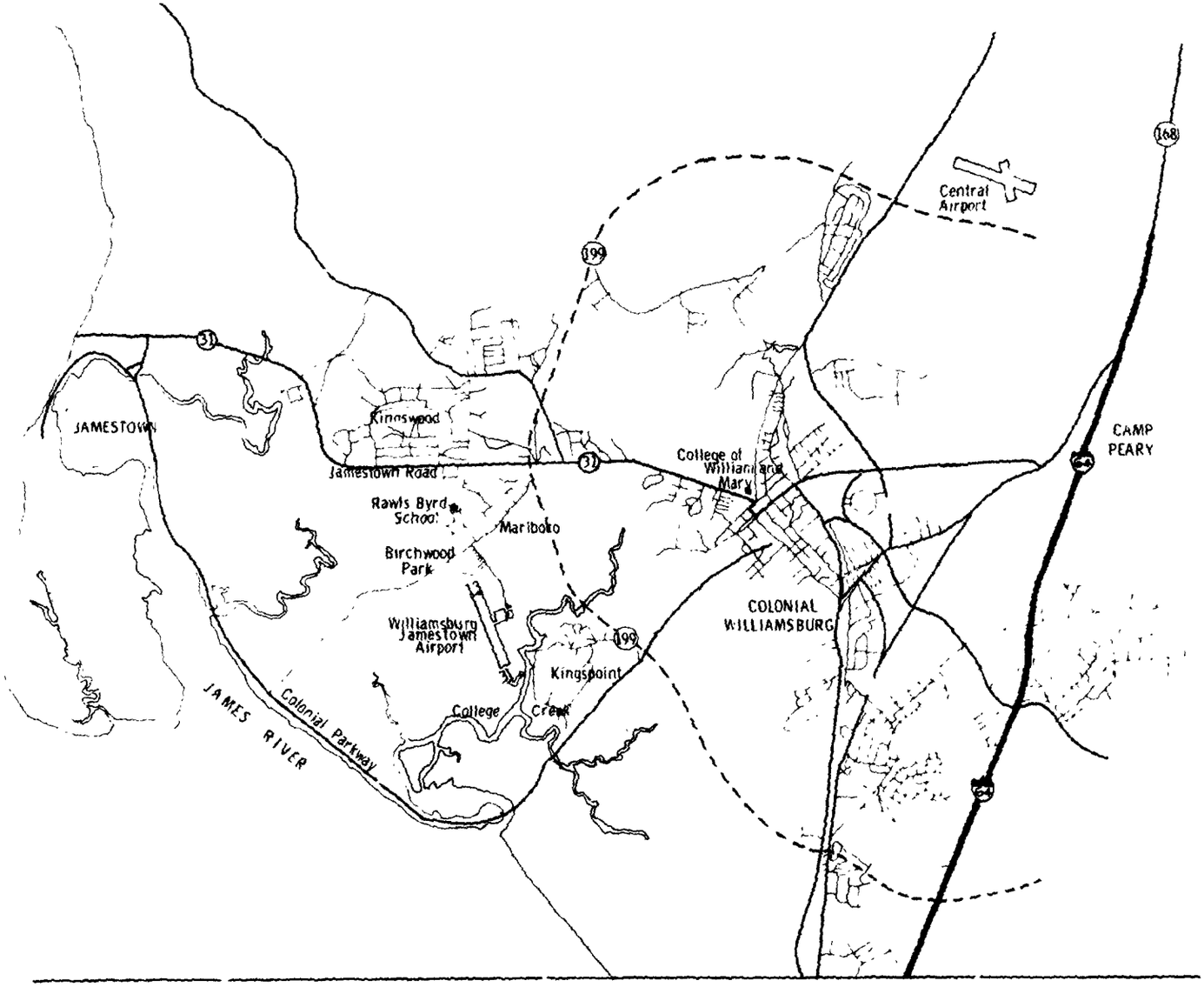
Almost immediately there was opposition to the proposed airport, coming mainly from residents of the Birchwood Park and Marlboro subdivisions, and from the parents of youngsters attending Rawls Byrd Elementary School. These groups opposed the site on the grounds that planes would pass too close to Byrd Elementary School and to a city water tower in the vicinity, thus creating safety and noise problems. The airport, however, was to be designed so that planes taking off would be no closer than three-fourths of a mile from the elementary school.

A hearing was held by the State Corporation Commission (SCC) in Richmond on July 3, 1967 to act on the application for the new airport. Neither the James City County Planning Commission nor the Board of Supervisors could have stopped construction of the facility since the county had no applicable zoning ordinance.

Federal and state agencies were not convinced that the proposed site was unsafe or that it would result in high noise levels in the surrounding communities, especially if the flight

[37] Mary B Edwards, "York Commission Votes Land Use Plan Approval, "Newport News *Daily Press*," September 10, 1970

[38] "Airport Using City Name May Disturb Williamsburg," Newport News *Times Herald*, September 10, 1970



THE WILLIAMSBURG AREA
FIGURE 4-10

patterns for the airport kept most of the air traffic on the James River (south) side of the airport. The SCC approved the airport and the decision was appealed immediately to the State Supreme Court of Appeals (Virginia Supreme Court). Opponents of the proposed airport argued that the SCC had applied wrong standards to the evidence presented at an October 1967 hearing when permission was originally granted for construction. They asked that the case be sent back to the SCC for a second hearing, at which time additional evidence could be presented. In June 1969 the State Supreme Court of Appeals affirmed an action by the SCC licensing the Williamsburg-Jamestown Airport. The court's ruling confirmed the Commission's decision which found that the proposed airport "met or exceeded all safety criteria of the Virginia code and commission rules and regulations."[39]

In September 1970, the airport was dedicated officially with the words "this county is the third fastest growing county in the state and this airport is one good example of the type of progress James City County has made in the past 15 years."[40]

Williamsburg-Jamestown Airport was open for only a short time when many concerned individuals and interest groups which had originally opposed it began to complain that airplanes were flying too low over residential areas. A representative of the State Division of Aeronautics visited the airport to investigate these complaints, and to interview residents of the nearby Birchwood subdivision. Later, a General Aviation Operations Inspector for the Federal Aviation Administration was also consulted and said that he did not "consider the airport hazardous if pilots would adhere to the traffic pattern. Of course there are all kinds of pilots just as there are all kinds of automobile drivers. But I think the directions being taken are good—putting all the traffic on the southern side of the field."[41]

Despite the findings of the State Division of Aeronautics and the FAA inspector, complaints continued. The James City County Board of Supervisors eventually agreed to look into the matter of reported violations of the air traffic pattern at the airport. A list of 10 planes which reportedly violated the traffic pattern and flew too low over residential districts was compiled by the residents of the area in April of 1971. The identification numbers of several airplanes had been copied by Birchwood residents and were reported to the County Board of Supervisors. Though he had spoken favorably about the airport at its dedication, a community leader who has previously led the appeal of the SCC decision to license the airport, has continued his leadership of those dissatisfied with the airport. He looked into the role of the State in enforcing the aviation laws of Virginia and concluded that "for all practical purposes, there are no laws."[42] "If the State Division of Aeronautics is to enforce the law," he said, "then they should come down here and enforce them. I'm not saying it is the airport manager's fault—it's the pilots' fault and we need to get someone down here to enforce the traffic pattern."[43] The Division of Aeronautics did investigate complaints a year earlier but no action was taken on the matter.

In telegrams to the SCC, The State Division of Aeronautics, and the FAA, a candidate for the house of delegates in the Democratic primary asked that he be informed as to who has regulatory authority. "Many citizens in the Birchwood, Kingswood and Kingspoint areas are desperately concerned about the failure of aircraft to follow prescribed traffic patterns, thereby endangering school children," he said in his telegram.[44] A new investigation did not turn up any pilot-violators. The FAA Inspector told the chairman of the James City County Board of Supervisors that, after careful investigation, no violators were found but that there was a plan to educate pilots further on the required traffic patterns. He suggested that a sign indicating the traffic pattern be "posted in a more conspicuous place."[45]

Objections to the Williamsburg-Jamestown Airport from nearby residents have subsided in recent years. Some of the airport's neighbors still refer to it as a nuisance, but its existence has been accepted.

Various air shows have been held at the Williamsburg-Jamestown Airport. These shows provide community entertainment, and generate revenue for local businessmen from the money spent by air show participants. Over 5,000 persons attended the first air show in 1971 and were offered a variety of skyward and ground entertainment.[46] The Flying Dentist As-

[39] "Jamestown Airport Licensing Affirmed, Newport News *Daily Press*, July 17, 1969

[40] "Williamsburg-Jamestown Airport Officially Dedicated," Newport News *Daily Press*, September 21 1970

[41] "Opponents of Airport Fail to Suggest Improvements," Newport News *Daily Press*, August 30, 1970

[42] Supervisors to Seek Investigation of Air Traffic Pattern Violations," Newport News *Daily Press*, May 1, 1971

[43] *Ibid*

[44] *Ibid*

[45] "No Violations Found in Probe of Area Airport, Newport News *Daily Press*, May 26 1971

[46] "Over 5,000 Attend Air Show" *The Virginia Gazette*, July 30, 1971

sociation flew in 100 planes to the airport for their annual meeting in Williamsburg.[47] Thirty experimental and antique airplanes participated in the second annual Colonial "Fly-In," drawing a crowd of 200 persons in 1973.[48]

Existing Aviation Facilities

The Virginia Peninsula is presently served by three airports in addition to Williamsburg-Jamestown.[49] These are:

(1) Patrick Henry Airport at Newport News, 15 miles southeast (25 minutes by Interstate 64). This is the air carrier airport serving the peninsula area. It presently has adequate facilities for general aviation;

(2) Gloucester Airport at Gloucester, 15 miles northeast (not on the peninsula or readily accessible from Williamsburg due to its location across the York River). This is a general aviation airport with facilities comparable to Williamsburg-Jamestown airport; and, and,

(3) West Point Municipal Airport at West Point, 19 miles north. This is a general aviation airport with better runway facilities (three 5000-foot runways) but is not attended and is too distant to serve the peninsula area effectively.

The Williamsburg-Jamestown Airport is currently classified in the NASP as a "feeder," low-density facility, serving up to the general utility class of aircraft.[50] The final draft document of the VATS Plan projects that the airport will play a local service role during the next 15-year period.[51] The reason for this classification, reflecting a reduced operational role, is the proposed addition of a second airport to serve the area. The proposal will be discussed in a subsequent section of this case study.

The Williamsburg-Jamestown Airport is equipped to serve general aviation with the following facilities:[52]

(1) One runway: Asphalt. 3,200 feet x 60 feet, 13-31.[53]

(2) Runway lights: Low intensity, operating during hours of darkness.

(3) Rotating Beacon, operating during hours of darkness.

(4) Wind Indicator: Tetrahedron and segmented circle (to show right hand traffic for Runway 13).

(5) Unicom: Radio advisory service is offered on frequency 122.8.

(6) Weather Information: FAA Flight Service Station, Newport News through telephone foreign exchange.[54]

(7) Surface access and parking: Two-lane paved access road and 7,000 square yards of auto parking.

The general aviation services and associated activity on the airport can be grouped in three categories as indicated by the firms offering the services.

The Williamsburg-Jamestown Airport, Inc., provides airport services (fuel sales, aircraft tie-down, and routine services) for visiting pilots. Two full-time employees and the following facilities are used for these services:[55]

(1) Aircraft parking and tie-down: Capacity for 60 aircraft with space for approximately 12 on paved ramp area.

(2) Aircraft Fuel Sales: Two 8,000-gallon tanks provide storage capacity for 80 and 100 octane fuel through contract with the Exxon Oil Corporation.

(3) Customer lounge/office area: located in a portion of a 20-foot by 60-foot structure that was a hunting lodge.

Colonial Aviation, Inc. leases a portion of the facilities and operates a flight school and aircraft rental facility. The firm is an FAA approved agency for the training of pilots with Private, Commercial, and Flight Instructor airplane ratings. The school also holds approval by the Veterans Administration for the training of veterans. Approximately 40 students are in training at any given time and receive their instruction in three, single-engine Cessna aircraft which are also available for rental. The

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[47] Picture caption in *The Virginia Gazette*, June 23, 1972

[48] Ed Offley, "Thirty Home-Built Planes Swoop into 'Fly-In'," *The Virginia Gazette*, November 9 1973

[49] *Virginia Airport Directory*, Division of Aeronautics, State Corporation Commission, Richmond, Virginia, 1974

[50] *1972 National Airport System Plan*, Federal Aviation Administration, 1972 Computer update February, 1975

[51] *Virginia Air Transportation System Plan, Final Draft*, op

[52] *Airport Master Record, Williamsburg*, Federal Aviation Administration August 1972

[53] Magnetic direction 130 (Southeast) and 310 (Northwest)

[54] Foreign Exchange provides for no-toll calls from airport

[55] Personal inspection of facilities on July 15 and 19, 1975

owner-manager is also an FAA Pilot Examiner for certification flight checks and is assisted by three flight instructors.[56]

The third operation is Colonial Aviation Services which operates as a maintenance facility through leasing a portion of the 950-square-yard hangar. The firm provides major and minor repairs to aircraft, utilizing two mechanics in addition to the owner.[57]

In the area of aircraft activity, the Williamsburg-Jamestown Airport falls into the low density category, based on an estimated 70,000 operations of which 40,000 are due to the 23 locally based aircraft and 30,000 are due to itinerant aircraft.[58] The airport is currently operating at 36 percent of its capacity.[59]

An evaluation of the Williamsburg-Jamestown Airport can be made by an assessment of the facility in comparison to others serving comparable communities. The following evaluation (based on the scheme presented in Appendix F) has been computed for the airport:[60]

	Rating	Possible
Air Transportation Services	1	5
Operational Capability	2	5
Aircraft Capacity	1	5
General Aviation Services	4	4
Ground Transportation	3	3
Total	11	22

Based upon the above evaluation the airport is strong in the area of general aviation services and ground transportation. The low rating in air transportation services is due to the lack of air-taxi services. The lack of an instrument approach and the short runway limit the operational and aircraft capacity ratings of the airport.

An assessment of the facility by selected tenants and users is summarized as follows:[61]

(1) The existing airport should be developed in preference to constructing a new airport, even if such development would require public ownership. It was generally agreed that the area could not support two airports.

(2) The airport is fulfilling a definite aeronautical requirement for the area.

(3) The runways and approaches are adequate for existing based aircraft but runway extension would provide expanded capacity for larger business-type aircraft.

(4) A taxiway to serve runway 13-31 is needed along with additional paved parking and tie-down facilities.

(5) T-hangars are needed for aircraft storage.

(6) Maintenance of the airport lighting system could be improved.

(7) The existing services offered are rated as "good" to "excellent."

(8) The cost of service is generally considered fair. One owner stated that he saves about $400 per year in personal property taxes and tie-down charges by being based at Williamsburg-Jamestown rather than at Patrick Henry Airport.

Williamsburg-Jamestown Airport, Inc. has invested $500,000 in time, equipment, and land. When the airport was under construction, the state provided $75,000 in matching funds for runway construction. This sum is amortized over a 20-year period, during which the airport must stay open or pay back the remaining portion of the loan.

Extensive improvements to the airport have been considered and the state has offered to match funds with the airport owner for the development of additional aircraft parking facilities. The need for this expansion is determined from the expected increase in traffic due to the Bicentennial activities in 1976. As of this date, no development plans have been finalized.

Support

In 1974, interest was initiated in the development of a new facility with the argument that Patrick Henry was crowded and that Williamsburg-Jamestown had reached capacity. The Peninsula Airport Commission subsequently obtained funds for a study of the feasibility of the new general aviation airport. Two-thirds of the cost of the study came from

[56] Interview with Mr Tom Johnson and Mr Carl MacConnell of Williamsburg-Jamestown Airport, July 16, 1975

[57]

[57] *Ibid*

[58] Airport Master Record, Williamsburg, *op cit.*

[59] *Virginia Air Transportation System Study*, Final Draft, Technical Supplement, Vol II, Part 2, June 1975, p 51

[60] See Appendix F for code of airport evaluation criteria

[61] Interviews of selected tenants and users on July 14 and 16, 1975

the FAA Planning Grants Program, with the rest coming from state and local matching funds.[62]

Possible support for the construction of a new general aviation facility in the peninsula also came from the final draft of the VATS plan which projected a new airport for the northern peninsula eventually to become a reliever for Patrick Henry's overflow of general aviation traffic. "By 1990 however, it will take both Patrick Henry and its reliever, Williamsburg-Jamestown, to accommodate the almost 600,000 annual GA operations projected for Planning District 21. By developing Williamsburg-Jamestown as a high capacity reliever, it would be possible to accommodate this GA demand and the more than 33,000 annual air carrier operations projected for 1990."[63] Designation by the VATS plan as a "reliever" is important since it implies a high priority status not accorded all proposed new airports.

The bases on which the new Williamsburg Airport has been designated as a reliever for Patrick Henry by the VATS plan are that: (1) Norfolk Regional Airport cannot expand its air carrier facilities much beyond their existing level; (2) Patrick Henry, the only other air carrier airport in the region and currently operating at 50 percent capacity, will thus be forced to expand its air carrier operation; and, (3) Patrick Henry is also an international airport and its international operations are expected to grow. Thus the VATS plan draws the preliminary conclusion that by 1990 Patrick Henry will need a reliever facility.[64]

Opposition

In addition to variations in the estimates of the numbers of aircraft which will be based in the peninsula in future years, another item where differences in opinion exist relates to the adequacy of existing aviation facilities. While some describe existing facilities as inadequate for accommodating projections of future need, the FBOs at both the Williamsburg-Jamestown and Patrick Henry Airports say that they have ample room for expansion in the future, and that a new airport is not really necessary. (It should be observed that the Williamsburg-Jamestown operators admitted that a new general utility airport in the northern part of the peninsula possibly would attract owners of small aircraft to base their planes there and would seriously hurt business at the present Williamsburg airport.)[65]

If taxiways were constructed and tie-down areas were expanded as planned, the Williamsburg-Jamestown Airport would be capable of accommodating at least 30 additional airplanes. The general aviation facilities at Patrick Henry Airport are also capable of handling a large increase in both traffic and based aircraft. With a 3,200-foot runway, the Williamsburg-Jamestown Airport cannot accommodate business jets, while Patrick Henry can. When Route 199 is opened to traffic, the driving time between Patrick Henry and Williamsburg will be reduced to about 25 minutes, thus making it more convenient for the residents of the northern peninsula to use Patrick Henry.

As for the objection that the Williamsburg-Jamestown Airport could be sold at any time because it is a private facility, some say this is not too likely to happen. They point to the acceptance of a state matching grant by that airport for improvements, as a sign of permanence. The matching grant is conditional upon the airport staying in operation for 20 years or paying back all or part of the matching funds.

There is another objection to the construction of a new facility in the northern peninsula based on the argument that general aviation serves only a limited portion of the community. Admittedly, there are community-wide services provided by general aviation—such as air rescue or pest control—but a large portion of general aviation is concerned either with business flying or pleasure flying and as such, it should rank far behind other services which are more widely used by the community. Persons who argue in this way object to the allocation of public resources for the construction of new general aviation airports, which serve a selected few. This type of objection is not unique to the peninsula area. Persons of this school of thought argue that airport development should be funded mainly by the local community desiring it, and that a community should not have such developments if it cannot support them financially.

Future Developments

Although the first phase of the Master Plan is still under study, speculation is already under way, as to where the new airport will be located. Several possible locations are being discussed

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[62] The cost to a locality of having a master plan drawn up is relatively small. In this case the 12-1/2 percent **not** funded by the federal and state governments was prorated among the cities of Williamsburg, Newport News, and Hampton, and York and James City counties according to population.

[63] *Virginia Air Transportation System Study, Final Draft*, Vol II, Part 3, July 1975, Appendix F, p. 10.

[64] *Ibid*.

[65] Johnson and MacConnell interview, July 16, 1975 at Williasmburg-Jamestown Airport.

informally. One is the airfield at Camp Peary in the upper peninsula. While the use of an existing facility seems to be preferable to building a new airport in some cases, a joint-use agreement between the public and the military at Camp Peary might not be a good idea. Camp Peary, for example, is in the process of becoming a central storage area for munitions, which may not be compatible with an increase in airport activity.

Another possible site for a new general utility airport in the peninsula is the old abandoned Central Airport which is located on land owned by the College of William and Mary. In the mid-1960's the airport manager died and the College decided to close the airport and use the land for building married students' housing; however, the housing was never built and the airport site remains in disrepair. After Central was closed, a motel was built some distance from the end of one of the major runways, but if it should interfere with flight patterns, that runway could be extended in the opposite direction so that required altitudes could be reached well before planes were over the motel.

There are two other possibilities for the location of a general utility airport on the peninsula. One is to buy and expand the present Williamsburg-Jamestown Airport which would involve paying the fair market price and being certain that the runway would be expandable to the length needed to handle business jet aircraft. College Creek limits expansion to the north, and a southern extension would mean that air traffic would be taking off much closer to the Rawls Byrd Elementary School—site of the earlier civic protests and public concern about noise and safety. Also land to the west of the present runway is not possessed by the airport owners and there might be some difficulty in buying additional land for the purpose of building a second runway.

A final possibility would be the purchase of farm land well to the north of Williamsburg and building a new airport there. This might result in an adverse environmental impact on the area. In any event, the question of site selection is not an immediate one, since the Peninsula Airport Commission in its monthly meeting of July 17, 1975 returned Phase I of the Master Plan to the consultants for further work.[66]

The future of air transportation on the peninsula depends to a great extent on whose projections prove to be most accurate in the coming 10 to 20 years. When Patrick Henry and Williamsburg-Jamestown begin to find that more persons want to base aircraft at those fields than there is room; when T-hangars are built and there are long waiting lists for their use; and, when the number of operations at these airports begins to reach the maximum safety limit, then the need for expanded or new airport facilities will become apparent to an increasingly larger segment of the interested public. The problem is how to forecast the timing and extent of this aviation growth accurately.

Virginia Beach

Introduction

The City of Virginia Beach provides a unique opportunity to study the relationship of general aviation to community development for the following reasons: (1) the current status of general aviation in the city; (2) the recommendations of the Virginia Division of Aeronautics for aviation facilities in the area; (3) the demographic, geographic, and socio-economic characteristics of the community; and, (4) the status of aviation-related planning in the city.

(1) **Current Status.** The City of Virginia Beach has no active general aviation facility located within its jurisdiction; therefore, the level of general aviation activity from a "within-the-city" perspective is nonexistent. City residents who require general aviation services must use the facilities located in adjacent communities.

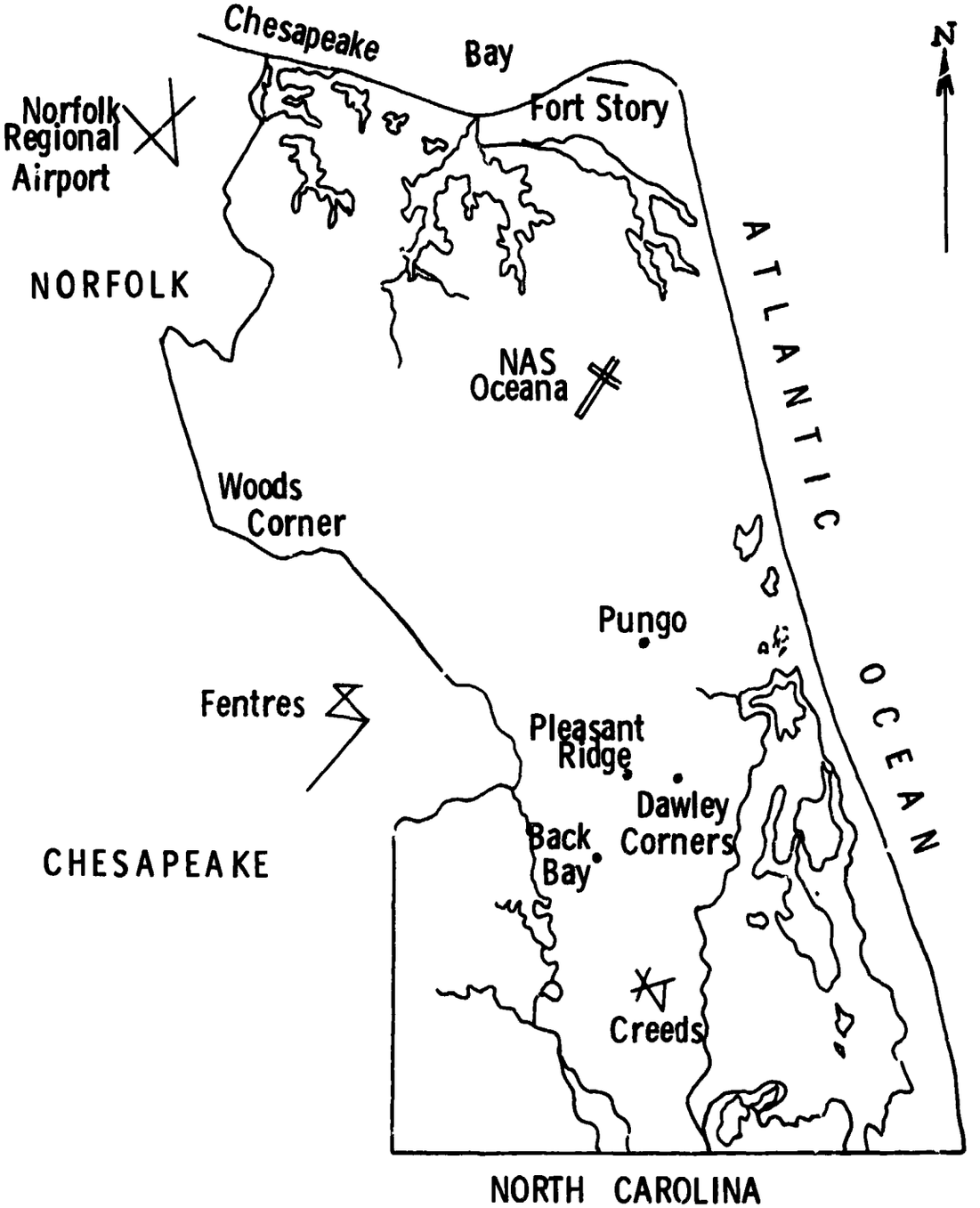
The city does have a great deal of aviation activity located within its boundaries as a result of the existence of Naval Air Station (NAS) Oceana, the Navy's largest master jet base. Because of a possible new general aviation airport and the existence of a military airport, an opportunity was provided to study the needs of groups with potentially conflicting uses of the area's air space.

(2) **Preliminary VATS Plan Recommendations.** The Preliminary Draft of the Plan for The Virginia Air Transportation System [67] recommended the development of two airports in Virginia Beach, one in the northern section (Fort Story) and one in the southern section (New Creeds), as shown in Figure 4-11. Apparently, state level aviation planners see a requirement for additional aviation facilities to serve the citizens of Virginia Beach.

(3) **Community Characteristics.** Demographically, the city's population stands about 220,000 and has been increasing at a very rapid rate, which will probably lead it to be

[66] "Satellite Airport Draft Is Rejected," Newport News *Daily Press*, July 18 1975

[67] Commonwealth of Virginia, Division of Aeronautics, Division of State Planning and Community Affairs, *Preliminary Draft of the Plan for the Virginia Air Transportation System*, December 1974



CITY OF VIRGINIA BEACH
FIGURE 4-11

Virginia's largest city in the very near future. In socio-economic terms, the city has a predominantly middle-to-upper class population. Geographically, the city has a land area of 259 square miles.[68] Thus, by many of the usual indicators, the city is expected to be able to generate and support a high level of general aviation activity.

(4) **Related Planning.** Virginia Beach already has an abandoned city airport which, when considered with past airport site planning studies, made it apparent that decision-makers within the city have attempted to deal with the problem of existing and potential general aviation airport sites.

Community Characteristics

Virginia Beach, which calls itself the world's largest resort city, is located in the southeastern corner of Virginia and is part of the Norfolk-Portsmouth-Chesapeake SMSA. It is 90 miles southeast of Richmond and 200 miles south of Washington, D.C. It is a city of 259 square miles bordering 51 square miles of water and is located at an elevation of six feet above sea level.[69] Virginia Beach was incorporated as a town in 1906 and in 1952 it became a city. In 1963, the city merged with Princess Anne County and was greatly enlarged.

The total population of Virginia Beach has been growing rapidly. It has grown from a population of 42,000 in 1950 to 172,000 in 1970. The 1974 city population stood at 219,285, according to studies conducted by the Virginia Beach Planning Department. The population of the city is distributed unevenly throughout its seven boroughs and ranges in size from 70,639 in the Lynnhaven Borough to 871 in the Blackwater Borough. The most rapid population growth is concentrated in the city's larger boroughs although population movement and development is also expected to increase in the southern part of the city which is relatively unpopulated and undeveloped.

An analysis of the city's labor market, prepared by the city's Department of Economic Development, indicates that most of the residents of the city are employed in either professional/technical industries or in management/administrative positions. Few employees are classified as laborers, and non-manufacturing sectors of the city's economy provide the largest source of employment, particularly in the service and retail trade areas. The city's major industries are Guille Steel (steel joists), Nepatrix (fabric dying), Snark Boat Products, J.C. Penney (regional distribution center), Eastern Electric Wire and Cable Company (national distribution center), Cooper Bearing Company (split roller bearings), and Stihl, Inc. (chain saws). A large number of the city's residents are service personnel and civilians employed by the military.

The city is served by a variety of transportation facilities: I-64 connects with both I-95 and I-85. The Penn Central Transportation Company, the Southern Railway System, and 50 truck lines, including common and contract carriers in the SMSA, serve the city. The waterway serving the city is the Port of Hampton Roads which is 25 square miles in size, handles about 70 million tons of cargo, and has channels up to 45 feet deep. The nearest airport is Norfolk Regional which has air carrier service provided by Allegheny, National, Piedmont, and United Airlines.

The city currently has three major industrial park properties available—Oceana West (1,000 acres), Little Creek (26 acres), and the Airport Industrial Park (202 acres) directly east of Norfolk Regional Airport. Other industrial park sites are being planned.

History and Development

Virginia Beach's general aviation airport development efforts began on April 16, 1963 when the city manager, at the request of City Council, appointed a three-member committee to determine the feasibility of the city's using the airport facilities at Fort Story for general aviation (see Figure 4-11).[70] In September, 1963 the city's request for joint use of the Fort Story aircraft facilities was endorsed by the Director of the Virginia Division of Aeronautics. At the same time, the Report of the Aviation Commission to the Governor and the General Assembly of Virginia identified Virginia Beach as one of the airport projects in Virginia in need of state aid. On March 4, 1964 the Army denied the city's request for joint use of the Fort Story aircraft facilities due to certain restrictive areas in the flight pattern at Fort Story.[71] Two months later the city's need for a general aviation air-

[68] These data are based on information contained in a community data publication prepared by the Virginia Beach Department of Economic Development January 1975, and on a Development Information Package prepared by the City of Virginia Beach Department of Planning on April 24, 1975

[69] *Ibid*

[70] Internal memo from George Tinnes, Assistant to the City Manager of Virginia Beach to City Manager Robert Scott entitled, "Chronological report of the city's general aviation airport development efforts, January 14 1972 The history of development discussed in this section is based on the memo cited above and on interviews conducted by the research team with Mr Tinnes All quotations also appear as quotations in the Mr Tinnes memo Hereafter, referred to as the Tinnes memo

[71] *Ibid*

port was again endorsed by the Director of the Virginia Division of Aeronautics. On October 9, 1967 the City Council appointed an Airport Study Committee which once again led to a request by the city manager to establish a general aviation facilitiy at the Fort Story site. The Army denied this request and also a later request for reconsideration made by Congressman Thomas N. Downing on December 18, 1967.[72]

In 1968 several significant events affecting the development of general aviation in Virginia Beach occurred. The city was listed in the National Airport System Plan. The airport study committee presented reports to the City Council on the economic benefits that occur to communities as a result of general aviation and on the Army's objections to the city's requests to use the Fort Story site.[73] The Airport Study Committee reached the following conclusions about the city's general aviation needs:[74]

(1) That the immediate need of the city with respect to an airport exists, primarily for tourism. In this conjunction such an airport would only be of value if located in, or adjacent to the Beach Borough. Considering the air space requirements for Oceana Naval Air Station, the only area in or adjacent to the Beach Borough would lie in the vicinity of Seashore State Park.

(2) It is proposed that prior to the development of urban housing in the southern portion of our city, that acquisition of land be undertaken, such to be sufficient for the location of an airport to be developed in conjunction with industrial use.

The Industrial Development Authroity received a presentation made by the president of a realty company on its proposed plans for an airport and industrial park in the southern part of the city between NAS Oceana and Auxiliary Landing Field (ALF) Fentress. This request was denied by the FAA because of its proximity to operations occurring at both of these military airports. At about the same time first community opposition to airport development emerged in a resolution transmitted to the City Council by the Board of Directors of the North Virginia Beach Improvement League which requested the council to "resist all efforts to place an airport at Fort Story, State Park, or North Virginia Beach."[75]

In January, 1969, the realty company once again renewed its efforts to obtain space for a public use airport in the vicinity of Oceana and Fentress. The Virginia Division of Aeronautics then sent a letter to the FAA requesting that the company be required to gain approval from the City of Virginia Beach. In April, 1969 the company withdrew its request for an aviation facility because it had not been able to obtain the necessary zoning and use permit from the city. This was because the city was considering the establishment of a public use airport and might be pre-empted by Virginia Beach Aviation Sales Limited.[76]

The city then retained the firm of Dewberry, Nealon and Davis for an airport planning study. Subsequent to its initial planning study, the firm conducted a Site Evaluation and Selection Study which was submitted to the city manager on July 9, 1970. In conducting this study the consultants looked at a variety of factors including: size and type of airport required, meteorological analysis, accessibility, compatible land use, engineering feasibility, construction costs, and real estate costs.[77] In March, 1970 the consultants received a letter from the FAA rejecting the proposed airport site locations at Fort Story, Pungo, and Woods Corner for "airspace utilization" reasons. The FAA indicated that it would continue to assist the city in locating a suitable site for the proposed Virginia Beach airport.[78]

In May, 1971 the City Manager requested FAA approval for an airport located at the Back Bay site "inasmuch as the project conforms to the guidance furnished by your office in the course of site selection."[79] In June the city's Airport Study Committee received a letter from Dewberry, Nealon and Davis reporting that the Navy has indicated that it was its opinion that serious aircraft operational safety problems would arise in the proposed site area. *This, however, is contrary to their position of May, 1969.*[80] The Navy indicated at that time that "there would be a possibility of rerouting their southern operations to accommodate a general aviation airport in the general vicinity of the Back Bay site.[81] The FAA responded to the Navy's objection by indicating that its regional

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[72] *Ibid*

[73] *Ibid*

[74] Dewberry, Nealon and Davis, *Airport Site Evaluation and Selection*, Fairfax, Virginia 1970

[75] Tinnes memo

[76] *Ibid*

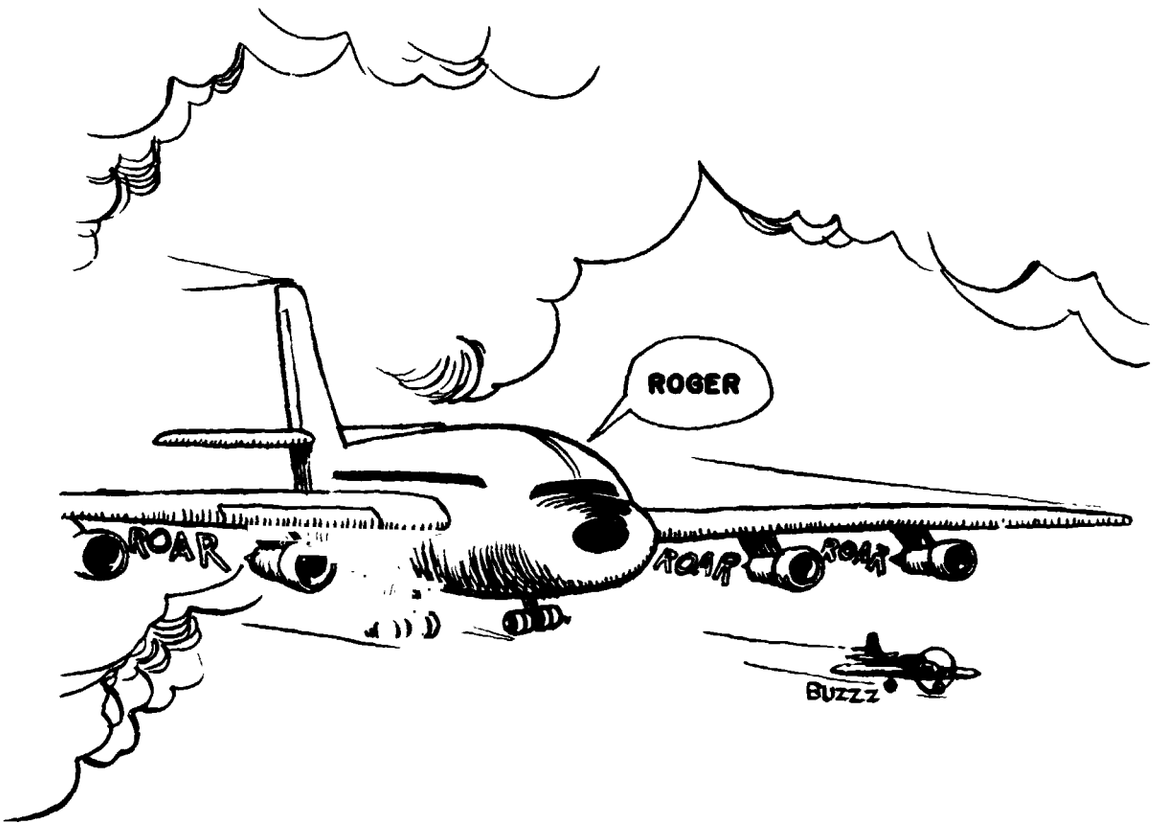
[77] Dewberry *et al*

[78] Letter from the FAA to Dewberry Nealon and Davis, dated March 31, 1970

[79] Letter from City Manager Robert Scott to the FAA, dated May 24, 1971

[80] Letter from Dewberry, Nealon and Davis, to Mr James Sadler, chairman of the Virginia Beach Airport *Study Committee*, dated June 25, 1971

[81] Tinnes memo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YOU ARE
NUMBER TWO
FOR LANDING

office would "restudy the entire Navy dominance of airspace in the Virginia Beach area and reaffirm the urgent requirement to place a general aviation airport on the west side of the peninsula."[82] The city then attempted to obtain the Navy's permission for joint use of NAS-Oceana. This request was denied.

On November 4, 1971, the City Manager received a letter from the FAA indicating that "inasmuch as the (Back Bay) site had been selected based upon a 'search area' recommended by the Air Traffic People, we returned the airspace finding for further review to our regional office. The region suggested that the Fort Story area, previously rejected, appeared to possess the best potential for the general aviation airport from an airspace utilization viewpoint."[83] At a December meeting, during which the city solicited the Navy's assistance in locating a general aviation airport site within the city, the NAS Oceana Base Commander suggested that the city use the Fort Story site for a joint civilian/military air facility. At a December 9, 1971, FAA airspace meeting with the City of Virginia Beach, action was postponed indefinitely at the city's request due to the Navy's airspace objections.

On February 14, 1973 the city contacted Congressman William Whitehurst to meet with him on the city's airport difficulties in a project with a history which was "long and fraught with disappointment."[84] The city's director of economic development, emphasized that after many meetings "we are no further toward a positive decision than we were when the Airport Study Committee was established five or six years ago."[85] In response to Congressman Whitehurst's interest he then indicated that "the Fort Story location is one that everyone can best live with, especially Oceana, since it would not unduly interfere with air traffic," and that "we should feel the need of an aiport to serve our city, and in the effort to establish one we do not want to leave any stone unturned."[86]

At this point, the city lost interest in Fort Story. The following reasons were given by city officials: (1) difficulties expected in obtaining Army approval for the use of Fort Story location; (2) meteorological problems associated with the site; and, (3) a changing view of the city toward the Fort Story location because the city was now viewing the area as a possible recreational site and felt that the needs of general aviation might be incompatible with the needs of recreation.[87]

In late 1973 the city began to actively pursue the Creeds Airport location as the "best" site. On November 2, the city requested a "Private classification for Creeds indicating no aircraft operations at present and none anticipated."[88] After a series of meetings with representatives of NAS Oceana, who still objected to this site, the city filed a second form 7480-1 with the FAA and now requested a "Private Restricted Use Only" classification for the Creeds Airport. In June the city was notified that the FAA was conducting an aeronautical study of the reactivation of Creeds Airport.

On October 16, 1974 the FAA conducted a hearing on the Creeds Airfield situation to enable the proponents and the opponents of the proposed reactivation to voice their opinion.[89] The proponents included two members of the State Corporation Commission and a representative from the Virginia Beach Department of Economic Development. Opposition to the reactivation was voiced by several Navy officials, the President of the Back Bay Civic League, and the Manager of the Back Bay National Wildlife Refuge.

The Navy's and the Civic League's main objection was based on the danger of midair collisions and of limited approach and departure avenues over the southern part of Virginia Beach. A representative from the State Division of Aeronautics countered this argument by saying that "the Navy does not own the airspace over or around Creeds, and that anyone has the right to fly in this airspace."[90] In addition, the state representative argued that "with proper controls, high performance and low performance aircraft use the same airspace every day at numerous airports throughout the country without midair collisions.[91] The meeting resulted in a compromise in which the Navy in-

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[82] Letter from Dewberry, *et al*, *op cit*.

[83] Letter from the FAA to City Manager Robert Scott, dated November 4 1971

[84] Letter from A James De Bellis Director of the Virginia Beach Department of Economic Development to Congressman G William Whitehurst, dated February 14, 1973

[85] *Ibid*

[86] Letter from A James De Bellis to Congressman G William Whitehurst dated May 8, 1973

[87] Interviews conducted with Mr Harold Gallup—Industrial Development Coordinator, Mr Jerry Broadway—Administrative Aide Ken Knight—Comprehensive Planner, and Mr Lee Eskin—Civil Defense Coordinator on July 16, 1975

[88] The following information is based on an Internal memo to Mr George L Hanbury, Assistant City Manager, dated July 8, 1974

[89] Internal memo from Mr Jerry Broadway to Mr A James De Bellis reporting on the FAA Hearings on the Creeds Activation, dated October 16, 1974

[90] *Ibid*

[91] Internal memo from Mr Jerry Broadway to Mr Ken Knight, Department of City Planning, dated March 6, 1975

dicated that it would not object to the reactivation of Creeds as a heliport.

More recently, comments have centered on the Preliminary Draft of The Virginia Air Transportation System Plan. The plan was reviewed by a representative of the Department of Economic Development who noted that: (1) the inclusion of the Creeds Airport in the State Plan and the National Aiport Systems Plan "lends much support to our application which is presently before the FAA to activate the airport at Creeds;" (2) the reactivation of Creeds Airport might make that area an excellent location for an industrial park; (3) Creeds would provide air access to the False Cape State Park recreational area.[92] In addition he noted that the Department of Economic Development had no plans for an airport at the Fort Story location. Similar views were contained in the city's comments on the VATS plan transmitted to the Division of State Planning and Community Affairs.[93] These comments indicated that the city supports the Creeds Airfield and that the Virginia Beach Planning Department had no plans to develop the proposed Fort Story facility. Therefore the city concluded "if not enough federal funds are available for ADAP support of general aviation facilities, it may be wise to concentrate federal funds in only one facility in Virginia Beach."

The Assistant to the City Manager for Human Resources, commented that the VATS plan in reality anticipates three airports serving Virginia Beach by 1990: Fort Story, a facility in the southern part of the city, and Norfolk Regional. He recalled the story of the "Tortoise and the Hare" and suggested that "with perseverance the city will obtain general aviation facilities in the southeastern and the northeastern parts of the city by the time 1990 rolls around." In addition he indicated that the city could work most productively toward establishing better access and utilization of the general aviation facilities located at the Norfolk Regional Airport.[94]

Existing and Proposed Aviation Facilities

Two of the five sites discussed in the Airport Site Evaluation and Selection report prepared for the City of Virginia Beach in July 1970 were visited. The sites discussed and evaluated in the form of "consultants 1st choice, 2nd choice, etc." were: Back Bay (visited), Dawley Corners, Pleasant Ridge, Woods Corner, and Creeds (visited).

In addition, the sites at Fort Story, Pungo airfield (abandoned), and NAS Oceana were visited to aid in evaluating their applicability as general aviation airport sites. This enabled the researchers to gain a better understanding of the environmental conditions which had been discussed with officials from the City of Virginia Beach. Woods Corner, Pleasant Ridge, and Dawley Corners were not visited because these locales were dropped early in the city's site selection study and no present consideration was given to them by any of the people contacted for this case study.

Fentress is an auxiliary landing field used by the United States Navy for simulated carrier landing practice for their high performance jets. Fentress, with an 8,000-foot single runway, has approximately 80,000 to 100,000 operations per year and acts as a reliever field for NAS Oceana which has over 150,000 operations annually. The Virginia Beach Airport Site Evaluation and Selection report did not consider Fentress in the plan. It was stated in the letter of transmittal with the report that "Fentress... is not only in another jurisdiction, but is poorly situated from an access standpoint."[95]

Pungo Field, Back Bay, and Creeds extend south from NAS Oceana in that order and are approximately 6.8, 11.9 and 15.9 miles respectively from the center of Oceana.

Major objections to these three sites came from the Navy because of conflict with the traffic patterns at NAS Oceana. Over 50 percent of the time, runways 5L and 5R at Oceana are active while runways 23L and 23R are used about 35 percent of the time (see Figure 4-12 for a layout of NAS Oceana). Problems were discussed with Navy personnel who provided drawings showing their ground control approach (GCA) pattern. Approach to the GCA pattern for runway 5R (which is the instrument landing runway) would normally pass directly over or very close to Creeds, which is also in Oceana's VFR approach zone. Back Bay would be further from this pattern but is still within the approach zone of runways 5L and 5R. Pungo Field does not appear to be in the approach zone of 5L and 5R, but its close proximity to NAS Oceana could present a VFR traffic problem.

Opening a general aviation airport in the Pungo-Back Bay-Creeds area presents another

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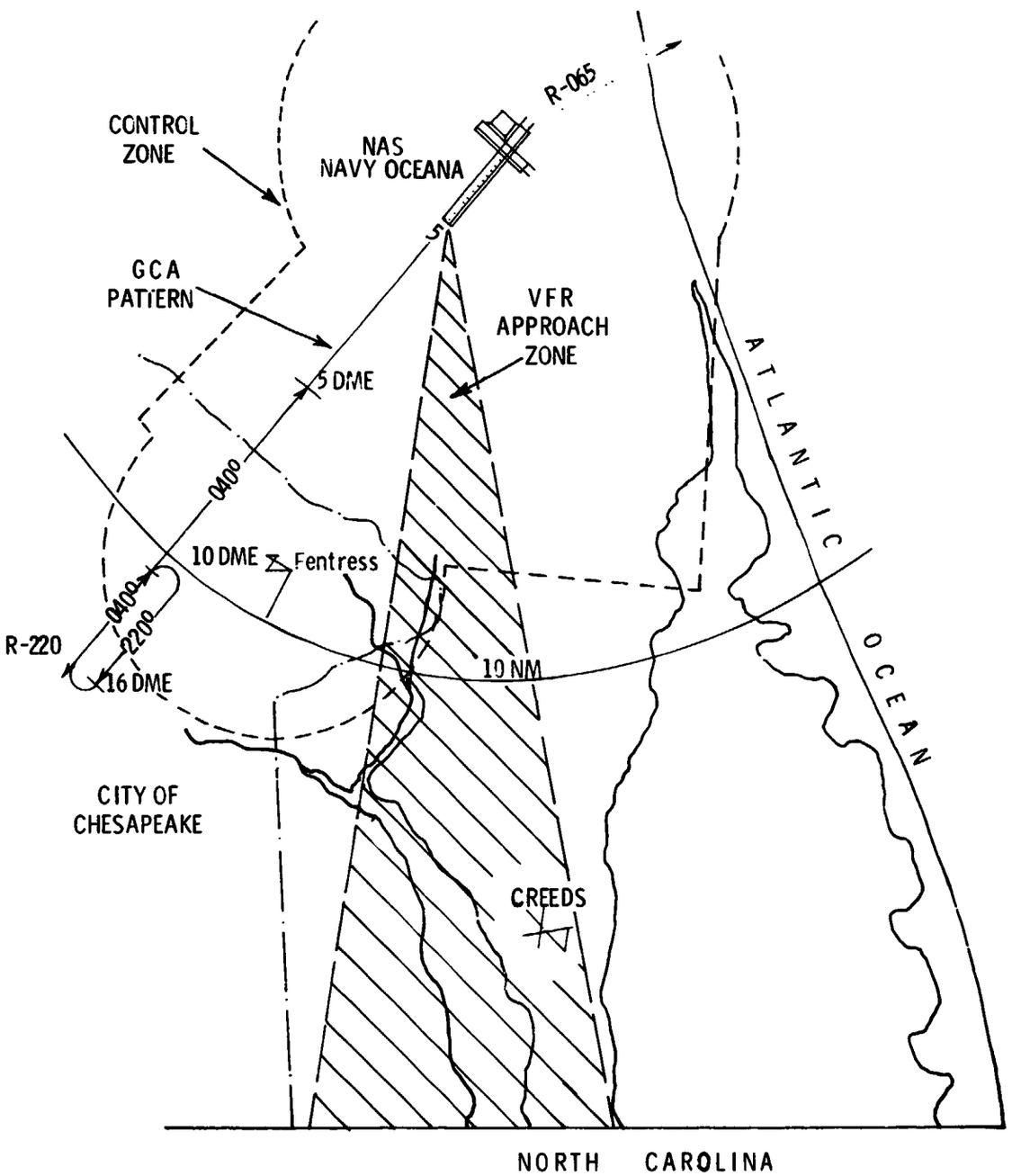
[92] *Ibid*

[93] Letter from Mr Ken Knight Virginia Beach Comprehensive Planner to Mr Robert S De Mauri Division of State Planning and Community Affairs Transportation and Public Safety Section dated March 10, 1975

[94] Letter from Mr George Tinnes Assistant to the City Manager/Human Resources to Mr James P Sadler Virginia Beach Airport Committee, March 27 1975

[95] Dewberry Nealon and Davis, *op cit*



NAS OCEANA AIRSPACE UTILIZATION
FIGURE 4-12

potential problem to NAS Oceana traffic. NAS Oceana has an established control zone and according to Federal Aviation Regulations, any aircraft flying in this airspace up to 3,000 feet above the ground must be under the control of NAS Oceana. Above 3,000 feet, if the aircraft is VFR, there is no requirement to contact NAS Oceana. High performance military aircraft will be under direct control while civil aircraft may or may not be, which presents a potential safety problem. An additional general aviation airport in the area would pose a potential safety problem. It appears that the FAA should make a detailed study of this problem. A possible solution would be the establishment of a Terminal Control Area to handle the expected high density traffic.

Creeds field is 15 miles from the City Hall complex of Virginia Beach City and it takes approximately 23 minutes to make the trip by automobile. This large distance is somewhat objectionable, but anything closer would create greater air traffic conflicts with NAS Oceana. The remaining area to be considered is at Fort Story, located in the extreme northeast corner of the City of Virginia Beach. This land is presently owned by the United States Army and from an air traffic point-of-view presents the least amount of conflict as long as one runway is oriented in a general east-west direction. A review of the documentation and talks with Virginia Beach officials indicated that Fort Story personnel, and possibly the residents of Virginia Beach in the Fort Story area, appear to be the only persons opposed to this location. It is not clear why aviation-knowledgeable people have recommended the Fort Story location since the runway length appears limited, the runway is oriented such that it is about 90° to the prevailing wind (a runway into the prevailing winds would conflict with Norfolk Municipal Airport and NAS Oceana), and the salt air and sand environment are very detrimental to aircraft. The Fort Story airport is located at the edge of the NAS Oceana control zone.

The old runway at Fort Story was approximately 3,500 feet in length and constructed of pierced steel plank (PSP). The runway has been abandoned for all practical purposes and would have to be reconstructed completely, although sufficient room appears to exist to lengthen it. There is another very small, hard surface located at Fort Story which appears to be a road and doubles as a landing strip. This strip is limited, due to size, to aircraft with STOL capabilities.

Support

It is difficult to talk in terms of proponents in the Virginia Beach case because the city has not placed a great deal of emphasis on having its **own** general aviation facility. This is not to say that the city does not desire the services provided by general aviation but indicates that the city officials interviewed felt that the facilities at Norfolk Regional could be changed and upgraded to serve Virginia Beach's needs.

The city's source of support for access to general aviation facilities seem to be interests related to economic development. But even here, city officials indicated that an airport does not in itself lead to economic development. One city council member commented that he had seen no convincing evidence that would lead him to support the use of local tax funds for the development of a general aviation airport. He seriously questioned the supposed benefits to the community although at the same time he indicated that the users of general aviation should have the facilities available but not necessarily within the city limits of Virginia Beach.[96]

The Creeds site is supported by the Department of Economic Development for three reasons. First, because of the expected population and industrial growth in the southern part of the city. Second, the department believed that an airport at Creeds would be used by certain technical and research and development industries which it hopes will be located near the Oceana Naval Air Station. Third, Creeds would receive some use once False Cape State Park is opened as a day facility with expected use by approximately 25,000 visitors daily.[97]

Additional support by city officials for the development of a general aviation facility in Virginia Beach is given by the city manager's office. The City Manager and ar assistant to the City Manager both see the need for additional industrial development in the city. At the same time, the former is also interested in locating a convention center in Virginia Beach. A general aviation facility is a desired component of the planned industrial and the convention center development. It should be noted, however, that the key problem will be in gaining access to a general aviation facility and not necessarily building one within the city limits in the immediate future.

Additional internal support for general aviation is found among the three members of the city's Airport Committee, individuals ap-

[96] Interview conducted with Mr George Callis, Councilman--City of Virginia Beach on July 22 1975

[97] Interviews conducted with members of the Virginia Beach department of economic development and city planning

pointed by the City Manager at the request of the City Council. Their major role has been to conduct studies on the aviation needs of the city and to report to the appropriate city officials on the city's aviation needs. They seem to be the only organized group currently supporting general aviation developments in the city.

At the present, Virginia Beach's second airport site at Fort Story seems to be supported by very few, if any, individuals within the city because of the generally held belief that the best way to use the Fort Story land, if available, is for recreational purposes. Past support for the Fort Story site came primarily from the industrial development interests in the city

An additional source of support for the development of general aviation facilities in Virginia Beach could be aircraft owners residing in the city. In 1970, FAA aircraft registrations for the city show 56 aircraft whose owners have Virginia Beach addresses.[98] Discussions with the city officials interviewed would lead one to believe that this number had increased substantially as a result of the type of population growth the city has experienced. No evidence was obtained to show that these aircraft owners have lobbied actively in their own behalf

Of at least equal importance in obtaining general aviation services in a given community are external sources of support. In the case of Virginia Beach these include members of the State Corporation Commission, Division of Aeronautics; the Federal Aviation Administration which has included an aviation facility for Virginia Beach in its National Air System Plan; and, Congressman William Whitehurst whose district includes the City of Virginia Beach.

The State Division of Aeronautics has endorsed aircraft facilities in Virginia Beach since 1963 when it supported the joint use proposal at Fort Story. In 1969 it endorsed the city's Advance Airport Planning Proposal. In 1971 the city received $5,000 in state funds as a reimbursement for airport planning in connection with Virginia Beach Municipal Airport. Most recently the Commonwealth has supported the city in hearings conducted by the FAA on the proposed reactivation of Creeds airfield.

The FAA has supported the development of aviation facilities in Virginia Beach since 1968 when the city was first listed in the National Airport System Plan (NASP). Recognition of the population center in the NASP adds impetus to an airport program because it indicates that potentially federal funds are available to assist in the planning and development of an airport. This recognition also indicates that federal officials believe that an airport is viable in that particular area, adding support to the proponents of an airport who would perceive a powerful ally in the form of the federal government. With this implied support they may become more vocal and active in their recommendations for an airport.

A third source of external support is Congressman William Whitehurst, who has played a cooperative role in attempting to obtain land at the Fort Story site. Mr. Whitehurst has contacted the Commanding Officer at the United States Army Transportation Center at Fort Eustis regarding the use of that site. In addition Congressman Whitehurst has corresponded with Virginia Beach's Director of the Department of Economic Development regarding the development of an aviation facility near the Oceana Naval Air Station.[99]

Opposition

Opposition to the development of a general aviation facility has come from two principal sources: (1) certain local civic and environmental interests and (2) the Navy The local interests have expressed opposition to the Fort Story site because they would like it to be used for recreational purposes. Opposition to the Creeds site was expressed by both the President of the Back Bay Civic League who was concerned with the danger of midair collisions, and the Manager of the Back Bay National Wildlife Refuge who was concerned about the environmental effects of the proposed development. One could conclude without surprise, given the low level of aviation activity within the city, that local citizen group opposition is not strong.

Continuous opposition to the development of an aviation facility at the Creeds site has come from officials representing the Oceana Naval Air Station. Since the reasons for this opposition have been discussed in the aviation environment section of this case study they need not be repeated here. Results of interviews conducted with the Commanding Officer and the air traffic control officer of NAS Oceana clearly indicated the Navy's concern about the air space available to Oceana and the difficulties inherent in mixing high performance

[98] Dewberry *et al.* p 7

[99] Letter from A James De Bellis Director Virginia Beach Department of Economic Development to Congressman William Whitehurst dated May 8 1973 Letter from Congressman Whitehurst to James De Bellis dated May 30 1973 Letter from James De Bellis to Major General Jack Fuson Commanding Officer U S Army Transportation Center Fort Eustis, Virginia, dated June 6, 1973

military aircraft with low performance general aviation aircraft.[100]

In summary, except for the opposition expressed by Navy officials, few individuals oppose the development of an aviation facility in Virginia Beach. Nevertheless, one should remember that opposition to policy decisions does not generally develop at the early planning stage, a present characteristic of the Virginia Beach situation.

Future Developments

The City of Virginia Beach appears to have long range plans which include aviation requirements. One of the problems the city has encountered is the slow response of the Federal Aviation Administration. An initial application to open Creeds Field for the city's private use was submitted to the FAA in 1973. The most recent application is dated May 20, 1974. As of July 16, 1975, the FAA has not given the city a response.

The city's emphasis has been, and will continue to be, placed upon the reactivation of Creeds airfield. The associated costs of equipment, maintenance, and insurance for the development of a "Private Restricted Use Only" facility would be relatively small.[101]

Another vision of the future airport needs of the City of Virginia Beach is held by the General Manager of Piedmont Aviation at Norfolk Regional Airport, who is also a member of the Virginia Advisory Committee on Aviation.[102] He believes that the proposed Fort Story airport should be upgraded from a General Utility facility to a Basic Transport facility. He reasons that the demands of Virginia Beach's convention business and the requirements of corporate pilots clearly show the need to develop an upgraded facility.

The future of general aviation in Virginia Beach is perhaps described best with these statements: Virginia Beach might succeed in obtaining a general aviation facility, probably at the Creeds site, at some point in the future. Until that occurs, the city will be able to gain access to the services being provided to general aviation through the proposed expansion of the facilities at Norfolk Regional Airport.

[100] Interview conducted with Capt Knutson, U S Navy, Commanding Officer, NAS Oceana and Commander J Morrison, U S Navy, Air Traffic Control Officer, NAS Oceana, on July 18, 1975

[101] Internal memo from Jerry W Broadway, Department of Economic Development to R Scott Tyler dated April 29, 1974

[102] Letter from T C Ferguson Member of Virginia Advisory Commission on Aviation, to the Director of the Virginia Division of Aeronautics, dated March 7, 1975

Chesapeake

Introduction

The proposed Chesapeake Municipal Airport represents an attempt to develop a new general aviation airport with the eventual purpose of becoming an air freight center for industrial development. With 2,000 acres of developable land, it is hoped that light industries will locate in the immediate area. The airport, in planning for eight years, has been approved for development by federal, state, and local officials. Construction is scheduled to begin in the fall of 1975. Coincidentally, the VATS Plan projects the need for a general utility airport for this region.

The proposed new airport has surmounted the initial problems associated with a new airport development program, and for this reason was selected for study, even though the project is noncontroversial in almost every respect.

City Characteristics

Chesapeake is a large, sprawling city, located in the Tidewater region of southeastern Virginia. It is bounded by Suffolk County on the west, the cities of Portsmouth and Norfolk on the north, the City of Virginia Beach on the east, and the State of North Carolina on the south. Having incorporated in the mid-1960's, Chesapeake is now the state's largest city with an area of 361 square miles. Over two-thirds of the city is rural in character with most of its population of 91,400 (1971) concentrated in the northern section around the port areas. In 1972, there were more than 69,000 farm acres in production covering over one-third of the city's area. The Great Dismal Swamp National Wildlife Refuge is located in the southwest corner of the city.

In the past, major industries have located along the waterfront. These include the largest employers: Lone Star Industries, Inc., and Evans Products Company, both dealing in the manufacture and sale of building and construction materials, and having about 670 and 625 employees, respectively. A study of the area indicates, however, that industry is beginning to locate around I-64 outside the center city. The impetus to this pattern has been given by Volvo of America, Inc., which has begun construction of a plant with an eventual employment of 3 500 people.

The 1974 annual report of the Chesapeake Industrial Development Authority reported an expectation of more than $165.4 million in new industry and 4,517 additional jobs. Of these

totals, $150 million and 3,500 employees are expected to be from Volvo.[103]

Existing Aviation Facilities

Currently, there are three airports in the City of Chesapeake (see Figure 4-13): (1) Chesapeake-Portsmouth, a privately owned general aviation airport located eight miles southwest of the city center; (2) South Norfolk, a privately owned general aviation facility located four miles south of the city center; and, (3) Auxiliary Landing Field (ALF) Fentress, owned and operated by the United States Navy as a training proficiency field. A private airport, Suffolk, is in near proximity. Several other existing and proposed airports within a 50-mile radius of the new airport site, including Virginia Beach and Williamsburg-Jamestown, have been reviewed previously in this chapter.

The major air carrier airport for the region south of Hampton Roads is Norfolk Regional Airport, a primary, medium density airport serving general transport category aircraft. It has a large general aviation facility which is presently near capacity. In order for Norfolk Regional to expand, it must obtain land outside the present municipal boundaries of Norfolk. Airport planners for Norfolk Regional and Virginia Beach officials are presently discussing expansion plans for property directly east of the airport and located within the corporate boundary of Virginia Beach.

Of the three private airports near the proposed site, Chesapeake-Portsmouth, with 125 based aircraft is by far the busiest and largest with 60,000 operations annually. It is readily accessible by six-lane highway and rail (Norfolk and Western) transportation, and covers an area of 1,200 acres. At present, although little residential or commercial activity impinges on the site, several radio and television antennas north of the airport represent a potential airspace hazard.

At Chesapeake-Portsmouth there are two 3,500-foot asphalt runways, one of which is being expanded to 4,500 feet. A third runway is proposed and could be extended up to 7,500 feet without difficulty. At present, the runways are considered to be of marginal length and bearing capacity, and capable of handling only the smallest jets. Dry wells and canals are used for drainage, in a way similar to that proposed for the site of the Chesapeake Municipal Airport.

On the Chesapeake-Portsmouth Airport, there are several FBOs which provide air taxi service, and aircraft and avionics maintenance, employing a total of 15 full-time individuals. One of two fish-spotting companies in the Peninsula area has a based airplane on the field. The airport apparently operates at a loss even though the FBOs appear to be successful. The retired airport manager has indicated that this location is a perfect site for development as there is ample space for industry to develop in the area.

The South Norfolk Airport is presently congested although it has some capacity for expansion. It is near the major highway intersection of I-64 and Virginia Route 168, and opposite the new Volvo plant. There are a number of residences in the vicinity and the land seems well suited for airfields. The airport is a family operation with marginal facilities. The owners are not interested in selling the land.

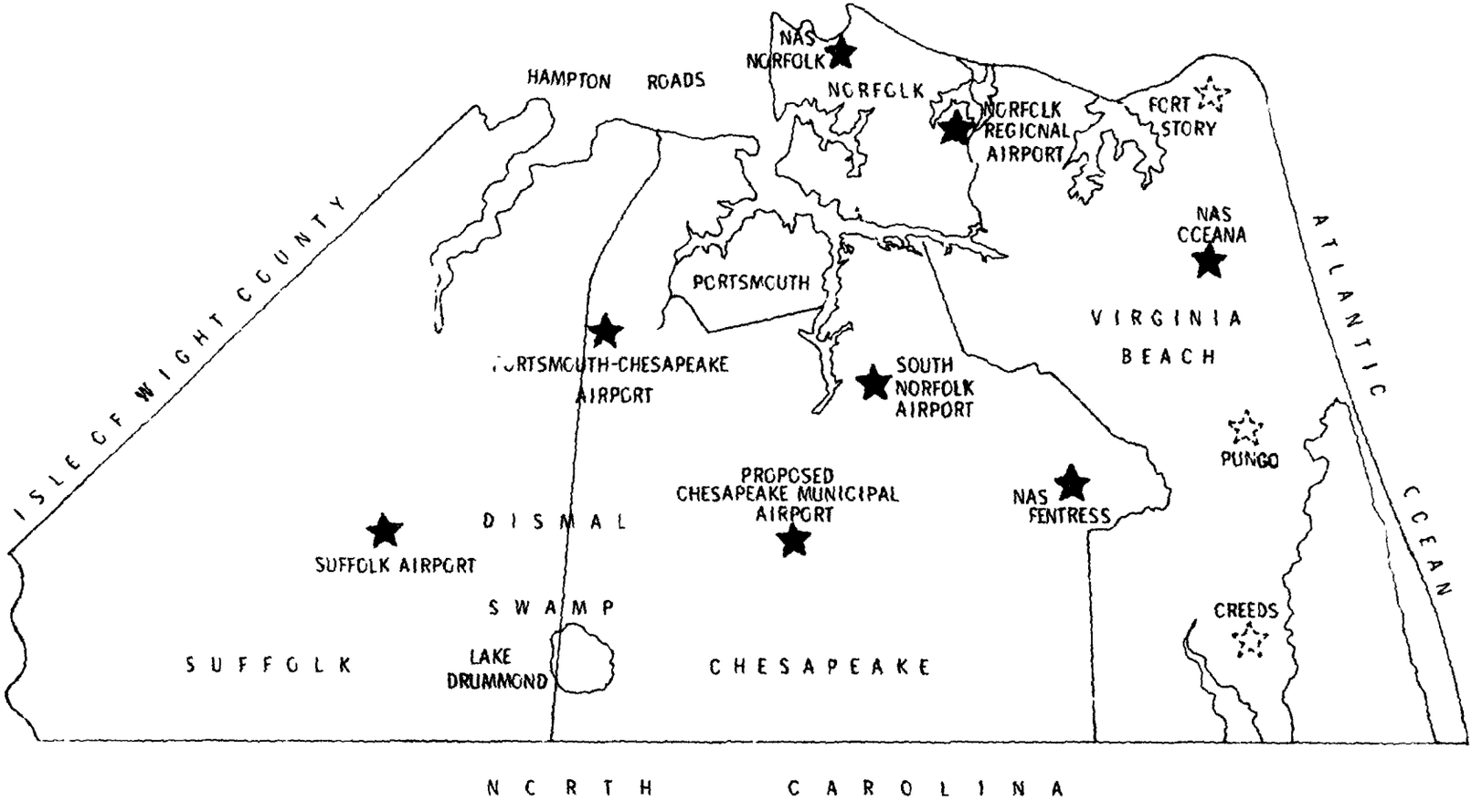
History and Development of the Proposed Facility

Unofficial planning for a public airport was begun in the mid-1960's by members of the aviation community in search of better facilities. It was also hoped that the new facility would act as a reliever for Norfolk Regional where general aviation activity must vie with certificated air carrier traffic. Many owners of private aircraft prefer being based at an uncontrolled field to avoid restrictions placed on them at a hub airport. Also, the cost of keeping a plane at a major airport is higher than that of basing it at a small general aviation facility.

In 1968, official action was taken by city council approval to establish a publicly owned general aviation airport. As planning progressed it became apparent that Chesapeake was in a position to attract additional industry and cargo operations. This was considered in the overall airport plan, by providing for an industrial park and for runways which will be strong enough to handle cargo operations. A local consulting firm was hired to recommend possible sites and to prepare an airport layout plan, in order to satisfy the minimum requirements for application for federal funds. The eligibility for such funds was established, since the airport was included in the National Airport System Plan.

The geographic location of the proposed Chesapeake Municipal Ariport seems suitable. The area is a forest just opposite the Dismal Swamp. It is owned by a wood products company and used as a tree farm. Trees in this area are 40 to 50 years old and are ready for harvesting. After the necessary clearing takes place,

[103] Annual Report of Chesapeake Industrial Development Commission, January 1975



AIRPORTS IN CITIES SOUTH OF HAMPTON ROADS
FIGURE 4-13

the company will sell the land to Chesapeake. There are only a few residences to the north and none to the south. The land itself is wet, however, and both runway and building construction might result in problems. Access to the site by railroad is non-existent and road access is minimal. In its favor is the fact that the other airports in the region are general aviation facilities with short runways, not strong enough to accommodate larger cargo and business airplanes.

The proposed airport is located close to, but outside, the control zones of ALF Fentress, Norfolk Regional Airport, and NAS Norfolk (Chambers). It should thus have very little effect, if any, on aircraft operations at any of the other airports in the area. Initial phases of the airport's development do not include an instrument approach, but this is included in subsequent phases.

After development plans for both siting and layout were developed and submitted to the necessary federal agencies, an Environmental Impact Statement was prepared and submitted. An attempt was made to determine if any of the 28 endangered species would be affected by the establishment of the airport. This is understandable since the location is adjacent to the Dismal Swamp and the area is one which is ecologically delicate. The Environmental Impact Statement has met federal approval.

After approximately seven years of work to obtain Federal funds for such a project, the City of Chesapeake was notified on May 1, 1975 that it had to have all of its plans and specifications prepared, and contractors selected, prior to June 10, 1975, if it expected to receive any of the 1974-1975 ADAP funds. (ADAP expired on July 1. 1975; at this writing its renewal is being considered by Congress.) Such short notice for response undoubtedly placed the City of Chesapeake in a poor position for a detailed price negotiation with tentative contractors. The first of three stages for development of the Chesapeake Municipal Airport, however, has now been approved for ADAP funding.

It is intended that Stage I will consist of a 3,600-foot by 60-foot runway with taxiway turnarounds and no terminal navigation aids. Runway strengths will be designed to support aircraft of up to 12,000 pounds with medium intensity runway lights.

Stage II will upgrade the airport from general utility to basic transport by extending the runway to 4,600 feet by 100 feet and adding a full length taxiway. In addition, the runway will be able to handle aircraft weighing up to 30,000 pounds and will have both taxiway and runway lights, a VASI approach system, and runway end identification lights (REIL).

Stage III will involve making the airport meet the general transport category by extending the runways to 7,500 feet by 150 feet and establishing precision approach caapability.

Support

The proposed airport has strong support from those interested in general aviation planning and is included in the NASP and VATS plans. The Chesapeake City Manager, City Council, Airport Authority, and the Industrial Development Authority have all given their full support to the airport development effort. Besides the approval of ADAP funds for 75 percent of the total $1.2 million Stage I construction costs, a commitment of $200,000 has been made by both the city and the state. The city intends to borrow money from general funds with a commitment to pay it back. Any other funds needed will be generated by the Airport Authority through the issue of revenue bonds. There is no intent to levy a tax. Interviews at the existing Chesapeake-Portsmouth airport indicated a belief that existing businesses will probably not be hurt by a new airport, but they do perceive that a new airport in Virginia Beach would provide serious competition.

Opposition

According to the Environmental Impact Statement, at least one public hearing was held on November 7, 1972 and announcement for reviewing the final draft was made in early 1974. It is not known how many citizens reviewed the final draft. The initial public hearing was conducted primarily to discuss the environmental effects of the airport project.

Opponents who spoke at this meeting consisted of an outdoorsman concerned about the Dismal Swamp, a resident who lives close to the new airport, and a member of the Virginia Beach School Board who opposed the time of the hearing rather than the building of the airport. Also at this meeting, a petition, containing 57 signatures, was submitted which "opposed...the construction of an industrial park and airport in the Shillelagh Road/West Road area [because] such a facility would adversely affect property values and introduce elements incompatible with the peaceful and quiet enjoyment of the area.'[104]

On contacting two of the petitioners, it was

[104] Final Draft Environmental Impact Statement for Chesapeake Municipal Airport, 1974

found that their attitude indicated a hopelessness concerning the ability of small numbers of residents to achieve success in any dispute with the city. In addition, their major complaints were directed toward jet traffic and not necessarily small general aviation planes. The other nearby communities of Norfolk, Portsmouth, and Virginia Beach are neutral, with no interest in funding the airport in Chesapeake. Several people stated that they think Virginia Beach will not build an airport but if it did, the airport will have some effect on the level of general aviation activity in Chesapeake.

Conclusions

Compared with other communities which are considering the expansion of their air transportation facilities, the prospect of putting in a new airport in Chesapeake has been greeted with relatively little community opposition.

As far as the selected site is concerned, there seems to be minimal opposition in the community, with the exception of a few farmers living in the vicinity of the proposed site. The location is fairly isolated and the planes will make approaches over the Dismal Swamp which is uninhabited by people.

Furthermore, indirect support for this airport development is expected to result from good labor relations in the area (Virginia is a right-to-work state), climate, general area facilities and the port location in the community. Also a number of industries have made oral commitments to the facility and several FBOs have also expressed interest. These FBOs, however, would have to construct their own facilities, since the city will only construct a small administration building on the site.

SUMMARY AND CONCLUSIONS

The study of transportation and general aviation in Virginia is summarized as follows:

(1) Virginia has a comprehensive system of highway, rail, bus, and air carrier modes with excellent common carrier service between larger cities.

(2) The role of air transportation and general aviation airports in community development is recognized in the Virginia Air Transportation System Plan which projects expanded general aviation service for Virginia primarily through the expansion of existing facilities and the addition of 19 new facilities.

(3) Regional and local studies in Virginia have identified the complex and difficult nature of the airport planning process. The following factors appear to be essential considerations in this process:

(a) Local and regional planners must consider the comprehensive transportation planning process as well as statewide aviation plans.

(b) Accurate input data are needed in the planning process and at present there is some problem in acquiring certain information, particularly at non-tower-controlled airports.

(c) Forecasting must be done realistically, with a consideration of all factors impacting on aviation.

(d) National and State plans can serve as general guides from which local communities can develop final plans.

(e) The execution of all plans is dependent upon their acceptance by the communities involved.

(f) Inter- as well as intra-community forces play a major role in the final outcome of any aviation facility development.